

# Do Chinese Firms Benefit from Government Ownership following Cross-border Acquisitions?

Tu W., Zheng X., Li L., Lin Z.J.



**University of  
Nottingham**

UK | CHINA | MALAYSIA

University of Nottingham Ningbo China, 199 Taikang East Road, Ningbo, 315100, China

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# **Do Chinese Firms Benefit from Government Ownership following Cross-border Acquisitions?**

## **ABSTRACT**

Chinese firms' increasing cross-border acquisitions (CBAs) in recent years seem to challenge the explanatory power of received theories of multinational enterprise (MNE) due to their relatively unique characteristics and the active role of the Chinese government. In this study, we seek to revisit and contextualize the OLI paradigm in conjunction with the institution-based view and examine how Chinese firms' post-CBA long term performance is associated with government ownership. Our study shows that Chinese firms with more government ownership demonstrate better post-CBA long term performance. However, the above relationship is differentially moderated by such firm-level boundary conditions as political connections and financial slack, and the country-level institutional boundary conditions (i.e., the host country formal institutions and the home-host country cultural distance). We discuss our findings in detail and explore theoretical and practical implications for both Chinese firms and other emerging economy (EE) firms.

**Keywords:** Cross-border acquisition; government ownership; boundary condition; political connections; OLI paradigm; Institution-based view

## 1. Introduction

International business (IB) scholars have long noted that emerging economy (EE) firms have tried to aggressively pursue strategic assets and/or market access through cross-border acquisitions (CBAs) since the beginning of the new millennium (Luo & Tung, 2007; Morck, Yeung, & Zhao, 2008). Yet, despite the popularity of CBA as a long-term strategic move for EE firms, there is little research on how EE firms perform over time after a CBA. The relevant literature on internationalization of EE firms do not provide adequate insights about the key drivers of post-CBA long term performance, largely because they rely heavily on traditional IB and strategy theories without sufficiently addressing the roles of the institutional contexts which some IB scholars have articulated (e.g., Dikova & Sahib, 2013; Peng, Sun, Pinkham, & Chen, 2009; Peng, Wang, & Jiang, 2008).

Unlike firms from advanced economies (AEs) which pursue internationalization to exploit their existing ownership or firm-specific advantages (FSAs) such as advanced technologies and brand names in the global arena (Dunning, 1981; Dunning & Lundan, 2008), EE firms without traditional FSAs in terms of proprietary rights and intangible asset advantages often leverage domestic country-specific advantages (CSAs) such as inexpensive labor, land, natural resources, and government or institutional support to compensate for their latecomer disadvantages in international competition (Child & Rodrigues, 2005; Hong, Wang, & Kafouros, 2015; Lu, Liu, Wright, & Filatotchev, 2014). This departure from *raison d'etre* of AE MNEs begs the question whether the traditional IB theories apply to international expansion of EE firms.<sup>1</sup>

Hennart (2012) revisits the OLI paradigm and explicitly problematizes two key tenets in light of internationalization of EE firms. First, possession of FSAs is often not necessary for making investments abroad. Second, domestic CSAs are often not freely available to all firms

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<sup>1</sup> The virtual AIB 2020 annual meeting showcases an interesting debate on the applicability of the OLI paradigm to internationalization of EE firms. IB scholars are still seriously divided.

located in the home country and therefore may be exploited to gain home market competitiveness and facilitate subsequent international expansion.

While Hennart's (2012) arguments are closely relevant to the pursuit of CBA as an aggressive form of international expansion by EE firms, we contend that more theoretical development is needed to examine what influence the post-CBA long term performance. In this study, we seek to address the impact of government ownership on post-CBA long term performance as the government is well argued to be a relatively unique institutional force driving international expansion of EE firms (Cui & Jiang, 2012; Dikova, Panibratov, & Veselova, 2019; Hong et al., 2015). We focus on Chinese firms as China is a major emerging economy and Chinese firms account for an increasingly large percentage of global CBAs.<sup>2</sup> More importantly, the Chinese context is richly related to the functioning of the government. First, government ownership, as overseen by State Asset Management Companies (SAMCs), is sophisticated and omnipresent in China (Sun, Mellahi, Wright, & Xu, 2015; Wang, Guthrie, & Xiao, 2015). Second, government ownership is often intermingled with complex informal institutional forces (Peng & Luo, 2000). Third, the periodic changes of national strategic mandates and fiscal and tax policies of the Chinese government make CBAs time dependent for Chinese firms. Despite the focus of this study, we explore theoretical and practical implications for both Chinese firms and other EE firms as there are some important commonalities among EEs (Hennart, 2012; Luo & Tung, 2018).

