The devil you know? A review of the literature on the impact of prior ties on strategic alliances

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The devil you know? A review of the literature on the impact of prior ties on strategic alliances

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Abstract

Purpose – This paper aims to provide a comprehensive view of the role of previous cooperative relationships between partners at the different stages of development of strategic alliances: formation, design and post-formation, as well as their effect on alliance performance.

Design/methodology/approach – This paper is a comprehensive review of the literature.

Findings – This paper shows that the relationship between prior ties and alliance outcomes is more complex than what it seems at first sight. The impact that prior ties have on alliance performance and organizational adaptation is not always positive.

Research limitations/implications – The main implication of this paper for researchers and managers is to show the need to consider the risks of repeated relationships between partners. This research could be developed by conducting a meta-analysis.

Originality/value – This paper provides a comprehensive view of the impact of prior ties between the partners in strategic alliance outcomes. This paper sheds light on some inconclusive results of previous research on this topic.

Keywords Performance, Trust, Governance, Alliance development, Previous relationships

Paper type Literature review

Resumen

El propósito – Se pretende proporcionar una visión integradora del impacto de las alianzas previas entre los socios en las diferentes etapas de la vida de las alianzas: formación, diseño de la estructura de gobierno, evolución, así como en sus resultados.

La metodología – Exhaustiva revisión de la literatura.

Los resultados – Se muestra que la relación entre relaciones previas y resultados de las alianzas es más compleja de lo que parece a primera vista. El impacto de las relaciones previas sobre los resultados no siempre es positivo.

Las limitaciones de la investigación/implicaciones – La principal implicación del trabajo para investigadores y directivos es mostrar la necesidad de tener en cuenta los riesgos que conlleva establecer repetidas relaciones con socios con los que ya se habían mantenido lazos cooperativos en el pasado. Esta investigación podría ser desarrollada mediante un meta-análisis.

La originalidad/el valor – El trabajo contribuye a la literatura proporcionando una visión integradora del papel de las alianzas previas, que permite entender algunos resultados no concluyentes de su impacto en el rendimiento y supervivencia de las alianzas.

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Palabras clave Relaciones previas, Confianza, Desarrollo de la alianza, Gobierno, Rendimiento
Tipo de artículo Panorama de la literatura

Resumo

Objetivo – Se tem como objetivo fornecer uma visão abrangente do impacto das relações prévias entre parceiros, nas diferentes fases do desenvolvimento das alianças estratégicas: formação de parcerias, plano estratégico, evolução, bem como seus efeitos nos resultados da aliança.
Metodologia – Ampla revisão da literatura.
Resultados – Mostra-se que a relação entre as parcerias anteriores e os resultados das alianças é mais complexa do que parece à primeira vista. O impacto das relações prévias no desempenho da aliança e na adaptação organizacional nem sempre é positivo.
Limitações da investigação/implicações – A principal implicação do trabalho para investigadores e gestores é mostrar a necessidade de considerar os riscos de estabelecer relações repetidas com parceiros que já haviam mantido laços de cooperação no passado. Esta pesquisa pode ser realizada através de uma meta-análise.
Originalidade/valor – O trabalho contribui para a literatura, fornecendo uma visão abrangente do papel das alianças prévias, permitindo compreender alguns resultados inconclusivos de pesquisas anteriores sobre este assunto.
Palabras clave Relações prévias, confiança, desenvolvimento da aliança, governo, desempenho
Tipo de artículo Revisão de literatura

Introduction

Research on strategic alliances has increased exponentially during the past decades. Despite being a marginal research topic prior to the 1980s, nowadays it is a mainstream field of research. The exponential growth of the number of papers about strategic alliances published in journals listed on the Web of Science confirms this fact. From just 16 articles published in 1980, the number rose to 47 in 1990 and to 420 in 2014[1]. This growing interest in alliances comes from the increase in the number of alliances formed by firms after the 1970s. This rise in alliance formation is usually explained by the pressures firms started to face at this time to rely on external resources because of the challenges associated to globalization and technical change. But the growing interest in alliances is also justified by the difficulties in managing these operations. Although alliances were not actually a new phenomenon, the recent wave of alliances included operations that were both more complex to manage and more important from a strategic point of view. This is precisely why they were labeled as strategic alliances.

One of the main concepts used in the literature on alliance management is trust, understood as the positive expectation of a partner on the willingness of the other partners to fulfill their duties beyond the letter of the contract. This is hardly a surprise, as trust is a central concept to understand not only economic transactions (Arrow, 1974) but also social interchanges (Granovetter, 1985). The importance of trust in alliance research has been increasing over the years. Researchers have tried to measure, conceptualize and identify its influence on alliance outcomes and dynamics (Zaheer *et al.*, 2010; Schilke and Cook, 2013; Vanneste *et al.*, 2014; Poppo *et al.*, 2015). One of the remarkable features of trust is that it is both an input and an output of alliances (Buckley and Casson, 1988). It is an input because a minimum degree of trust is required to enter into an alliance, as contracts are never complete.

And it is an output because, after working with a specific partner, it is easier to assess its propensity to behave as a good partner. For this reason, earlier research on trust in alliance management proxied it by the existence of previous cooperative relationships. Setting aside the relationship with trust, the role of previous cooperative relationships among partners on alliance governance and performance started to be studied *per se* in the past decade (Al-Laham *et al.*, 2010; Casciaro, 2003; Filson and Morales, 2006; Gulati *et al.*, 2009; Hoang and Rothaermel, 2005; Li *et al.*, 2008; Ryall and Sampson, 2009; Zollo *et al.*, 2002) while trust started to be more precisely measured (Gulati and Nickerson, 2008). Previous research shows that prior ties influence alliances during all of the stages of their life cycle: when forming the alliance, when choosing its governance structure and also during the execution stage. However, the magnitude and significance of this influence varies in empirical research.

