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## The contingent effect of state participation on the dissolution of international joint ventures: A resource dependence approach

*Abstract. We adopt a resource dependence approach to explain the effect of state participation on the dissolution of international joint ventures (IJVs). While resource dependence theory has been used to explain the formation of IJVs, we propose an extension of the theory to explain their dissolution. We do so by highlighting the match between foreign firms' resource needs (resource hierarchy) and the resource provision roles of state-controlled versus private local partners (resource profiles). We further argue that the effect of state participation on the dissolution of IJVs is moderated by foreign firms' host country experience and IJV age. We test our hypotheses by using data on 623 IJVs in China. Our results show that state participation reduces the risk of IJV dissolution and that the strength of this effect differs depending on the type of state-controlled actor that is involved in an IJV. We also find that host country experience and IJV age moderate the effect of state participation on IJV dissolution. These findings enhance our understanding of IJV dissolution and contribute to the development of resource dependence theory.*

## INTRODUCTION

International joint ventures (IJVs) with state-controlled actors (SCAs) such as government agencies and state-owned enterprises (SOEs) play an important role for foreign firms operating in emerging economies (Brouthers & Bamossy, 1997, Collinson & Sun, 2011, Nguyen & Meyer, 2004, Sun, Mellahi, & Thun, 2010a). Although previous research has investigated a wide range of determinants of IJV dissolution<sup>1</sup> (e.g., Inkpen & Beamish, 1997, Xia, 2011, Yan & Gray, 1994), the literature remains silent on how state participation affects IJV dissolution (Barringer & Harrison, 2000, Nemeth & Nippa, 2013). This omission in the literature is surprising given that, in a national context, state ownership can benefit domestic firms by providing them with access to state-controlled resources such as capital, licenses, or market access (Inoue, Lazzarini, & Musacchio, 2013, Musacchio & Lazzarini, 2014). In how far the participation of a domestic, state-controlled actor can offer such benefits to IJVs and thus reduce the dissolution risk of IJVs remains an open question.

In this paper, we employ the resource dependence perspective to investigate the effect of state participation on IJV dissolution. Resource dependence theory (RDT) views joint ventures as a mechanism that allows organizations to absorb the external constraints associated with accessing resources (Hillman, Withers, & Collins, 2009, Pfeffer & Salancik, 1978). Unlike alternative organizational strategies for coping with external constraints (e.g. attempts at reducing dependence on particular resources) (Pfeffer & Salancik, 1978, Wry, Cobb, & Aldrich, 2013) constraint absorption provides organizations with direct access to critical resources (Casciaro & Piskorski, 2005). Since in emerging economies many critical resources for foreign firms are controlled by the government, RDT provides a suitable lens for analyzing how state-participation affects the level of constraint absorption through, and thus the dissolution of, IJVs in these economies. Adopting RDT logic also allows us to further the development of RDT in the following three areas in which our understanding of RDT remains incomplete: firms' abandonment –

rather than choice – of means to absorb external constraints, the mechanisms underlying RDT logic, and the contingent and dynamic nature of RDT logic.

First, RDT research has traditionally focused on firms' choice of particular mechanisms for constraint absorption, such as M&As or joint ventures. In contrast, research has paid little attention to the question as to whether these mechanisms work and to the conditions under which firms might abandon such mechanisms, e.g. the divestment of acquired companies or the dissolution of joint ventures (Pfeffer & Salancik, 2003). This omission is problematic since RDT does not see the management of firms' external constraints as a one-off task but rather as a continuous effort to ensure firm survival (Pfeffer & Salancik, 1978). In this study, we analyze and provide evidence of how differences in the resource profiles across various types of partner firms – i.e., privately vs. state owned – contribute to the abandonment of IJVs as constraint absorption mechanisms.

Second, research has called for the clarification of the mechanisms underlying RDT logic to counter suggestions that RDT has become an “appealing metaphor” rather than a “foundation for testable empirical research” (Casciaro & Piskorski, 2005: 167, Pfeffer & Salancik, 2003). We use Pfeffer's (1972) notion of matching organizations' resource hierarchies and external actors' resource profiles to clarify the mechanisms that underlie an RDT-based explanation of IJV dissolution in the specific context of IJVs in emerging economies. Based on our clarification of the particular resource hierarchies of foreign firms in emerging economies, we expect that in this particular context the resource profiles of different types of SCAs – SOEs and government agencies – provide a greater match with foreign firms' resource hierarchies than the resource profiles of private local actors.

Finally, research has highlighted the need to explore the contingent and dynamic nature of RDT logic further (e.g., Hillman, et al., 2009, Pfeffer & Salancik, 2003) given indications that the level of constraint absorption possible through different mechanisms is likely to vary over time and to depend on contextual factors (Casciaro & Piskorski, 2005, Finkelstein, 1997, Pfeffer & Salancik, 2003). Based on RDT logic

we expect that foreign firms' international experience and IJV age moderate the effect of state participation on IJV dissolution owing to the influence of these two variables on the match between foreign firms' resource hierarchies and SCAs' resource profiles.

Overall, our study addresses the following three research questions: (1) How does the constraint absorption associated with an increasing equity stake held by SCAs affect the likelihood of IJV dissolution? (2) How does the variance in constraint absorption associated with different types of SCA moderate the effect of greater state participation on IJV dissolution? (3) How do foreign firm experience and IJV age moderate the effect of greater state participation on IJV dissolution? By addressing these research questions we provide a theoretical explanation for, and empirical evidence on, the effect of state-participation on IJV dissolution. In addition, we contribute to the development of RDT in three ways. First, we extend RDT by advancing theoretical arguments and empirical evidence of how RDT logic applies to the abandonment – rather than choice – of constraint absorption mechanisms. Second, we contribute to the development of RDT by using Pfeffer's (1972) notion of matching organizations' resource hierarchies and external actors' resource profiles to clarify the mechanisms and concepts underlying RDT logic in the context of IJVs. Third, we contribute to our understanding of the boundary conditions of RDT by exploring the moderating effect of international experience and IJV age on the ability of an IJV with a SCA to act as a constraint absorption mechanism.

We test our hypotheses by using a sample of 623 IJVs established in the People's Republic of China (PRC) between foreign firms and domestic privately owned firms, SOEs, or government agencies. State participation in IJVs is particularly prominent in the PRC, where the government continues to control many key resources and continues to exert significant influence over economic activity despite the gradual opening up of the domestic economy (e.g., Lin, 2001, Shi, et al., 2014). We find that state-participation negatively affects IJV dissolution and that this effect varies with the type of state-control partner involved in an IJV, with foreign firms' host country experience, and with the age of an IJV.

## **THEORY AND HYPOTHESES**

Recent RDT-based research has revisited the concept of matching, i.e., Pfeffer's (1972) notion that the particular resources that an external actor provides (i.e., resource profiles) need to match the particular resource needs (i.e., resource hierarchies) of the focal organization (see, for example, Hillman, Cannella, & Paetzold, 2000). Based on the importance of this 'matching', this research has aimed to clarify the role of organizations' environments in shaping their resource hierarchies (e.g., Au, Peng, & Wang, 2000). In addition to attempts to differentiate the resource needs of organizations, research has also begun to differentiate the resource profiles of external actors (Lester, Hillman, Zardkoohi, & Cannella, 2008) with the aim of exploring their relative contribution to constraint absorption. We use the concepts of resource hierarchies and resource profiles to develop theoretical arguments geared towards identifying the survival consequences of resource matching between IJV partners and to explore the contingent nature of such consequences. We focus our analysis on the dependence of the foreign partner in the IJV following prior research that has stressed the particular role of foreign partners' dependence for IJV instability (Inkpen & Beamish, 1997) and argued that foreign partners are comparatively more capable of selecting an alternative partner to absorb external constraints (Bae & Gargiulo, 2004).