Drawing upon Hennart (2012), we suggest that government ownership is a relatively unique CSA which is mainly available to certain Chinese firms (Peng & Luo, 2000). The firms with government ownership have a privileged access to government-enabled financial and information resources, among others and may have the abilities to influence the government policies in their favour (Pan, Teng, Supapol, Lu, Huang, & Wang, 2014). Thus,

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<sup>2</sup> According to the statistics from Center for China and Globalization (CCG), the number of Chinese outward CBAs reached the record high of 722 in 2016 surpassing that of the U.S. outward CBAs.

government ownership is expected to bring substantive benefits to Chinese firms. However, there is a counter argument which stresses the agency problems associated with government ownership (Li, Li, & Wang, 2019). Further, as a CSA, government ownership tends to be location-bound and not readily transferable abroad. Thus, our first research question is: *How does government ownership really affect Chinese firms' post-CBA long term performance?*

The OLI paradigm (Dunning & Lundan, 2008) and the related FSA-CSA framework (Rugman & Verbeke, 2003) indicate that absence of FSAs or lack of the integration between FSAs and CSAs tends to compromise long term success of MNEs. While the bundling of FSAs and CSAs, as emphasized by these scholars, is examined mainly in host countries, we contend that the FSA-CSA combination in the home country is of significance for long term performance of Chinese MNEs (and other EE MNEs for that matter). Thus, we would like to investigate some of the critical FSAs and understand *how they may enhance or constrain the effects of government ownership on post-CBA long term performance as firm-level boundary conditions*. This is our second research question.

In addition to the home country institutional forces, the institution-based view suggests that there is a need to understand, as our third research question, *how the impact of government ownership on post-CBA long term performance is affected by formal and informal host country institutions*.

Our empirical findings show that Chinese firms with more government ownership demonstrate better post-CBA long term performance. Such an effect is enhanced by senior managers' political connections but reduced by firms' financial slack. Moreover, the positive impact of government ownership is constrained by the host country formal institutions but strengthened by the home-host country cultural distance.

This study seeks to make three main contributions. First, to the best of our knowledge, our study is perhaps the first to elaborate on the complex effects of government ownership on

post-CBA long term performance of Chinese firms (and EE firms in general for that matter). By re-conceptualizing government ownership as a relatively unique CSA, we provide a cogent explanation about the roles of government ownership in the post-CBA operations of Chinese firms thereby making a context-specific extension of the OLI paradigm initiated by Hennart (2012). Second, we explore the combination of FSA and CSA in the home country rather than in the host country in terms of its impact on the post-CBA long term performance and reveal that some FSAs such as political connections are complements to government ownership and some other FSAs such as financial slack are substitutes. This sheds new light on the interaction between FSA and CSA as an important mechanism influencing long term success of MNEs (Rugman, 2009; Zollo & Singh, 2004). Third, we address the cross-national transferability of government ownership as a CSA, a departure from the traditional focus on the fungibility of FSAs abroad. Consistent with the prediction of the institution-based view, the positive roles of government ownership in post-CBA long term performance are compromised in light of the host country formal institutions. In contrast, the informal institutions (from the cross-cultural perspective) tend to be conducive to the functioning of government ownership.

## **2. Theoretical underpinnings and hypotheses**

### *2.1. Theoretical foundations*

Research on EE MNEs has significantly increased in the recent two decades (Deng, Delios, & Peng, 2020). Despite the tremendous efforts in exploring and developing EE MNE-specific theoretical insights, IB scholars have far from reached the consensus on whether the traditional IB and strategy theories (derived from the studies on AE MNEs) can account for EE MNEs. Hennart (2012) revisits the OLI paradigm, one of the most influential IB theories, and problematizes two key tenets in light of international expansion of EE MNEs. One is that possession of FSAs in terms of proprietary rights and intangible assets is not necessary for

foreign direct investments (FDIs) and the other is that CSAs are not freely available to all firms operating in the country. He argues that certain CSAs are only accessible to or even monopolized by some local firms in EE contexts. Such CSAs enable those EE firms to achieve competitiveness in the home country and subsequently pursue FDIs to acquire or develop FSAs in host countries. While Hennart's (2012) theoretical development focuses on the complementarity between CSAs and FSAs and the impact thereof on the choice of FDI establishment mode of EE MNEs (e.g., acquisition, greenfield), it bears insightful implications for long term performance of EE firms after a CBA. It should be noted that Rugman and Verbeke (1992, 2003) have long stressed the interactions between FSAs (from the home country) and CSAs (from the host countries) and their impact on the success of MNEs in the global arena. In particular, they point out that the degree of location boundedness of FSAs affects whether and how FSAs can be transferred and integrated with CSAs for developing global competitive advantages. Although the IB scholars as mentioned above emphasize market imperfections and pay little attention to institutional environments, it is apparent that the differences of institutions across nations cause (at least partially) market imperfections which in turn affect transferability of FSAs and their interactions with CSAs and ultimately the long term performance of EE MNEs after an FDI such as a CBA.