This paper tries to provide a comprehensive review of this literature on previous cooperative relationships trying to offer an overall perspective of its role in alliance formation, design, performance and dynamics. However, before we do so, we will discuss the relationship between trust and strategic alliances.

Trust and strategic alliances

As trust is an elusive concept, a number of definitions and typologies exist in the literature. However, most previous research considers trust as the positive expectation each partner has on the others not taking advantage of their weaknesses and vulnerabilities during the life of the alliance (Ring and Van de Ven, 1992; Das and Teng, 1998; Zaheer *et al.*, 1998; Dyer and Chu, 2000; Lui and Ngo, 2004; Patzelt and Shepherd, 2008; Jiang *et al.*, 2015, among others). This is the concept of trust that we adopt in this paper, which is usually labelled as goodwill trust. Goodwill trust is completely different from the so-called competence trust (Lui and Ngo, 2004; Patzelt and Shepherd, 2008; Jiang *et al.*, 2015), which is based on the expectation that the other partners have the capabilities and skills required to perform the assigned tasks in the alliance.

Trust, thus, is always based on expectations. According to Dyer and Chu (2000), these expectations may come from three sources, which allow us to identify three different types of trust:

(1) Social relationships and embedded ties, which lead to relationship-based trust (Granovetter, 1985; Gulati, 1995a). This type of trust is an outcome of the ongoing interaction between partners.

(2) Routines or institutionalized processes, which lead to process-based trust (Zucker, 1986; Zaheer and Venkatraman, 1995; Zaheer *et al.*, 1998). Also labelled as Institutionalization-based trust (Bachmann and Inkpen, 2011; Lioukas and Reuer, 2015), it comes from the institutionalization of reciprocity and equity norms during the course of the previous relationships between the partners.

(3) An alignment of economic incentives, which lead to economic hostage-based trust (Williamson, 1985, 1993). This type of trust is based on the mutual hostage position maintained by the partners, which serve as a basis for incentive alignment and a guarantee of the fulfillment of their duties.

However, trust is also a psychological property attributable to individuals (Inkpen and Currall, 1998). That is why previous research has also considered the *affect-based trust* (Fryxell *et al.*, 2002; Lioukas and Reuer, 2015), which comes from emotional ties, friendship and affection between the managers of alliances.

Trust is a key concept in the relational view of alliances (Dyer and Singh, 1998; Ariño and de la Torre, 1998; Kale *et al.*, 2000). This approach strongly contends that alliances evolve according to the way in which partners handle their relationship (Zajac and Olsen, 1993; Ring and Van de Ven, 1994). A key concept within this framework is relational investments. They are any kind of effort (in terms of money, managerial time and so on) to comprehend the partner's goals and/or to facilitate communication and decision-making (Madhok and Tallman, 1998). Relational investments not only contribute to the execution of specific cooperative projects but also to the overall management of the relationship through trust formation (Ring and Van de Ven, 1994; Doz, 1996; Nooteboom *et al.*, 1997; Ariño and de la Torre, 1998; Madhok and Tallman, 1998; Tsang, 2000). From this perspective, as shown throughout the paper, interfirm trust not only facilitates the formation and development of strategic alliances but also their governance, as it triggers self-enforcing mechanisms which make partners behave cooperatively. Thus, as we show in the research line of alliance development, if alliance development and interfirm relationships are processes, trust is a key concept that explains why firms enter into strategic alliances and some of them evolve into a virtuous cycle of success and development (Doz, 1996), or into a vicious one leading to failure (Ariño and de la Torre, 1998).

Trust is thus an attribute of strategic alliances that changes over time, depending on the degree to which the behavior of the partners meets or not the expectations of cooperative behavior. But trust also performs several roles in alliances at all stages. It reduces transaction costs, as it lowers behavior uncertainty and the risk of opportunism (Gulati, 1995a). Trust also encourages the formation of not only alliances with specific partners but also investments in relation-specific assets (Dyer and Singh, 1998), and it facilitates the formation of interorganizational routines for interfirm coordination (Dyer and Singh, 1998; Zollo *et al.*, 2002). Additionally, several researchers have pointed out that trust between partners is a specialized resource which facilitates alliance management and development (Zaheer and Venkatraman, 1995; Dyer, 1997; Nooteboom *et al.*, 1997; Dyer and Singh, 1998; Madhok and Tallman, 1998; Kale *et al.*, 2000, among others) and a key factor in explaining the success of partnerships (Dyer, 1996; Doz and Hamel, 1998; Zaheer *et al.*, 1998, among others).

In the rest of the paper, we analyze how alliances starting with positive levels of trust due to the existence of previous cooperative relationships are influenced by this fact across the stages of the alliance formation, design and post-formation (Gulati, 1998; Kale and Singh, 2009), as well as their overall effect in alliance performance. Table I summarizes the main empirical studies that analyze the impact of partner-specific experience on different aspects of strategic alliances.