### **State participation and IJV dissolution in emerging economies**

#### *Resource hierarchy of foreign firms in emerging economies*

According to RDT, an organization's external dependence and the mechanisms it adopts for absorbing the associated constraints on its operations are influenced by the types of resources that are most critical to the organization's survival (Pfeffer & Salancik, 1978). These types of resources include market access, physical assets, human capital, information, regulatory support, and legitimacy (Hillman, et al., 2009, Pfeffer & Salancik, 1978). Based on the particular characteristics of emerging economies, research has

highlighted (preferential) access to assets, regulatory support, and legitimacy as particularly important for foreign firms in such economies (e.g., Lin, 2001).

Access to assets remains critical to foreign firms operating in emerging economies because governments in, e.g., China (OECD, 2009a, Sun, Mellahi, & Liu, 2011), Russia (Okhmatovskiy, 2010), Brazil (EIA, 2013, UNCTAD, 2012), and India (OECD, 2009b, UNCTAD, 2012) continue to control and allocate critical assets such as capital, natural resources, and transportation networks despite recent liberalization and marketization. Therefore, obtaining and maintaining access to assets is likely to be more important in determining foreign firms' survival in emerging economies than in developed economies, where better functioning markets for key assets exist.

Foreign firms operating in emerging economies also depend on regulatory support to a greater extent than foreign firms operating in developed economies. Such regulatory support may range from providing advice and access to information about the environment (Pfeffer & Salancik, 2003) to "bending existing rules for local market expansion" involving "unorthodox, deviant, or even illicit use" of authority (Lin, 2001: 15). On the one hand, the incompleteness and uneven development of regulatory frameworks in emerging economies increase the importance of a political market in which SCAs sell "state-controlled resources, opportunities, and exemptions from societally shared liabilities" (Lin, 2001: 3). On the other hand, less developed regulatory frameworks also increase the scope for the ad hoc, arbitrary interpretation and enforcement of certain rules by state agents and the non-enforcement of others (e.g., Boddewyn & Brewer, 1994, Lin, 2001). Under such conditions, the material advantages associated with regulatory support become critical for firms.

Finally, foreign firms' need to obtain legitimacy<sup>2</sup>, i.e., a "generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995: 547), is greater in emerging economies than in developed economies owing to the less developed regulatory frameworks and contract-enforcing

mechanisms in such economies. Obtaining legitimacy is particularly important for foreign firms in emerging economies, where foreign firms are more likely to be perceived as exploiting weak or more lenient regulations regarding, for example, environmental protection or labor standards, and where foreign firms are exposed to governments with a greater scope for particularistic action against firms that lack legitimacy (see, for instance, Christmann & Taylor, 2001).

*Resource profiles of state-controlled actors (SCAs) in emerging economies*

Local partners differ in their resource profiles and thus in the degree to which they can provide their foreign partners with access to the resources that are important to their foreign partners. Consequently, local partners vary in their contribution to absorbing external constraints, leading to differences in the likelihood of IJV dissolution. Owing to their specific resource profiles, we suggest that, compared with local private firms, SCAs will allow foreign firms to better absorb their external constraints regarding access to the resources that are most critical for them in emerging economies. Based on existing research stressing the link between equity shares and partner firms' willingness to contribute resources to an IJV (Isobe, Makino, & Montgomery, 2000), we further expect the willingness of SCAs to contribute to the absorption of these external constraints to increase with their equity share.

SCAs allow foreign firms to better absorb their external resource constraints regarding access to assets, regulatory support, and legitimacy than private firms. First, a greater equity stake held by SCAs will enhance foreign firms' ability to access critical assets in emerging economies. In emerging economies, many critical assets remain under the control of SOEs or government agencies. For instance, Russian SOEs control critical assets such as natural resources, communication, and transportation networks, as well as unique technologies (Okhmatovskiy, 2010). Similarly, Luo (1998) suggests that Chinese SOEs have better access to scarce assets such as capital, information, markets, industry experience, and state-instituted distribution channels, than local privately owned firms.



Second, a greater equity stake held by SCAs will enhance foreign firms' ability to access regulatory support in emerging economies and thus increase the likelihood of the IJV benefitting from regulatory support and from the creation of "market-closing advantages" (Boddeyn & Brewer, 1994: 134). Host country governments can provide exclusive licenses to an IJV, protect it from negative interference by other market actors, grant exemptions from specific regulations, or guarantee currency conversion and profit repatriation (e.g., Brouthers & Bamossy, 1997, Luo, 2001). Although IJVs with private firms may also receive regulatory support, anecdotal evidence suggests that host governments on the whole tend to provide more support to IJVs with SCAs than to IJVs with privately-owned firms (e.g., Sun, et al., 2010a).

Third, a greater equity stake held by SCAs will enhance IJVs' constraint absorption regarding access to legitimacy in emerging economies. Organizations can obtain legitimacy through association with "respected entities in its environment" (Suchman, 1995: 588). Since SCAs enjoy natural legitimacy (Boddeyn & Brewer, 1994, Li & Zhang, 2007), being associated with such actors increases the likelihood that foreign firms are also perceived as legitimate entities. IJVs with SCAs are thus more likely to allow for an absorption of foreign firms' external constraints regarding access to legitimacy than IJVs with privately owned firms.

While there are also potential downsides of state participation in IJVs, we propose that state participation will have a net negative effect on IJV dissolution and that this effect will increase in line with the equity share of a SCA. We expect the enhanced constraint absorption possible through partnering with a SCA to outweigh the risk of negative state interference in the operations of an IJV. Research on domestic organizations that are partially owned by the government has highlighted that governments may interfere in their operations through excessive rent appropriation or attempts to pursue non-economic objectives (see, for example, Sun, et al., 2011). For example, Inoue et al. (2013) and Musacchio and Lazzarini (2014) suggest that such interference is particularly likely when governments retain a controlling stake in

partially privatized firms. We acknowledge these arguments as they apply to firms that were partially privatized by the state, but we suggest that they do not apply to IJVs with SCAs for two reasons. First, governments are less likely to abuse their ownership positions in an IJV to negatively interfere in its operations owing to their interest in maintaining continuous access the advanced technology and management know-how of the foreign partner (Luo, 2004). Second, governments are less likely to interfere negatively in the IJV given the lower barriers to exit for foreign firms compared with domestic firms (Jensen, 2006). Consequently, we do not expect to see greater negative government interference in IJVs with increasing stakes held by state-controlled actors. Based on this discussion, we formulate the following hypothesis.

*Hypothesis 1. The likelihood of IJV dissolution declines as the equity stake held by state-controlled actors increases.*

### **Different types of state participation and IJV dissolution**

Research suggests that SOEs and government agencies<sup>3</sup> are the SCAs that are most likely to be involved in IJVs with foreign firms (e.g., Brouthers & Bamossy, 1997, Sun, et al., 2010a). Because SOEs and government agencies differ in their ability to absorb foreign firms' constraints with regard to critical assets, regulatory support and legitimacy, we expect the effect of state-participation on IJV dissolution to vary with the type of SCA involved in an IJV.

SOEs in emerging economies control or have preferential access to assets that often remain tightly controlled by the government, such as capital, information, or state-instituted distribution channels (Luo, 1998, Okhmatovskiy, 2010). SOEs and their managers are also likely to possess industry-specific knowledge and networks that may be critical for foreign investors. Prior case-based research has underlined how such SOEs can help firms absorb external constraints and thus contribute to the survival of IJVs (e.g., Brouthers & Bamossy, 1997, Sun, et al., 2010a). While the control over access to state-

controlled assets is often delegated to SOEs, government agencies may also be able to provide IJVs with access to such critical assets such as timely information or capital from off-budget funds (Lin, 2001). However, taken together the evidence suggests that government agencies will be less likely than SOEs to be able to provide IJVs with access to critical assets such as industry experience and distribution networks.

Although SOEs cannot directly provide IJVs with regulatory support, IJVs with SOE involvement can indirectly benefit from the support provided to the SOE by the government and the relevant supervising agencies (Brouthers & Bamossy, 1997, Sun, et al., 2010a). In contrast to SOEs, government agencies possess regulatory power and can thus make a comparatively greater contribution to an IJV in terms of providing regulatory support. Such support can include both preferential regulatory treatment and reduced regulatory constraints, for example, by granting the IJV (exclusive) licenses, simplifying import and export procedures, or relaxing regulations on land use or accounting and employment practices (Lin, 2001). Government agencies may also restrict the operations of rivals to provide an IJV with a monopoly position or interfere in the operations of rivals to provide an IJV with a competitive advantage (Boddewyn & Brewer, 1994, Sun, et al., 2010a). Based on this discussion, we suggest that government agencies have much greater scope for providing IJVs with regulatory support than SOEs.

Finally, while both SOEs and government agencies enjoy natural legitimacy, we expect the legitimacy obtained through an IJV with a government agency to be greater and more immediate than the legitimacy gained through an IJV with a SOE. Indeed, unlike SOEs, government agencies enjoy and can thus provide legitimacy that is not limited to particular sectors of the economy. Thus, government agencies are more likely to provide the legitimacy that foreign firms depend on for their survival in a particular market.

The different resource profiles of SCAs are particularly important for IJV dissolution given the relative importance of the resources that different SCAs can provide to IJVs. Specifically, although access to local assets is important, particularly when such assets are state controlled (e.g., natural resources), we expect

IJV dissolution in emerging economies to depend more on regulatory support and legitimacy and less on access to assets for two reasons. First, as foreign firms tend to be asset rich their dependence on assets is, perhaps with the exception of natural resources, comparatively less pronounced than their dependence on regulatory support and legitimacy. Second, given that foreign firms in emerging economies are confronted with comparatively weaker regulatory frameworks (Meyer, Estrin, Bhaumik, & Peng, 2009) and a greater liability of foreignness (Uhlenbruck, Rodriguez, Doh, & Eden, 2006), gaining regulatory support and legitimacy will be comparatively more important than access to assets for the survival of IJVs in emerging economies (Lu & Xu, 2006). Based on this discussion we formulate the following hypothesis.

*Hypothesis 2. The negative effect of the participation of a government agency on the likelihood of IJV dissolution will be stronger than the negative effect of the participation of a SOE on the likelihood of IJV dissolution.*

### **The moderating effects of host country experience and IJV age**

We expect that the contribution of a SOEs and government agencies to constraint absorption in an IJV will decline as the host country experience of the foreign partner increases. RDT indicates that firms' ability to manage their external dependence is based on an understanding of "the social context and the interrelationship between context and the organization" (Pfeffer & Salancik, 2003: 20). Host country experience is likely to enhance foreign firms' understanding of the host country context and their interrelationship with that context. Consequently, host country experience improves a foreign firm's ability to absorb external resource constraints. Host country experience will thus weaken the negative effect that the participation of a SOE or a government agency has on IJV dissolution by reducing the value of the contribution that a foreign firm's existing state-controlled partner makes to absorbing resource constraints regarding the firm's access to assets, regulatory support and legitimacy.

First, foreign firms with more host country experience are less dependent on the contribution that a SOE or a government agency involved in an IJV can make to absorbing constraints on access to critical assets (e.g., distribution channels, capital, or industry-specific knowledge). Other operations in the host country will improve foreign firms' ability to establish and manage access to distribution channels and may lead to the accumulation of capital, which eases external constraints on access to state-controlled capital (Lin, 2001, Okhmatovskiy, 2010). Host country experience allows foreign firms to acquire knowledge regarding operating in the specific industry. Therefore, the advantage that particularly local SOEs have traditionally had over local private firms in this regard is less important for foreign firms with host country experience (Luo, 1998). Further, host country experience allows foreign firms to develop and provide in-house training to staff more quickly and effectively, thus mitigating the external constraint associated with the frequently highlighted lack of appropriately trained employees in emerging economies (e.g., Lin, 2001). Finally, firms that have experience with other operations in the host country are likely to be able to draw on this experience and their participation in local networks to mitigate the resource constraints of a focal venture that involves a SOE or a government agency. Host country experience will therefore reduce the role of SOEs and government agencies actors in constraint absorption and weaken the negative effect that the participation of these actors has on IJV dissolution.

Second, greater host country experience will reduce the value of the contribution of both types of state-controlled partner in the IJV to absorbing constraints on firms' access to regulatory support. Experience of operating in a host country will enhance foreign firms' ability to deal with a potentially underdeveloped regulatory framework in the host country (e.g., Barkema, Bell, & Pennings, 1996). Increasing host country experience will therefore reduce foreign firms' reliance on regulatory support available through existing state-controlled partners. As the importance of the regulatory support possible through partnering with a SOE or government agency declines, the effect that the participation of these actors has on IJV dissolution decreases.

Third, foreign firms' host country experience will reduce the value of the contribution that SOEs and government agencies can make to absorbing foreign firms' constraints on their access to legitimacy. Legitimacy accrues over time so that the longer that a foreign firm has been operating in a host country, the more likely it will be for that firm to be regarded as a legitimate actor (Luo, 2001). Experience of operating in a host country allows firms to learn how to engage in legitimacy-enhancing activities and how to avoid legitimacy-reducing activities. Therefore, foreign firms with host country experience that operate in an IJV with a SOE or government agency will have a reduced need for the legitimacy that such actors can provide. Based on this discussion, we formulate the following hypothesis.

*Hypothesis 3. The strength of the effects of SOE and government agency participation on the likelihood of IJV dissolution decreases with foreign firms' host country experience.*

We suggest that the value of the contribution that SOEs and government agencies can make to absorbing foreign firms' external constraints in an IJV will decline as an IJV ages. Over time, the foreign firm will better understand the particular nature and level of its dependence on the domestic environment (Pfeffer & Salancik, 2003). Therefore, with higher IJV age foreign firms will be less likely to rely on existing state-controlled partners to absorb their external resource constraints. Prior research on IJVs suggests that over time, foreign firms will acquire the knowledge and skills that allow them to reduce or eliminate their dependence on their IJV partners (Inkpen & Beamish, 1997). In the particular case of IJVs with state-controlled partners, foreign firms may have learned how to replace state-controlled resources such as intermediate products with non-state-controlled alternatives. Similarly, foreign firms which initially relied on a SOE or a government agency for access to skilled staff (Lin, 2001) will gradually be able to recruit from alternative sources of skilled staff. Finally, and in line with our argument regarding the moderating effect of foreign firms' experience in the host country (e.g., Barkema, et al., 1996) a foreign firm will over time learn how to operate and attain legitimacy in the host country, thus reducing its need to rely on its IJV with a SOE or government agency for absorbing external resource constraints.

In addition to the learning effects associated with IJV age, we also expect the resources that are critical to IJV survival to change as an IJV ages, thus affecting potential contribution SOEs or government agencies can make towards the absorption of external constraints. First, we expect that the importance of gaining access to assets that are controlled by the state decreases as an IJV ages. Obtaining access to particular assets such as land and employees is crucial for the establishment of a new IJV. As many such assets are controlled by the state in emerging economies (e.g., Sun, Wright, & Mellahi, 2010b), having a SOE or a government as partner is particularly important in the early stages of an IJV's development. For example, Brouthers and Bamossy (1997) highlight the importance of accessing skilled local employees as a key rationale for foreign firms to establish IJVs with SOEs in Central and Eastern Europe. While firms continue to require access to resources such as natural resources over their lifetime, we propose that access to some resources such as staff and land will be more important in the early stages of an IJV and will tend to decline during later stages of the IJV's development.

Second, the importance of access to enhanced regulatory support through partnering with a SOE or government agency is likely to decrease as the IJV ages. Regulatory support is crucial during the early stages of IJV development, when operations need to be established and when foreign firms have to pass various tests on, e.g., safety and energy conservation to obtain licenses. As government agencies in particular play a key role in "authorizing and regulating the establishment of new enterprises" (Lin, 2001), IJVs are more likely to benefit from the enhanced regulatory support available through a such a partner in its early as opposed to later stages of development. Regulatory support will also be crucial for the foreign firm to develop a strong market presence. Indeed, Sun et al. (2010a) show that the access to the market for cars possible through partnering with local SOEs enabled foreign car manufacturers to establish a strong presence in the Chinese car market. However, in this case, we also contend that while such access will remain important throughout the life of an IJV given the nature of emerging economies, its importance for the foreign firm will decline with higher IJV age.