Prior ties and partner selection

Partner selection is one of the oldest research lines in strategic alliances but, as happens to other branches of this field, there are still research gaps to fill (Geringer, 1988, 1991; Shah and Swaminathan, 2008; Mellewigt and Decker, 2014). Previous research on this topic suggests that there are three key attributes when choosing a partner, all of them

Table I. Empirical evidence on the influence of partner-specific experience over different dependent variables

Reference	Data/sample	Method	Aspect analyzed	Influence and dependent variable[a]
Podolny (1994)	Investment banking relationships between 1981 and 1987	Logistic regression model	Partner selection	Positive in uncertain environments (Partner selection)
Gulati (1995a)	2400 alliances formed by American, European and Japanese firms between 1970 and 1989. Biopharmaceuticals, new materials and automobile sectors	Logistic regression model	Governance	Negative (JV)
Gulati (1995b)	7266 alliances formed between 1970 and 1989 by 166 firms in three worldwide sectors: materials, industrial automation and automotive products	Random-effects probit regression model (panel data)	Partner selection	Inverse U-shaped relationship (Partner selection)
Garcia-Canal (1996)	663 strategic alliances in which at least one Spanish firm is involved	Multinomial logit regression model	Governance	Non-significant effect (JV)
Park and Kim (1997)	158 joint ventures formed in the electronics industry between 1979 and 1988	Cross-sectional regression model (event study)	Performance	Negative (Cumulative abnormal returns)
Saxton (1997)	98 alliances formed in 1993	OLS regression	Performance	Positive (Satisfaction)
Gulati and Singh (1998)	2400 alliances formed by American, European and Japanese firms between 1970 and 1989. Biopharmaceuticals, new materials and automobile sectors	Multinomial logit regression model	Governance	Negative (JV)
Gulati and Gargiulo (1999)	Alliances formed between 1970 and 1989 by 166 firms in three worldwide sectors: materials, industrial automation and automotive products	Random-effects probit regression model (panel data)	Partner selection	Positive (Partner selection)
Oxley (1999)	727 alliances involving one US-based firm and a firm from another country. Biotechnology, information technology and new materials sectors	Simple appropriability model	Governance	Non-significant effect (JV)
Chung *et al.* (2000)	Ties among US investment banks during the 80s	Logistic regression model	Partner selection	Inverse U shaped relationship (Partner selection)
Li and Rower (2002)	Ties among US investment banks between 1994 and 1998	Logistic regression model	Partner selection	Positive (Partner selection)
Reuer and Ariño (2002)	71 alliances formed between 1986 and 1992 in which at least one Spanish firm is involved	Logistic regression model	Governance	Positive (JV)
Zollo *et al.* (2002)	81 biotech and pharmaceutical firms completed questionnaires for 145 agreements	Multiple regression model	Performance	Positive (Satisfaction)
Casciaro (2003)	719 alliances formed in the US telecommunications, entertainment and computer industries	Fixed-effects logistic regression model (panel data)	Governance	Non-significant effect (JV)
Colombo (2003)	271 alliances that were established between each other by 67 of the world's largest firms in IT industries over the period 1983-1986	Binomial and multinomial logit models	Governance	Positive (JV)

(*continued*)

Reference	Data/sample	Method	Aspect analyzed	Influence and dependent variable[a]
Pangarkar (2003)	83 biotechnology alliances formed and terminated between 1980 and 1996	Logistic regression model	Performance	Non-significant effect (Alliance duration)
Beckman *et al.* (2004)	300 largest US firms during the 1988-1993 period	Random-effects negative binomial regression models	Partner selection	Positive in uncertain environments (Partner selection)
Lui and Ngo (2004)	283 architect-contractor partnerships in Hon Kong	Hierarchical multiple regression model	Performance	Positive (Satisfaction)
Oxley and Sampson (2004)	208 international R&D alliances involving electronics and telecommunications equipment companies	Multinomial logit regression model probit regression model Bivariate probit model	Governance	Non-significant effect (JV)
Sampson (2004)	232 R&D alliances	Binomial probit model	Governance	Non-significant effect (JV)
Hoang and Rothaermel (2005)	292 alliances between pharmaceutical and biotechnology firms	Logistic regression model	Performance	Non-significant effect (Successful completion of a new drug development project)
Hoetker (2005)	Buyer–supplier relationships in notebook manufacturers industry between 1992 and 1998	Logistic regression model	Partner selection	Positive in uncertain environments (Partner selection)
Santoro and McGill (2005)	642 alliances formed in 2000 in biotechnology and pharmaceutical industries	Ordinal logit model	Governance	Negative (Governance form)
Filson and Morales (2006)	4344 biotechnology alliances from the mid-1970s to June 2001	Probit models	Governance	Negative (Equity links)
Globerman and Nielsen (2007)	120 alliances involving Danish firms	Logit model	Governance	Non-significant effect (JV)
Goerzen (2007)	Equity-based alliances formed by 580 Japanese multinationals	Structural equation model	Performance	Negative (Financial indicators)
Kim and Song (2007)	2952 alliances formed in pharmaceutical industry from 1988 to 1995	Negative binomial regression model	Performance	Positive (Joint invention)
Reuer and Ariño (2007)	436 alliances formed by 343 Spanish firms	OLS models	Governance	Negative (Coordination provision), Non-significant effect (Enforcement provisions)
Gulati *et al.* (2009)	628 JVs formed among Fortune 300 firms between 1987 and 1996	Regression model (event study)	Performance	Positive (Cumulative abnormal returns)
Kuittinen *et al.* (2009)	1918 alliances of 12 European and North American companies of information and communication technology sector	Logistic regression model	Governance	Positive (JV)
Ryall and Sampson (2009)	52 joint technology development contracts in telecommunications and microelectronics industries	Probit and ordered probit models	Governance	Positive (Detailed contracts)
Vanneste and Puranam (2010)	971 information technology procurement contracts entered into by 788 Dutch SMEs	OLS regression model	Governance	Positive (Detailed contracts)
Al-Laham *et al.* (2010)	847 US biotechnology firms	Regression model (event study)	Performance	Positive (Post-acquisition patent rate)
Zaheer *et al.* (2010)	8647 high-technology acquisitions by US firms during 1990-98	Regression model (event study)	Performance	Positive (Bigger cumulative abnormal returns)

(*continued*)

Table I.