Finally, we expect the foreign firm's dependence on a local SOE or government agency for obtaining legitimacy to decrease as the IJV ages. A central element of the new organization's liability of newness is a lack of legitimacy that it must overcome. Prior research has stressed that compared with well-established firms, young firms thus have particularly strong incentives to obtain legitimacy (e.g., Meschi & Riccio, 2008). In general, a foreign firm's legitimacy in a particular host country is a function of the time that the firm has survived in a market, as survival indicates the firm has successfully overcome any challenges associated with obtaining such legitimacy (Hillman & Wan, 2005). While legitimacy needs to be maintained by a firm, we propose that the creation of legitimacy is more difficult for newly established firms than for established firms. Obtaining legitimacy through affiliation with a local SOE or government agency that enjoys natural legitimacy (Boddewyn & Brewer, 1994) will thus decrease in importance with higher IJV age. Based on this discussion, we formulate the following hypothesis:

*Hypothesis 4. The strength of the effects of both SOE and government agency participation on the likelihood of IJV dissolution decreases with IJV age.*

## **METHODS**

### **Sample and data**

We test our hypotheses by using data on IJVs in the PRC. The PRC is a suitable setting for this research because, similar to other emerging economies such as Russia or India, the government plays an active role in the local economy, thus increasing the scope for IJVs between foreign firms and SCAs. Consequently, many foreign investors in the PRC have established IJVs with SOEs and other types of SCAs (e.g., Sun, et al., 2010a, Szamosszegi & Kyle, 2011).

We used the Thomson SDC database to create a new data set by extracting from it all IJVs in the PRC that were announced between 1985 and 2009. In line with prior research (see, for example, Lu & Hébert,



2005, Park & Russo, 1996), we only considered IJVs that were formed up to four years before our cut-off date, i.e., December, 31<sup>st</sup>, 2009. As the SDC database does not include information on the dissolution or continued existence of an IJV, the data had to be confirmed for each IJV through individual searches on online databases, news services, and company websites. We therefore selected a random sample of 1,500 IJV. From those IJVs, we eliminated 57 IJVs with predetermined dissolution dates based on suggestions in the literature that the termination of such IJVs is expected and thus is less likely to be considered a failure (e.g., Inkpen & Beamish, 1997). We were able to confirm the dissolution or continued existence of 623 of the remaining IJVs. Of these 623 IJVs, 112 IJVs (18.5%) were dissolved, and 511 IJVs (83%) were still operating. The average age of the dissolved IJVs in our data set was 7.0 years. Further, a total of 286 (45%) IJVs were established with the participation of at least one SCA. Among these IJVs, 204 IJVs (71%) were formed with a SOE, 70 IJVs (25%), with a government agency, and 12 IJVs (4%), with the participation of both. Of the 204 IJVs with the participation of a SOE, 46 IJVs (22%) were dissolved; of the 70 IJVs with the participation of government agencies, 11 IJVs (16%) were dissolved; and of the 12 IJVs in which both a SOEs and a government agency participated, three IJVs (25%) were dissolved. In 35 (12%) of the IJVs involving state participation, SCAs held a majority share in the IJV.

The average number of IJVs in which the foreign firms participated was 12.5. In 187 of the IJVs (30%), the partners held equal equity shares, and 206 of the IJVs (33%) had more than two partners. As shown in Table 1, the largest proportion of IJVs in our sample belonged to the manufacturing industry.<sup>4</sup> The distribution of our sample in terms of industry is consistent with the distribution in our source database. Table 2 shows the distribution of our sample by province.

\*\*\* Insert Tables 1 and 2 here \*\*\*

### **Dependent, independent, and moderating variables**

Our dependent variable is the hazard of IJV dissolution. Prior research regards the survival/dissolution of IJVs as an important indicator of performance (e.g., Lu & Hébert, 2005, Steensma & Lyles, 2000).

Empirical studies show that IJV dissolution tends to be associated with a lack of success on both subjective and objective performance measures (e.g., Makino & Beamish, 1998).<sup>5</sup>

In line with past research on IJV dissolution (e.g., Dhanaraj & Beamish, 2004), we test our hypotheses by using a Cox proportional hazard model. Our dependent variable, the hazard rate, is coded in STATA by using a dichotomous variable reflecting the status of the IJV (1 = dissolved, 0 = existing) and the age of the IJV, which is measured by calculating the period from the IJV's announcement until its dissolution or, for surviving IJVs, until December 31<sup>st</sup>, 2009.

Our independent variables are two variables reflecting the equity shares held by the different SCAs.<sup>6</sup> We measure our first moderating variable, foreign firms' experience, by using the total number of IJVs that a foreign firm had established in the PRC until the date of the focal IJV's dissolution or until our cut-off date (similarly, see Tong, Reuer, & Peng, 2008). In cases in which an IJV had more than one foreign partner, we calculate the sum of this index across all of the foreign partners. We measure our second moderator, IJV age, as the period in months from the date of the agreement to either the date of dissolution or December 31<sup>st</sup>, 2009, for surviving IJVs.

### **Control variables**

We include several control variables that have been shown to affect IJV dissolution. Prior research has argued that the equity structure of an IJV (e.g., equally shared versus majority ownership) is important for IJV survival (see, for instance, Park & Ungson, 1997). Following Park and Ungson (1997), we measure equity structure by using a dummy variable that assumes a value of 1 for IJVs in which the equity shares

were distributed equally (i.e., 50/50, 33.3/33.3/33.3) and 0 for unequal equity distribution. Existing research on IJV dissolution has also stressed the role of cultural distance between partner firms, which is expected to increase the likelihood of conflicts and misunderstandings, and thus to increase the risk of IJV dissolution (Lyles & Salk, 1996). We calculate the Kogut-Singh Index of cultural distance between two parties based on the cultural dimensions and values provided by Hofstede (1980). A number of studies specifically dedicated to analyzing multi-partner IJVs have argued that such IJVs' survival chance differs from that of IJVs between two partners (Luo & Park, 2004). To control for this potential effect, we include a dichotomous variable that takes a value of "0" for a two-partner IJV and a value of "1" for a multi-partner IJV.

Prior research has highlighted the relevance of parent size for the survival of subsidiaries (e.g., Dhanaraj & Beamish, 2004). While some of the partner firms in our sample are publicly listed and information on their size is thus available, a majority of the firms are not publicly listed. In addition, in cases in which the local partner is a SCA, such as a government agency, traditional measures of firm size (e.g., turnover) may not be applicable. Yet, given the potential impact of parent size on IJV dissolution and given the possibility that particularly large firms are more likely to be able to partner with SCAs, we follow the approach of Shi et al. (2014) and control for whether a foreign firm belongs to the Fortune Global 500. In addition to reflecting size, our dummy reflecting foreign firms' membership in the Fortune Global 500 allows us to control for the possibility that such firms are more likely to have access to the best local partners and the possibility that their respective IJVs are thus less likely to dissolve.

We also include control variables to account for the possibility that dissolution is initiated by the local partner. Specifically, we use three control variables reflecting local firms' dependence on their foreign partners. First, local firms in emerging economies tend to depend on their foreign partners in order to integrate themselves into the global economic division of labor and the global flow of information (Eden & Lenway, 2001). As foreign partners in the Fortune Global 500 are arguably able to provide such

integration and access, foreign partners' membership in the Fortune Global 500 also reflects a local firm's dependence on its foreign partner. Second, prior research suggests that Chinese firms depend on their foreign partners to obtain advanced technology and know-how (Luo, 2004) and are thus less likely to dissolve IJVs that provide them with these resources. To control for this dependence we include a dummy variable reflecting whether a foreign firm operates in one of the high-tech sectors defined by SDC Platinum. Finally, since local firms may have previously acquired such advanced technology and know-how through IJVs with other foreign firms and are thus less dependent on the foreign partner for these resources, we control for local partners' experience in IJVs with foreign firms, measured as the total number of IJVs established by a local partner until the date that a focal IJV was established.

We also control for the degree of marketization, i.e., the "expansion of exchange relations in economic relations in economic activities and a concurrent decline of central planning based on the state's administrative commands" (Lin, 2001: 32), given the importance of this factor for the operations of foreign firms in transition/emerging economies, such as the PRC (e.g., Child & Tse, 2001). To measure marketization, we use the NERI marketization index of the Chinese province in which the IJV is located (Fan & Wang, 2001). This index comprises a range of facets of the environment in Chinese provinces and contains more information than the frequently used distinction regarding whether a firm is located in the coastal areas of the PRC (e.g., Xu & Lu, 2007). Because IJVs might be more likely to be dissolved if foreign firms had no alternative when entering China, we control for the existence of ownership restrictions in the respective industry at the time of the IJV's establishment by using a dummy variable. This variable takes the value of "1" if wholly owned foreign enterprises were prohibited in a particular sector at the time that an IJV was established. We also account for a change in ownership restrictions and include a dummy variable that takes the value of "1" if ownership restrictions were lifted before the termination/cut-off date. Finally, we control for an IJV's industry based on previous studies that have argued that dissolution risk varies across industries (Dhanaraj & Beamish, 2004, Luo, 1997). We use a block of six dummy variables to control for seven industries based on 2-digit SIC codes.

## RESULTS

Table 2 presents the correlation matrix of our variables. The correlation coefficients among our independent variables are below the commonly suggested threshold of 0.7, indicating the absence of severe collinearity. We also checked for potential multicollinearity using variance inflation factors and find no presence of multicollinearity (VIFs < 5 in all cases).

\*\*\* Insert Table 3 here \*\*\*

We adopt Cox's proportional hazard model using STATA 11. This approach models expected time to failure with an unspecified baseline hazard function. Accordingly, it enables an examination of the relationship between survival time and explanatory factors, and it has been widely used in previous research (Dhanaraj & Beamish, 2004, Xu & Lu, 2007)<sup>7</sup>. We estimate four specifications. Table 4 presents our results. In the first specification (Model 1), we only include the control variables to compute a baseline model. To test our hypotheses, we estimate three additional models. Model 2 includes the shares of SOEs and government agencies, and in Model 3, we add the interaction terms that reflect the moderating effects of MNEs' host country experience. Model 4 further includes the interaction effects between state participation and IJV age to test for the development of the effect over an IJV's lifespan. Where applicable, we check the proportional hazard assumption by using the Schoenfeld residual-based test developed by Grambsch and Therneau (1994) and find no violation of the proportional hazard assumption.<sup>8</sup> We also check the model significance and the predictive power by using Wald chi square statistics and Harrell's C statistics respectively. The results of these tests indicate that the significance and the predictive power of these models are good. Regarding the interpretation of the results of the Cox proportional hazard model shown in Table 4, a negative coefficient indicates a decrease in the likelihood of IJV dissolution.

\*\*\* Insert Table 4 here \*\*\*

A potential concern relates to the possibility that the selection of a state-controlled actor is endogenous, i.e. strong foreign firms may be better able to attract state-controlled actors as partners and the resulting IJVs are thus more likely to survive. To address this concern we also run our analysis using a nested matching approach, a variant of the matching approach recommended by Reeb et al. (2012). We match IJVs based on analysis time and two covariates that are likely to affect firms' decision to collaborate with SCAs (industry plus one of two factors indicative of the "strength" of a foreign firm, i.e. Fortune Global 500 and multi-partner IJV<sup>9</sup>) and carry out the estimation using conditional logistic regression technique (STATA, 2003). The results from this approach are consistent with results reported in table 4 indicating that endogeneity is not an issue in our study.<sup>10</sup>

Hypothesis 1 suggests that the participation of SOEs or government agencies reduces the risk of IJV dissolution. Our findings in Model 2 show that adding the shares of SOEs and government agencies to the baseline model increases the percentage of explained variance in IJV dissolution. The results for Model 2 show that while the participation of a government agency has the expected effect on IJV dissolution ( $p < .001$ ), the effect of SOE participation is not statistically significant. However, Models 3 and 4, which add the interaction terms, indicate that both the equity share of SOEs and the equity share of government agencies have the expected negative effect on IJV dissolution, thus supporting hypothesis 1.

Our findings also support hypothesis 2, which suggests that the strength of the effect of state participation on IJV dissolution differs between SOE and government agency participation. The results for Model 2 show that the participation of government agencies has a stronger negative effect on IJV dissolution than the participation of SOEs. Further, the result of the Wald test ( $\chi^2 = 294.77$ ) demonstrates that the difference between the two coefficients is statistically significant at the 1% level, thus supporting hypothesis 2.

Hypothesis 3 suggests that foreign firms' host country experience moderates the effects that the participation of SOEs and government agencies has on IJV dissolution. To test this hypothesis, Model 3

includes the interaction between host country experience and both the equity share of a SOEs and the equity share of a government agency. Although both coefficients have the expected positive sign, only the coefficient for the interaction between the equity share of a SOEs and foreign firms' host country experience is statistically significant ( $p < .05$ ). Our results thus provide only partial support for hypothesis 3.

Hypothesis 4 suggests that IJV age has a moderating effect on the association between the participation of SOEs or government agencies and IJV dissolution. To test this hypothesis, Model 4 includes the interactions between IJV age and both the equity shares of SOEs and the equity shares of government agencies. The results show that the coefficients for the interaction terms between the equity shares of both types of SCA and IJV age are positive and statistically significant ( $p < .001$  and  $p < .01$  respectively). Thus, we find support for a declining negative effect of the participation of SOEs or government agencies on IJV dissolution with increasing IJV age in line with hypothesis 4.

The results for the control variables are similar across our four models. The results indicate that IJVs are more likely to dissolve if there is a high cultural distance between the partner firms or if the IJV involves a foreign partner firm that is among the Fortune Global 500. Moreover, the likelihood of IJV dissolution is significantly reduced if IJVs have more than two partner firms, if they involve a foreign partner operating in a high-tech sector, if the foreign partner(s) have experience with IJVs in the PRC, if the local partner(s) have experience of collaborating with foreign firms, if the IJV operates in a region characterized by high levels of marketizations, if the foreign firm faced ownership restrictions when establishing the IJV and such restrictions were subsequently lifted. The results for our industry controls further indicate that IJVs in the agricultural, forestry, and fishing (SIC01-07) and mining and construction (SIC 10-17) sectors are less likely to be dissolved than IJVs in manufacturing (SIC 20-39) sectors. Moreover, IJVs in the wholesale and retail trade (SIC 50-59) sectors are more likely to be dissolved than IJVs in manufacturing (SIC 20-39) sectors.

## DISCUSSION

In our first hypothesis, we argue that the size of the stake held by a SCA has a negative effect on IJV dissolution. Grounded in RDT and the concept of matching, we argue that SCAs are more useful than privately owned local firms in absorbing foreign firms' external constraints in emerging economies and that the positive benefits derived from SCA participation in the IJV will increase with the size of their stake in the IJV. The results of our analysis confirm our expectation. These results complement the existing anecdotal, case-based evidence on the impact of state participation on IJV dissolution (Brothers & Bamossy, 1997, Sun, et al., 2010a). Further, by accounting for varying degrees of state ownership in IJVs, our study is the first to propose and find evidence for a decrease in the likelihood of IJV dissolution as the equity stake held by SCA partner in the IJV increases.

Our findings regarding hypothesis 1 also complement recent research highlighting the effects of state ownership in domestic firms (Inoue, et al., 2013, Musacchio & Lazzarini, 2014). Inoue et al. (2013) argue that majority state ownership of firms would be associated with an increase in government interference that would outweigh the benefits associated with partial state ownership, i.e. the absorption of external constraints (Inoue, et al., 2013). In contrast to this argument, we argued and found empirical support that there is positive association between the size of the stake held by a SCA and IJV dissolution, thus suggesting positive net effects of both minority and majority state ownership in IJVs. We attribute these contrasting results to the differences between partially privatized domestic enterprises in which the host government retains an equity stake and newly established IJVs between foreign firms and domestic SCAs.