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Reference	Data/sample	Method	Aspect analyzed	Influence and dependent variable[a]
Pateli and Lioukas (2011)	122 alliances in which at least one partner are Greek. Telecoms, information technology, internet and new media industries	Logistic regression model	Governance	Positive for a subsample of innovation alliances and non-significant effect for the whole sample (equity alliances)
Petruzzelli (2011)	796 university–industry joint patents	Negative binomial regression model	Performance	Positive (value joint innovation)
Phene and Tallman (2012)	2552 biotechnology alliances formed between 1990 and 2009	Logistic regression model	Governance	Non-significant effect (JV)
Nigro *et al.* (2012)	Inter-firm relationship in biopharmaceutical industry	Probit regression	Governance	Non-significant effect (Governance form)
Ariño *et al.* (2014)	92 logistics outsourcing partnership	Multiple regression models	Governance	Negative (Negotiation time)
Garia – Canal *et al.* (2014)	2456 two-party technology alliances formed between 1990 and 1999 by European firms	Logistic regression model	Governance	Positive for previous joint ventures and Negative for previous contractual agreements (JV)
Hsieh and Rodrigues (2014)	71 international joint ventures located in Taiwan	Three-stage least squares regression	Performance	Non-significant effect (Satisfaction)
Poppo *et al.* (2015)	211 buyer–supplier relationships of manufacturing firms in China	Three-stage least squares regression	Performance	Positive (Satisfaction)

Note: [a] In parentheses

starting with "c": compatibility, complementary capabilities and commitment (Cauley de la Sierra, 1996; Shah and Swaminathan, 2008; Kale and Singh, 2009). From a resource-based view, it is argued that resource complementarity is a necessary condition for the existence of synergy (Harrison *et al.*, 2001). However, the mere existence of a potential synergy is not enough to enter into an alliance, as partners should be willing to take part in it and provide resources (commitment), and they should also be able to coordinate themselves (compatibility).

One of the main difficulties in assessing the adequacy of potential partners is that this assessment is usually made in conditions of information asymmetry (Balakrishnan and Koza, 1993; López-Duarte and García-Canal, 2002). This is why there is a minimum of mutual trust level that firms need to have to enter into an alliance (Das and Teng, 1998). The amount of necessary trust would be dependent on the complexity of the alliance (Killing, 1988). Even though, sometimes this trust can be generated during the negotiation stage, the degree of trust required for some complex alliances exceeds whatever can be generated at this stage. However, trust is not only an input but also an output of cooperative relationships (Buckley and Casson, 1988; Killing, 1988). For this reason, sometimes, familiar partners are an option when high levels of trust are required. When the firm has had prior ties with the potential partner, the firm has first-hand knowledge regarding their capabilities and their degree of cooperative behavior (Granovetter, 1985; Gulati, 1995a; Das and Teng, 2000). In addition, having worked together paves the way for the development of interfirm coordination routines (Dyer and Singh, 1998).

Taking this into account, we can understand why firms tend to choose old partners for their new alliances (Gulati and Gargiulo, 1999; Li and Rowley, 2002). Li and Rowley (2002) argue that this preference can also be driven by inertia. Some firms develop partner selection routines that can lead them to choose specific partners for specific purposes. In other cases, relying on familiar partners reduces the costs resulting from searching for new partners (Li *et al.*, 2008). This preference for familiar partners is more likely to occur in environments characterized by high market uncertainty (Podolny, 1994; Beckman *el al.*, 2004; Hoetker, 2005), when a high degree of technological commitment is required (Li and Ferreira, 2008), and to undertake radical innovation projects (Li *et al.*, 2008).

Some papers (Gulati, 1995b, Chung *et al.*, 2000) have found an inverse U-shaped relationship between the number of prior ties and the probability of a new alliance between the same partners. This non-linear relationship is explained taking into account that information sharing and potential synergistic opportunities between two firms are limited. Gulati (1995b) also argues that fears of excessive dependence can also limit the willingness to enter into new alliances with old partners. Thus, even though firms tend to look for a familiar partner for their new alliances, this preference is not always present, and it seems that firms should not limit themselves to choose this type of partners. As we show in the research line of alliance performance, relying on familiar partners can lead to the so-called paradox of embeddedness (Uzzi, 1997).

There are two research opportunities related to the preference for familiar partners. This choice involves a number of trade-offs in terms of information sharing and synergistic opportunities, and searching costs and behavioral uncertainty. Identifying the causes and consequences of these trade-offs requires further research. In addition, as firm's propensity to choose familiar partners is not always accompanied by better performance, it seems that this preference cannot be explained by a mere rational calculation of costs and risks of each partner. Martínez-Noya *et al.* (2015) suggest that some cognitive biases related to risk-aversion are present in the preference for familiar partners. Identifying these biases constitutes a promising research line.

Prior ties, trust and alliance governance

The study of the drivers of the governance structure of alliances is one of the most important research questions analyzed in this literature. Initially, the focus was put on the choice between joint ventures (JVs) and mere contractual alliances (Osborn and Baughn, 1990; Gulati, 1995a; García-Canal, 1996; Gulati and Singh, 1998; Oxley, 1999). However, the interest of researchers recently has shifted to the in-depth study of the specific clauses of the contracts[2].

The adoption of JVs as a governance form in strategic alliances is one of the most frequently analyzed topics in the literature on alliances (Pisano, 1989; Gulati, 1995a; García-Canal, 1996; Oxley, 1997; Ariño and Reuer, 2006; Casciaro, 2003; Colombo, 2003; Sampson, 2004; Teng and Das, 2008; Kuittinen *et al.*, 2009; Phene and Tallman, 2012, among others). The existence of previous cooperative relationships among partners has been one of the identified factors influencing this choice, and has received special attention. Apparently, the problem studied is quite simple: creating a new company that is jointly owned by the partners to organize alliance activities partially or entirely, instead of relying exclusively on contracts. Existing research suggests that the coordination and control of alliances is easier in JVs, so complex alliances or cooperative projects entailing high risks of opportunism are expected to show a high propensity to adopt the JV form. However, the significant number of contradictory results and existing gaps in the literature shows that this research problem is more complex than it seems.