In our second hypothesis, we argue that the strength of the negative effect of state participation varies with the type of SCA involved in the IJV owing to variance in different SCAs' contribution to foreign firms' constraint absorption. Our argument is based on RDT logic and the notion of matching (i.e., the notion that the level of constraint absorption varies depending on the match between organizations'



resource hierarchies and external actors' resource profiles). We thus propose that the variation in the resource profiles of different SCAs leads to variation in the degree to which different SCAs allow foreign firms to absorb external resource constraints, differently affecting IJV dissolution. Specifically, we argue that the participation of government agencies in an IJV has a stronger negative effect on IJV dissolution than the participation of a SOE. Our results support this second hypothesis and suggest that IJVs formed with government agencies are less likely to dissolve than those formed with SOEs. This finding contributes to overcoming the dearth of knowledge regarding the effects of state participation on IJV dissolution and add to the literature on partner selection in IJVs (e.g., Luo, 1998, Luo, 1997).

Furthermore, this finding underlines the need to account for different types of SCAs when analyzing business-government relations (Okhmatovskiy, 2010). In his study of Russian banks, Okhmatovskiy (2010) finds that banks with ownership ties to SOEs are more profitable than banks with ownership ties to the government. Okhmatovskiy's (2010) findings thus contrast with our findings for IJVs in the PRC, as we find SOE participation to be less beneficial for IJV survival than government participation. This difference in findings is likely to be due to the fact that, unlike the government, domestic SOEs are also important clients for Russian banks and because Russian banks operating in Russia are not faced with a liability of foreignness that would make ownership ties with the government particularly beneficial.

While our distinction of SCAs into government agencies and state-owned enterprises follows prior research such as Okhmatovskiy (2010), recent research has highlighted the importance of accounting for different government levels when analyzing ties between firms and governments. Lin, Cui and Lu (2014), for example, distinguish between central vs. local government controlled SOEs in their study of outward FDI of Chinese SOEs. Given that SCAs controlled or administered by different levels of government can be expected to vary in their contribution to foreign firms' attempts to absorb external constraints, we conducted additional tests to explore whether the relationship between SCA share and IJV dissolution differs depending on whether a SCA is controlled or administered by the central government level vs. other, lower government levels.<sup>11</sup> The results of this analysis confirm that the negative effect of SCA

participation on IJV dissolution is strengthened if the respective SOE or government agency is controlled or administered by the central government. Although data limitations prevent us from using a finer-grained categorization of different administrative levels as used, for instance, by Wang et al. (2012) future research should explore these effects in more depth.

Overall, our findings underline the need to differentiate between distinct types of SCAs when researching political strategies (Delios & Henisz, 2003, Hillman & Wan, 2005) in the context of MNE-host government relations. Whereas existing research has highlighted the role of managerial ties to political decision makers (e.g., Li, Zhou, & Shao, 2009), Sun et al. (2010a) suggest that research on inter-organizational-level political links remains underdeveloped. Consequently, our study of IJVs with SCAs enhances our understanding of political ties on an inter-organizational level. Nevertheless, more research is needed on the effects of different types of ties with different types of SCAs in different contexts to advance our understanding of MNE-government relations further.

In our third hypothesis we suggest that the effect of the participation of SOEs and government agencies on IJV dissolution is moderated by the level of foreign firms' host country experience. We find that whereas foreign firms' host country experience moderates the effect of SOE participation on IJV dissolution, its effect on the relationship between government agency participation and IJV dissolution is not statistically significant. A possible explanation for this finding may lie in the local nature of both regulatory support and legitimacy. Indeed, foreign firms' ability to deal with less developed regulatory frameworks and the legitimacy they obtained through operating in different regions and/or different sectors may not always be easily transferable and thus may not reduce government agencies' contribution to the absorption of new ventures' external constraints. Although research on MNE-host government relations has argued that accounting for host country experience is important when investigating foreign firms' political activities overseas (Hillman, 2003, Wan & Hillman, 2006), the results have so far been inconsistent, leading Wan and Hillman (2006) to call for additional insight into the role of host country

experience in this context. Our analysis provides such insight by highlighting the moderating effect of host country experience on the relationship between different types of SCAs and IJV dissolution with regard to constraint absorption. In so doing, we contribute to a better understanding of the contingent nature of MNE-government relations.

Our fourth hypothesis suggests that the negative effects of state participation on IJV dissolution diminish with increasing IJV age. We argue that greater experience in operating a particular IJV and changes in resource needs across the stages of an IJV's lifecycle reduce an existing state-controlled partner's contribution to foreign firms' ability to absorb their external constraints. We find support for this hypothesis. In line with our hypothesis, the negative effects of both, the participation of a SOE as well as the participation of a government agency, on IJV dissolution decline with increasing IJV age. We expect this effect to result from foreign partners' greater familiarity with the particular environmental conditions over the lifetime of an IJV, which leads to a relative decline in the importance of SOEs and government agencies for the absorption of external resource constraints.<sup>12</sup>

Overall, our findings regarding the moderating role of IJV age on the effect of state participation on IJV dissolution extend recent research on MNE-host government relationships that stresses the contingent value of political ties and that identifies time as one important contingency (Sun, et al., 2010a). Treating IJVs with SCAs as a particular type of political tie, our findings imply that the change in the value of foreign firms' political ties over time is itself contingent on the local state-controlled or political actor with which these ties have been established. Our results suggest that while ties to some local political actors might provide foreign firms with value over extended periods of time, the value of political ties to other local political actors may not be particularly long lasting.

## CONCLUSION

Our study on the effects of state participation on IJV dissolution contributes to both the literature on the dissolution of inter-organizational relationships and the further development of RDT. We contribute to the literature on the dissolution of inter-organizational relationships, which remains scarce compared with the literature on the formation of such relationships (e.g., Barringer & Harrison, 2000), by analyzing the effect of state participation on IJV dissolution. Prior research has examined the effect of various partner characteristics, such as cultural distance, on the dissolution of IJVs (Cui & Kumar, 2012, Park & Ungson, 1997). However, despite the importance of IJVs involving state participation for foreign firms operating in emerging economies (e.g., Sun, et al., 2010a), systematic evidence on the effect of state participation on IJV dissolution is lacking thus far. Given the importance that the corporate governance literature attributes to firms' ownership identity and given the recently increased interest in the effects of state participation on organizational outcomes (Inoue, et al., 2013, Musacchio & Lazzarini, 2014), we believe that our study makes an important contribution to the IJV literature. By studying the effects of state participation on IJV dissolution, we further respond to calls for more research on IJV dissolution in an international context and for better theoretical explanations of the dissolution of inter-organizational relationships (Barringer & Harrison, 2000, Nemeth & Nippa, 2013).

We also contribute to ongoing efforts to test and develop RDT (see, for example, Hillman, et al., 2009, Katila, Rosenberger, & Eisenhardt, 2008). We refine and extend RDT in three ways. First, we contribute to the scant but incipient evidence that RDT logic is not limited to explaining the choice of constraint absorption mechanisms but can also be applied to their abandonment (Xia, 2011, Xia & Li, 2013). Specifically, we show that RDT logic is not limited to explaining the choice of IJVs but that it can be extended to investigate later development stages of IJVs.

Second, we extend RDT by developing Pfeffer's (1972) notion of matching organizations' resource hierarchies and external actors' resource profiles in the context of IJVs. In doing so, we respond to calls to

clarify the mechanisms and concepts underlying RDT logic (Hillman, et al., 2009). We advance empirical evidence for an RDT based explanation that allows us to clarify the mechanisms that underlie IJV dissolution. Specifically, we show that in emerging economies the resource profiles of different types of SCAs – SOEs and government agencies – provide a greater match with foreign firms’ resource hierarchies than the resource profiles of private local actors. By adopting Pfeffer’s (1972) notion of matching, which so far has only been applied in RDT research on boards of directors, we also contribute to the “talking between” different strands of RDT research (Hillman, et al., 2009: 1415).

Third, our study contributes to clarifying the boundary conditions of resource dependence logic by adding to our understanding of the contingent and dynamic nature of organizations’ decision to abandon constraint absorption mechanisms (Hillman, et al., 2009, Pfeffer & Salancik, 2003). Specifically, we show that foreign firm experience and IJV age are boundary conditions on the positive effect of state participation on the survival of IJVs, i.e., on the suitability of the IJV as a constraint absorption mechanism. Our findings therefore extend RDT by providing empirical evidence that the level of constraint absorption possible through different mechanisms is likely to vary over time and depends on contextual factors (Casciaro & Piskorski, 2005, Finkelstein, 1997).

### **Practical implications**

Given the re-emergence of state capitalism in both emerging and developed countries (Economist, 2012) combined with the state’s traditionally greater economic involvement in emerging economies, establishing an IJV with a SCA remains an important way to enter emerging economies. Our study shows that the equity participation of a local SOE or a government agency reduces the likelihood of IJV dissolution. Our findings thus aid foreign firms in their choice of local partner or—if this choice is restricted by the availability of alternatives or by legal restrictions—in their decision on whether to enter a particular market. Further, foreign firms are well advised to assess how far the specific type, level, and

quality of resources provided by different SCAs might allow them to absorb the particular external resource constraints that they face in emerging economies. Our findings indicate that IJVs with government agencies are less likely to be dissolved than IJVs with SOEs.

Moreover, our findings have implications for both foreign firms with substantial host country experience and foreign firms with little or no host country experience. On the one hand, our empirical results indicate that firms with little or no host country experience will benefit more from the enhanced constraint absorption possible through partnering with a SOE than foreign firms with significant host country experience. Indeed, foreign firms with significant host country experience will likely have greater knowledge of alternative ways of absorbing constraints on their access to assets and thus will likely benefit less from partnering with a SOE. On the other hand, however, our empirical results also indicate that regardless of their host country experience, firms will benefit from the enhanced constraint absorption possible through partnering with a government agency. In other words, foreign firms should understand that host country experience is unlikely to reduce their need for regulatory support and legitimacy. This finding suggests that host country experience accumulated in different regions and/or different sectors of the host country may not be directly transferable to other regions or sectors.

Finally, our findings indicate that the benefits derived from having a government agency as partner decline over the lifetime of an IJV. Therefore, firms establishing an IJV with a government agency should be aware of such changes and of the potential consequences that those changes can have on the economic rationale underlying the existence of their IJV.

## **Limitations**

Our study has a number of limitations. First, our theoretical arguments are only focused on the dependence of the foreign partner in the IJV. We chose to focus on the dependence of the foreign over the local partner in the IJV based on the premise that foreign partners in an IJV are comparatively more

capable than local partners of selecting an alternative mechanism to absorb external constraints, e.g., the dissolution of the IJV and the establishment of a new one with a different partner (Bae & Gargiulo, 2004). As we acknowledge that IJV termination can also be initiated by the local partner, we control for this possibility empirically by incorporating a number of factors that reflect the local firms' objectives and dependence on the foreign partner and thus their potential desire to dissolve an IJV. However, future studies could complement both our theoretical argument and our analysis by examining how the dependence of the local partner affects IJV dissolution.

A second limitation of this study concerns the way in which we capture foreign firms' resource hierarchy, local partners' resource profiles, and the resulting variation in the degree of match between a foreign firm and different types of local actors, which is central to our RDT-based explanation of IJV dissolution.

While our assessment of foreign firms' resource hierarchy and local partners' resource profiles was based on prior research, future research could develop more immediate measures of these concepts.

Finally, our study is based on data gathered from IJVs operating in only one country, the PRC, which may limit the generalizability of our findings. We chose the PRC as a major emerging economy showing high levels of government involvement in economic activity (Lin, 2001). In this respect the PRC is comparable to other major emerging economies like Russia (Okhmatovskiy, 2010) and India (e.g., OECD, 2009b). Therefore, it is likely that our findings are applicable to other emerging economies. Nevertheless, future research in other research settings will be needed to explore contextual variations.

Despite these limitations, we believe that our findings are robust and that our study provides novel insight into the factors that affect the dissolution of IJVs. By investigating the contingent effects of state participation on the dissolution of IJVs, we contribute to an improved understanding of state involvement in economic activity, an area that has started to see renewed scholarly interest owing to the re-emergence of state capitalism in both emerging and developed countries.

## ENDNOTES

<sup>1</sup> We define IJV dissolution as the liquidation of an IJV, the sale of an IJV to a third party, or the buyout of an IJV by one of the partner firms (Hennart & Zeng, 2005)

<sup>2</sup> Whereas legitimacy can be viewed from both an institutional and strategic perspective (Suchman, 1995), we adopt the strategic perspective in line with resource dependence logic and view legitimacy as a resource that is critical to firm survival and that can be acquired by firms (e.g., Drees & Heugens, 2013, Pfeffer & Salancik, 1978).

<sup>3</sup> Despite attempts by the Chinese government to reduce the direct engagement of government agencies in economic activity and a declining trend in such activity, government agencies continue to engage directly in economic activity with local and foreign businesses in the PRC (Cui & Jiang, 2012, Lu, Liu, Wright, & Filatotchev, 2014). The importance of IJVs between foreign firms and government agencies was also highlighted in speeches by Chinese politicians in the late 1990s. For instance, after taking office as Prime Minister of the PRC in 1998, Zhu Rongji stressed that the direct involvement of various government agencies in business activities persisted even after the central government tried to reduce such activity in the mid-1990s (see, for example, ‘The Records of Zhu Rongji’s words’, Peoples’ Publishing House 2011, p. 50 vol. 3; Rongji also raised similar concerns in 1993 and 2001 (see p. 269, vol. 1 and p.106, vol. 4, respectively). Recent examples of IJVs established between private firms and government agencies include the Tianjin Qianxin Chip Design Co., an IJV established by Motorola, Nankai University, Tianjin Science and Technology Committee, and the Administration Commission of the Tianjin Economic and Technological Development Area in 2002.

<sup>4</sup> To avoid small numbers of observations in individual industries we grouped industries as shown in Table 1. We also ran our models by using alternative industry groupings and confirmed that our results remain stable across different classifications.

<sup>5</sup> We would like to thank one of the anonymous reviewers for stressing that a high SCA stake and thus high constraint absorption may be associated with high performance raising foreign firms’ desire to buy-out their local partner. In this case, dissolution may indeed be a result of high as opposed to low levels of performance. While we acknowledge this possibility, we suggest this is not very likely in our study given the fact that resources, such as regulatory support or legitimacy are difficult, if not impossible to transfer.

<sup>6</sup> We used the equity shares held by the different SCAs at the time that the IJV was established. The SDC database does not contain information on the changes of these equity shares over time. We therefore searched other databases for information on changes in the equity stakes of the partners in the IJVs in our sample and found no evidence of such changes. To check the robustness of our models, we also ran our models with two dummies reflecting the mere participation of an SOE and the mere participation of an government agency instead of the actual shares of these SCAs. The results of these analyses did not differ significantly from the results of the analyses that used the continuous SCA equity share as dependent variable.

<sup>7</sup> To evaluate the robustness of our results, we also ran our analysis by using two parametric estimation methods (Exponential and Weibull). With the exception of some changes in the significance level of some of the control variables, the results are in line with the results of the Cox proportional hazard method. These results are available upon request.



<sup>8</sup> To test the hypothesized moderating effect of IJV age on the association between state participation and IJV dissolution, we used a time-varying coefficient model, for which the Schoenfeld test is not applicable.

<sup>9</sup> We cannot use Fortune Global 500, multi-partner IJV, and industry together as matching covariates since this would lead to a substantial reduction in sample size, a typical shortcoming of matching case approach. We thus adopt a compromised approach and use either industry and Fortune Global 500, or industry and multi-partner IJV as matching covariates.