The main difference between JVs and contractual agreements lies in the existence of an administrative hierarchy in JVs that allows partners to guarantee their rights of supervision of their resources on a day-to-day basis. In contractual agreements, the relationship is governed by a contract that specifies the parties' rights and obligations, without entailing the creation of a new company. However, it is important to note that the use of JVs does not exclude the use of contractual provisions to rule the agreement (Kale and Singh, 2009; Reuer and Ariño, 2007). Both, JVs and contractual agreements make use of them. However, in contractual agreements, provisions in the contract are the only formal governance mechanism, while JVs also rely on hierarchical instruments. Another difference is that both forms of governance include different types of contractual provisions. Whereas Reuer and Ariño (2007) did not find more contractual complexity in pure contractual agreements than in alliances involving shared equity, they found different kinds of provisions. For instance, they found more clauses related to auditing rights in equity than in nonequity alliances. Finally, JVs and contractual agreements can also be backed by informal governance mechanisms based on trust and the shadow of the future; the so-called relational contracts (Gibbons and Henderson, 2012).

Theoretical arguments in the study of the contractual form of alliances come from transaction costs economics (TCE) (Williamson, 1985, 1996), the theory of social networks (Burt, 1982; Granovetter, 1985) and the principles of the organizational design (Galbraith, 1977; Lawrence and Lorch, 1967; Thompson, 1967). From a TCE perspective (Williamson, 1985, 1996), it is generally assumed that JVs are organizational forms that allow partners to reduce uncertainty about the future behavior of other partners, and to enter into alliances while minimizing the risks that they are obliged to assume owing to possible opportunistic behavior. These risks are commonly known as appropriability hazards (Kogut, 1988; Oxley, 1997) and refers to the risk of suffering the consequences of inappropriate use of assets brought to alliances and inadequate distribution of returns from this cooperative partnership. The theory of social networks (Burt, 1982; Granovetter, 1985) analyzes the choice of the governance form for alliances in the context of the network of relationships in which the firm is embedded. This perspective points out that firms linked through recurrent ties accumulate information about the most appropriate behavior for their relationship, reducing uncertainty and generating trust (Granovetter, 1985). Authors taking this approach argue that formation of JVs is not necessary when the alliance is embedded in a long-term relationship between firms (Burt, 1982; Granovetter, 1985; Gulati, 1995a). From an organizational design perspective, the key issue in the choice of JVs is related to the coordination requirements of the tasks implicit in the collaboration. In fact, JVs are mechanisms that help to solve coordination problems among partners (Casciaro, 2003; Gulati and Singh, 1998).

Earlier works in this field considered previous relationships as a proxy of trust, and stated that such relationships would reduce the propensity to create JVs, as the trust accumulated among partners should reduce the risks of opportunistic behavior. Gulati (1995a) was the first to find significant negative influence of this factor on the propensity to create JVs. In his work, he argued that the trust generated by previous relationships reduces the risk of opportunistic behavior, thus making the control rights associated with JVs less necessary. Subsequently, other studies have detected the same influence (Gulati and Singh, 1998; Santoro and McGill, 2005; Filson and Morales, 2006).

However, some studies have never found empirical support for the influence of previous cooperative relationships among partners on the contractual form (García-Canal, 1996; Oxley, 1999; Oxley and Sampson, 2004; Sampson, 2004; Globerman and Nielsen, 2007; Pateli and Lioukas, 2011; Nigro *et al.*, 2012; Phene and Tallman, 2012). In other studies this influence is positive (Reuer and Ariño, 2002; Casciaro, 2003; Colombo, 2003; Kuittinen *et al.*, 2009; Pateli and Lioukas, 2011).

One reason for these inconclusive results is that the influence of previous cooperative relationships on the propensity to create JVs is subject to the governance structure already used in previous cooperative experiences. In this regard, Garcia-Canal *et al.* (2014) show that when developing new collaborative projects with the same partner, firms tend to repeat the same contractual form used in previous projects to take advantage of the governance routines developed in the past. They explain that both the context in which these routines are developed and the partner-specific routines are completely different depending on whether the case is a contractual agreement or a JV. In fact, the results of previous research are compatible with the idea that previous general experience in the use of a contractual form is valuable only when the same contractual form is adopted in future alliances (Anand and Khanna, 2000; Gulati *et al.*, 2009). For the same reason, previous specific experience and routines developed working with a specific partner could only be properly exploited when using the same governance form with this partner.

A wider debate in the literature exists regarding the degree to which formal control and relational mechanisms are substitutes or complements in alliances (Gulati, 1995a; Das and Teng, 1998; Poppo and Zenger, 2002; Lui and Ngo, 2004; Carson *et al.*, 2006; Lee and Cavusgil, 2006; Argyres *et al.*, 2007; Puranam and Vanneste, 2009; Ryall and Sampson, 2009; Abdi and Aulakh, 2014, Cao and Lumineau, 2015; Kale and Singh, 2009, for a review). Whereas formal control is based on the presence of hierarchical mechanisms or specific clauses in contracts, relational governance is based on trust. Both options can handle conflicts of interests in alliances. For this reason, earlier research on the topic considered them just as substitutes, arguing that formal control was less necessary in the presence of trust (Gulati, 1995a; Uzzi, 1997; Dyer and Singh, 1998; Das and Teng, 1998). Malhotra and Murnighan (2002) even argue that formal control could be an obstacle for the formation of trust. Nowadays, both options tend to be seen as complements, as each one reinforces the effect of the other, reducing behavioral uncertainty and facilitating coordination (Poppo and Zenger, 2002; Lee and Cavusgil, 2006; Gulati and Nickerson, 2008; Ryall and Sampson, 2009; Kim, 2014; Bstieler and Hemmert, 2015; Cao and Lumineau, 2015). In an exploratory study, Woolthuis *et al.* (2005) suggested that trust and formal control could be both, complements and substitutes. Developing this idea, Abdi and Aulakh (2014) showed that they are substitutes when dealing with environmental uncertainty, whereas they act as complements when it comes to deal with behavioral uncertainty.

This debate is also present in the recent research line focused on studying the clauses included in alliance contracts in detail. This line of research has been possible thanks to the availability of specific sources of information like Thomson Reuters' Recap and the UK's Pharmaprojects (Contractor and Reuer, 2014). An important branch of this literature has analyzed the impact of previous cooperative relationships on contract design and, more specifically, on their complexity (Poppo and Zenger, 2002; Mayer and Argyres, 2004; Reuer and Ariño, 2007; Ryall and Sampson, 2009; Vanneste and Puranam, 2010; Ariño *et al.*, 2014, among others). Consistently with the previously mentioned debate, two opposing influences have been found for previous cooperative relationships.

On the one hand, some studies suggest that the trust associated with previous ties leads to a reduction in the complexity and the length of the contracts (Gulati, 1995a; Das and Teng, 2000; Reuer and Ariño, 2007). The essence of this argument is that, thanks to previous experience, partners have ample information on the reliability and skills of the others, making it easier to anticipate what to expect from them. For this same reason, this trust also reduces the probability of opportunistic behavior, turning the alliance into a self-enforcing agreement that does not need complex contracts, and, thus, reducing the costs of contracting (Gulati, 1995a; Das and Teng, 2000; Reuer and Ariño, 2007).

On the other hand, another set of studies argue that previous experience increases the complexity of the contracts (Poppo and Zenger, 2002; Mayer and Argyres, 2004; Reuer and Ariño, 2007; Ryall and Sampson, 2009; Vanneste and Puranam, 2010). They state that this experience facilitates not only learning from the partner and its reliability, but also identifying the possible contingencies that may arise during the relationship. As a consequence, it is easier and less expensive to write detailed contracts specifying the rights and obligations of each party under the presence of specific contingencies. Several papers have found empirical support for this hypothesis (Poppo and Zenger, 2002, Ryall and Sampson, 2009, Vanneste and Puranam, 2010). However, the results of empirical research are not conclusive. Whereas Reuer and Ariño (2007) did not find a significant relationship between previous cooperative relationships and contractual complexity, they found that prior ties reduce contractual provisions aimed at improving coordination, but not the ones related to enforcement. This result seems to suggest that the effect of prior ties varies among the different types of clauses. That is why they call for a disaggregation of the study of contractual complexity to disentangle the real effect of prior ties (Reuer and Ariño, 2007). More recently, Ariño *et al.* (2014) have argued that learning from prior ties not only influences contractual provisions, but it may also reduce the negotiation time for a given level of contractual complexity.

Summing up, we can see that, despite the number of papers aimed at analyzing the role of previous ties on the governance of alliances, more research is still needed to fill the gaps in the literature. The relationship between prior ties and alliance governance is more complex than it would seem at first sight.

Prior ties, trust and alliance development

Several researchers have focused their interest on the analysis of the development and evolution of alliances (Ring and Van de Ven, 1994; Doz, 1996; Ariño and de la Torre, 1998; Das and Teng, 2002; Reuer *et al.*, 2002; White, 2005; Ariño *et al.*, 2008; Ness, 2009; Chung and Beamish, 2010; Duso *et al.*, 2010, Elfenbein and Zenger, 2013; Vanneste *et al.*, 2014; among others). Majchrzak *et al.* (2015) provide an excellent survey of this research, identifying the main processes and dynamics in alliance evolution.

Alliance development is a process that usually comprises several stages of negotiation, commitment and execution that are sequentially repeated in a search for efficiency and equity (Ring and Van de Ven, 1994; Ariño and de la Torre, 1998). The cycle of negotiation, commitment and execution is reinitialized every time partners feel that the initial environment surrounding the alliance is going to suffer any alteration, or when the partners obtain feedback from goal fulfillment as the activities developed in the alliance are executed. Consistently with the relational approach (Dyer and Singh, 1998; Ariño and de la Torre, 1998; Kale *et al.*, 2000; Lee and Cavusgil, 2006), alliance development is thus dependent on how partners react to these external changes and internal feedback (Ariño and de la Torre, 1998). When partners are adaptable enough so as to adjust the terms of the relationship to changing circumstances, keeping the project's profitability on track, alliances enter into a virtuous circle. This virtuous cycle leads partners to increase the scope of their alliance and to earn relational rents, i.e. extraordinary benefits that can only be obtained by working with each other. However, when partners react unilaterally to changing circumstances and/or the projects are not successfully executed, alliances enter into a slippery slope that could eventually lead them to failure and dissolution (Ariño and de la Torre, 1998; García-Canal *et al.*, 2003).

Prior ties and cooperative behavior are key aspects for alliance development. As mentioned above, previous relationships between partners encourage relational investments, which facilitate cooperative behavior of partners and alliance development. These investments are partner-specific, so their value outside the relationship is close to zero. That is why relational investments made by the partners can act as mutual hostage positions (Williamson, 1985) facilitating the governance of the alliance through the reciprocity mechanism, turning them into self-enforcing agreements. García-Canal *et al.* (2003) showed that this reciprocity is easier to implement in dyadic alliances than in multi-party ones. Specifically, they found that the partners' relational investments have a stronger influence on the effectiveness of dyadic JVs than on multi-party ones.