<sup>10</sup> These results are available from the authors.

<sup>11</sup> We would like to thank one of the anonymous reviewers for raising this possibility.

<sup>12</sup> While we argue for and find partial support for a linear, moderating effect of IJV age on the relationship between SCA participation and IJV dissolution, we also test for a curvilinear direct effect to rule out this alternative possibility. We take these additional steps because prior research provides evidence for a curvilinear, direct effect of the length of inter-organizational relationships on the dissolution of such relationships. In particular, Levinthal and Fichman (1988) find an initially higher hazard rate followed by a lower hazard rate in their study on the effects of the length of inter-organizational relationships between auditing firms and their clients, which they refer to as a “honeymoon” effect. To test for such an effect, we retrieve a baseline hazard function that captures the direct effect of age on dissolution. In contrast to Levinthal and Fichman (1988), we find no evidence for a honeymoon effect in our sample. These contrasting findings may be due to the differences in the type of relationship analyzed in Levinthal and Fichman’s (1988) and our study (i.e., auditor-client relationships versus IJVs). Compared with IJVs, auditor-client relationships can be set up comparatively quickly and with lower up-front costs. As such, the early stages of an auditor-client relationships (i.e., the honeymoon period) can be used by partners to explore similarities and to establish plans for the development of the relationships (Levinthal & Fichman, 1988: 355). In contrast, IJVs take more time to set up, as they involve the establishment of a separate, legal entity and the equity investment of the partner firms. Given the higher commitment that is needed from firms establishing an IJV, they are thus more likely to establish and assess the “desirability of an attachment” (Levinthal & Fichman, 1988: 355) before committing significant resources to establishing an IJV. Therefore, we suggest that a potential honeymoon period between partners, as suggested by Levinthal and Fichman (1988), would occur—if at all—prior to the establishment of an IJV.

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## TABLES AND FIGURES

Table 1 Sample distribution by industry

IJV Sector	% in sample	% in population
SIC M1. Agriculture, forestry, and fishing (SIC 01-07)	0.16	0.78
SIC M2. Mining and construction (SIC 10-17)	2.41	5.48
SIC M3. Manufacturing (SIC 20-39)	76.24	61.27
SIC M4. Transportation, Communications, Electric, Gas, and Sanitary Services (SIC 40-49)	6.10	9.40
SIC M5. Wholesale and Retail Trade (SIC 50-59)	5.14	5.84
SIC M6. Finance, Insurance, and Real Estate (SIC 60-67)	3.05	6.88
SIC M7. Services (SIC 70-89)	6.90	10.35



Table 2 Sample distribution by province

Province	Frequency	%
Anhui	10	1.61
Beijing	92	14.77
Chongqing	7	1.12
Fujian	8	1.28
Gansu	1	0.16
Guangdong	79	12.68
Guangxi	6	0.96
Guizhou	4	0.64
Hainan	3	0.48
Hebei	7	1.12
Heilongjiang	6	0.96
Henan	5	0.80
Hubei	5	0.80
Hunan	6	0.96
Inner Mongolia	4	0.64
Jiangsu	58	9.31
Jiangxi	3	0.48
Jilin	16	2.57
Liaoning	36	5.78
Shaanxi	6	0.96
Shandong	41	6.58
Shanghai	132	21.19
Shanxi	6	0.96
Sichuan	12	1.93
Tianjin	38	6.10
Xinjiang	2	0.32
Yunnan	4	0.64
Zhejiang	26	4.17
Total	623	100

Table 3. Correlation matrix

Variable	Mean	Std. Dev.	Correlation coefficients										
Marketization	6.87	1.06											
Multi-partner	0.33	0.47	0.12*										
Equity structure	0.30	0.46	-0.07	-0.25*									
Foreign partner experience	12.55	18.44	-0.01	0.30*	-0.11*								
Local partner experience	3.36	8.85	-0.03	0.01	0.14*	0.04							
Cultural distance	4.81	5.48	0.01	0.53*	-0.06*	0.12*	0.01						
High-tech sector	0.33	0.47	0.01	0.04	-0.02	0.22*	-0.04	-0.01					
Fortune Global 500	0.43	0.50	0.03	0.14*	0.06	0.41*	0.22*	0.04	0.14*				
Ownership restriction	0.36	0.48	-0.10*	0.05	0.18*	-0.01	0.16*	0.04	-0.07	0.13*			
Ownership restriction change	0.14	0.35	0.01	0.08	0.06	0.02	-0.04	0.06	0.11*	0.06	0.54*		
Government agency share (%)	3.44	11.64	-0.05	0.05	0.13*	-0.01	0.05	0.03	0.06	0.05	0.21*	0.10*	
State-owned enterprise share (%)	13.89	22.42	-0.0*	-0.03	0.11*	0.02	0.30*	-0.02	0.01	0.13*	0.01	0.11*	-0.19*

Note: \* indicates significance at the 5% level; N = 623

Table 4. Results of Cox regression

Variables	Model 1	Model 2	Model 3	Model 4
Government agency (%)		-0.0246*** [0.00144]	-0.0271*** [0.0000385]	-0.0680*** [0.00174]
State-owned enterprise (%)		-0.0000158 [0.000366]	-0.00210** [0.00104]	-0.00970** [0.00401]
Government agency (%) * Foreign partner experience			0.000312 [0.000206]	0.000279 [0.000188]
State-owned enterprise (%) * Foreign partner experience			0.000249** [0.000138]	0.000251** 0.000131
Government agency (%) * IJV age				0.000346*** [0.0000147]
State-owned enterprise (%) * IJV age				0.0000904* [0.0000496]
Equity structure	0.130 [0.104]	0.184* [0.110]	0.180* [0.105]	0.167 [0.103]
Cultural distance	0.0299*** [0.00610]	0.0371*** [0.00590]	0.0381*** [0.00645]	0.0400*** [0.00633]
Multi-partner IJV	-0.259* [0.152]	-0.314** [0.141]	-0.323** [0.149]	-0.332** [0.147]
Fortune Global 500	0.299*** [0.0100]	0.301*** [0.0130]	0.313*** [0.0102]	0.320*** [0.00828]
High-tech sector	-0.442** [0.195]	-0.418** [0.195]	-0.418** [0.205]	-0.421** [0.204]
Foreign partner experience	-0.0200*** [0.00540]	-0.0203*** [0.00524]	-0.0245*** [0.00747]	-0.0246*** [0.00731]
Local partner experience	-0.0199*** [0.00628]	-0.0160** [0.00721]	-0.0168** [0.00773]	-0.0168** [0.00835]
Marketization	-0.112** [0.0483]	-0.119** [0.0471]	-0.123** [0.0503]	-0.122** [0.0488]
Ownership restrictions	-0.405*** [0.139]	-0.417*** [0.140]	-0.431*** [0.126]	-0.414*** [0.123]
Ownership restrictions change	-0.495*** [0.0470]	-0.388*** [0.0610]	-0.370*** [0.0531]	-0.379*** [0.0512]
SIC M1	-4.113*** [0.147]	-3.516*** [0.148]	-3.818*** [0.148]	-3.619*** [0.147]
SIC M2	-4.145*** [0.113]	-3.564*** [0.117]	-3.867*** [0.120]	-3.667*** [0.122]
SIC M4	0.0463 [0.162]	0.0397 [0.161]	0.0407 [0.160]	0.0397 [0.160]
SIC M5	0.0791*** [0.00401]	0.0703*** [0.00496]	0.0744*** [0.00713]	0.0741*** [0.00738]
SIC M6	-0.0308 [0.162]	-0.0387 [0.161]	-0.0383 [0.161]	-0.0379 [0.161]
SIC M7	0.0368 [0.145]	0.0424 [0.144]	0.0431 [0.143]	0.0423 [0.144]
Wald chi Squared	2892.93***	2274.87***	2509.35***	2405.86***
Harrel's C	0.6627	0.6791	0.6810	

Robust standard errors (clustered on each industry) in brackets

\* p < 0.10; \*\* p < 0.05; \*\*\* p < 0.01; N=623