Although relational investments encourage alliance development, firms having partners fully committed to make these investments, especially intangible ones, face the risk of knowledge misappropriation (Kang *et al.*, 2009). By making these investments, firms gain absorptive capacity that facilitates undesired knowledge transfers. Martínez-Noya *et al.* (2013) found that intangible investments reduced the effectiveness of alliances when the risk of knowledge leakage was high.

Trust does not remain constant over the alliance's life cycle; it is dynamic, it evolves and changes over time (Madhok, 1995; Inkpen and Currall, 2004). As Madhok (1995) points out, trust evolves gradually over time and through repeated successful interactions between partners[3]. It is necessary to take into account that the accumulation of trust is subject to time compression diseconomies because it cannot be developed quickly (Dyer and Singh, 1998). However, firms usually enter into alliances so as to quickly access external resources or adapt to a new competitive environment. Environmental changes may force firms to reap the potential benefits of an alliance from day zero by accelerating alliance development. In these cases, managers have to find an adequate balance between gradual development due to time compression diseconomies in trust formation and rapid development of the alliance to adapt quickly to a changing environment. García-Canal *el al.* (2002) analyze this issue and show that, although acceleration of the alliance may be an obstacle to its functioning, firms can overcome this barrier if they adopt adequate management practices.

In summary, trust is a dynamic concept that evolves over time and coevolves with alliance development. However, as the literature on alliance performance suggests that there is a negative side of relying on familiar partners and that the synergistic potential of the relationship with specific partners is limited, future research should analyze when and how firms must put an end to their alliances. Recent research on alliance portfolios (Wassmer, 2010; Srivastava *et al.*, 2011; Lavie and Singh, 2012; Castro *et al.*, 2014; Kim *et al.*, 2015; Park *et al.*, 2015) could be developed to accomplish this goal.

Prior ties and performance

Alliance performance is another important topic among the literature on strategic alliances. The existence of prior ties between the partners has been one of the main factors analyzed, although one important methodological problem in this literature, which makes it difficult to include the results of previous research, is the measurement of performance. Performance has been measured in different ways, with subjective measures, such as partner's satisfaction; perceptions of goal fulfillment; or objective measures based on accounting data, stock market valuations or the longevity of the agreement. Another methodological problem of this literature is that empirical tests do not usually account for endogeneity.

Generally speaking, it has been argued in previous research that prior ties increase alliance performance by reducing behavioral uncertainty and the risks of opportunistic behavior (Gulati, 1995a; Zollo *et al.*, 2002; Lui and Ngo, 2004; Kim and Song, 2007), thus facilitating learning (Gulati *et al.*, 2009) and making it easier to develop and exploit interorganizational routines (Zollo *et al.*, 2002; Hoang and Rothaermel, 2005; Kim and Song, 2007).

Trust seems to be the main driver in this relationship between prior ties and alliance performance (Parkhe, 1993). Boersma *et al.* (2003), after analyzing several case studies of JVs, suggest that trust is both an input and output of alliance performance. They found evidence supporting that increases in alliance performance helped to restore interpartner trust, while reductions in performance led to reductions in trust levels. However, when trying to test this two-way relationship between trust and performance, Mohr and Puck (2013) found a positive effect of performance on trust, but did not find a significant relationship the other way around.

Prior ties also contribute to performance through several factors associated with organizational learning. Although learning and alliance experience are also considered as drivers of alliance success, prior ties provide more benefits than the overall alliance experience because some of the advantages of this experience are partner-specific and cannot be transferred to other alliances with different partners (Gulati *et al.*, 2009). For instance, prior ties facilitate a better understanding between partners. After having worked together, they have a good knowledge of each other's capabilities, skills, culture, management systems and so on (Zollo *et al.*, 2002). Firms, thus, learn from each other, and this learning facilitates understanding and anticipating the patterns of behavior of each other (Dyer and Chu, 2000). Moreover, prior ties also influence performance promoting coordination and teamworking through the development and exploitation of inter-firm organizational routines. Further alliances with the same partner allow partners to capitalize previously established interfirm routines. It is well documented that firms tend to exploit the routines used in the past (Kogut and Zander, 1995) taking advantage of accumulated knowledge and experience (Dutton and Thomas, 1984; Nelson and Winter, 1982; Winter, 1987, 1995; Yelle, 1979). Partner-specific routines can include conflict resolution mechanisms, as, sometimes, partners institutionalize these procedures to proactively manage potential conflicts (Kale *et al.*, 2000). Moreover, routines and procedures established in the past may allow firms to exploit partner-specific, non-codified knowledge (Simonin, 1999). Dyer and Singh (1998) argued that routines for joint interaction that facilitate communication, coordination and control are assets capable of generating rents as the relationship between the partners evolves. They are, in fact, an organizational capability that can lead to sustainable competitive advantage and performance (Dyer and Singh, 1998; Hoang and Rothaermel, 2005).

Despite all these argumentations, the empirical evidence on the relationship between prior ties and alliance performance is not conclusive. Even though some studies found a positive relationship between them (Saxton, 1997; Zollo *et al.*, 2002; Lui and Ngo, 2004; Kim and Song, 2007, Gulati *el al.*, 2009; Al-Laham *et al.*, 2010; Zaheer *et al.*, 2010; Petruzzelli, 2011; Poppo *et al.*, 2015), others have found a non-significant relationship

(Pangarkar, 2003; Hoang and Rothaermel, 2005; Hsieh and Rodrigues, 2014) or even a negative one (Park and Kim, 1997; Goerzen, 2007).

This inconclusive evidence shows that the relationship between prior ties and alliance performance is also more complex than it would seem at first sight. As previously mentioned, firms tend to ally with known partners, but this propensity could be "too much of a good thing". Allying always with the same partners can led to negative outcomes as these partners can provide redundant information (Hoang and Rothaermel, 2005) introducing some inertia that prevents the firm from gaining access to fresh ideas and knowledge to upgrade their procedures and capabilities. This is what Uzzi (1997) labels as the paradox of embeddedness. This situation is especially harmful in environments with technological uncertainty, where the exploitation of the same routines limits the openness to new knowledge, as shown by the results of Goerzen (2007), who found a negative relationship between prior ties and performance in environments with high technological uncertainty. In fact, most of the studies which found a negative or non-significant relationship between prior ties and performance were conducted in industries with high technological intensity such as biotechnology or electronics (Park and Kim, 1997; Pangarkar, 2003; Hoang and Rothaermel, 2005). In these industries, openness to new knowledge is critical for competitiveness. Thus, firm and industry, heterogeneity should be taken more into account in future research on this topic, as well as the endogeneity of the decision to ally with a familiar partner.

Conclusion

Previous research has analyzed the role of previous cooperative relationships among partners at different stages of strategic alliance's life cycle: from the initial phase of partner selection, to the design of their governance structure and their development, as well as the overall effect of prior ties on alliance performance. After a comprehensive review of this literature, we provide in this section an integrated view of the impact of prior ties on alliance outcomes.

Our review suggests that the relationship between prior ties and alliance outcomes is more complex than what it seems as first sight. These ties can have both positive and negative effects on the potential benefits and synergies of the alliance, and also on its governance and coordination. As a consequence, the impact of prior ties on alliance performance and organizational adaptation is not always positive. Figure 1 illustrates the different potential effects of prior ties, which are described below.

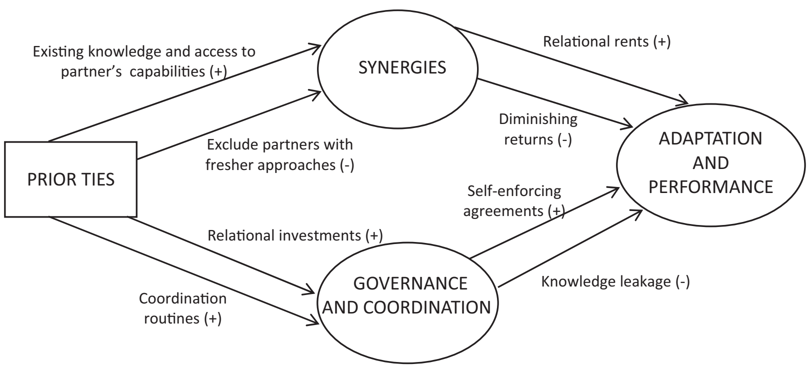

Figure 1. Different potential effects of prior ties at different stages of alliance's life cycle

Prior ties can increase the potential benefits of alliances as compared to alliances with unfamiliar partners because the firm gathers better information and knowledge regarding the capabilities and resources of their partners (Gulati, 1995a). As a consequence, the projects that are generated are better defined when prior ties exist. Firms also economize on the costs of searching for new partners. Thus, partners can enter into a virtuous cycle of alliance development gaining relational rents, as argued by the relational view of alliances. However, a number of undesired outcomes can arise from prior ties. The first one is that the firm forgoes the benefits of having new partners with fresher approaches and capabilities (Martínez-Noya *et al.*, 2015). The second one is that most of the potential benefits of the alliance may have already been obtained, as the firm is already in possession of the relevant knowledge and capabilities of the partner. Thus, at some point, the relationship can experience diminishing returns in terms of new contributions in knowledge and capabilities (Harrigan, 1985; Lorange and Roos, 1992; Gulati, 1995b; Chung *et al.*, 2000; Hoang and Rothaermel, 2005). In fact, this is the reason why Uzzi (1997) showed how relying on familiar partners can limit the possibilities of adaptation and survival.

Prior ties also facilitate governance and coordination. Prior relational investments and trust accumulated by the partners act as mutual hostage positions that facilitate turning the alliance into a self-enforcing agreement (Williamson, 1985; Dyer and Singh, 1998). In addition, previously existing coordination routines can be applied to the new project, making its execution easier. However, undesired knowledge transfers may happen as a consequence of previous relation-specific investments as previously mentioned by Kang *et al.* (2009). These transfers lead to reductions in alliance performance, at least for the partner that is acting as source of knowledge or for the alliance as a whole if this partner reduces its transparency to prevent these transfers (Martínez-Noya *et al.*, 2013).

Taking the whole picture into account, we are now in a position to see why prior ties can have a negative impact on alliance performance and survival. Relying on familiar partners initially seems to be initially a safe bet, which could be illustrated by the saying "better the devil you know than the devil you don't". However, we show two important risks in this preference. First, the risk of being trapped in a relationship with diminishing returns. Second, the risk of losing important proprietary information. The importance of taking these risks into account is the main implication of this paper for research and the practice of management. Alliances between firms are processes that should come to an end when learning opportunities are exhausted or unbalanced between partners. This research could be developed by conducting a meta-analysis. Another extension would be to explore the role of prior ties between partners in the dynamics of alliance portfolios. Additional research opportunities for each specific research line on alliance outcomes are specified in each section of the paper.

Notes

1. Number of articles published each year in journals listed in the WOS Social Sciences Citation Index including as keywords joint venture-s, strategic alliance-s, cooperative agreements, alliance network-s, alliance portfolio-s, alliance experience and alliance form or alliance partner. Date of the consultation: March 12, 2015.
2. See Schepker *et al.* (2014) for a literature review on interfirm contracting.

3. See Schilke and Cook (2013) and Vanneste *et al.* (2014) for an analysis of the dynamic aspect of trust.

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