Institutions are defined as 'the rules of the game' consisting of both formal (regulatory) and informal (normative and cultural-cognitive) institutions (North, 1991; Scott, 1995). The structures, policies and performance of firms are imperceptibly influenced by the institutional environment in which firms are embedded (Abdi & Aulakh, 2012). The recent application of the institutional theories (economics-based and sociology-based) to the area of international expansion strategies of EE firms including CBAs leads to the emergence of the institution-based view which suggests that firms may not only conform to but also leverage the institutions (Peng et al., 2008). The institution-based arguments have been used to explain the



determinants of CBAs of EE firms (e.g., Child & Rodrigues, 2005) and the stock market response after CBA announcement (e.g., Du & Boateng, 2015). To emphasize the importance of the institutional contexts of the EE firms, Kumar (2009, p. 116), for example, argues that “unlike western companies, which use mergers & acquisitions primarily to increase size and efficiency, emerging companies acquire firms to obtain competencies, technology, and knowledge essential to their strategy...And they have a clear long-term vision guiding their actions...” The key implication is that for EE MNEs, international expansion in general and CBAs in particular need context-rich theoretical development (Deng et al., 2020).

As a major emerging economy, China presents a complex and promising context for both theoretical development and applications (Child, Falkner, & Pitkethly, 2001). Many Chinese firms have aggressively pursued CBAs since China’s accession to WTO in December 2001 because they have been urged to augment their FSAs to be globally competitive by the Chinese government. The ones pursuing CBAs often count on institutional resources (aka CSAs) instead of traditional FSAs to manage CBAs and achieve competitiveness over time (Gaur, Kumar, & Singh, 2014). One of the most salient CSAs for Chinese firms is arguably government ownership which nevertheless seems to be double-edged subject to concerned circumstances. Thus, the impact of government ownership cannot be adequately understood without examining the key contextual boundary conditions.

## *2.2. Chinese firms’ CBAs: Government ownership and its boundary conditions*

Government ownership is closely related to corporate governance. It is well argued in organization studies that corporate ownership significantly influences the structure and composition of board of directors which are associated with both resource provision and agency problems (Dalziel, Gentry, & Bowerman, 2011). Therefore, the effects of government ownership are expected to be complex and contingent upon the specific situation of a firm.

It is well known that the Chinese government plays an active role in governing economic

development, and in guiding corporate strategies, particularly with respect to international expansion such as CBAs (Abdi & Aulakh, 2012; Hong et al., 2015). In general, the Chinese government sets policies and develops institutional systems to facilitate or constrain outward FDIs in line with the national interests and objectives (Cui & Jiang, 2010; Deng, 2004), exerting macro-level influence on the operations of Chinese firms undertaking CBAs.

The Chinese government often promotes Chinese firms' CBAs by providing financial subsidies and/or cheap loans (through policy and/or commercial banks). This is especially salient if a CBA falls in the strategic categories for government support.<sup>3</sup> Apart from financial support, the Chinese government may facilitate CBA initiation and post-CBA integration through the provision of information and possibly local expertise in host countries. The Chinese government has actually signed inter-governmental bilateral economic cooperation agreements with more than 100 countries based on the data from Ministry of Commerce (MOC) and can engage with the host country governments in various ways to help reduce the risk exposure of Chinese firms' CBAs. Therefore, the government support via government ownership, as a CSA available to only a subset of Chinese firms, often enables these firms to compensate for, to a certain extent, their lack of FSAs in the face of CBAs. Some extant studies have provided relevant evidence that government ownership has positive impact on short-term stock market response after CBA announcement (Du & Boateng, 2015) and post-CBA performance (Du, Boateng, & Newton, 2016).

However, government ownership may also bring opposite influences on Chinese firms undertaking CBAs. Chinese firms with government ownership may often have to consider political and social issues in their decision making and such considerations may lead to

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<sup>3</sup> *Notice on Using and Managing Special Funds for Foreign Economic Cooperation* was enacted by the Ministry of Commerce (MOC) and Ministry of Finance (MOF) in 2006; *Notice on Providing Credit Support to Key OFDI Projects Encouraged by the State* was enacted by the State Development and Reform Commission (SDRC) in 2003 and classified natural resource-seeking, manufacturing, R&D projects, and M&A as four areas supported by the state; *Guiding Directories of Target Nations and Industries for OFDI* enacted by MOC in 2004 specifies government supported industries and 67 approved countries.

principal-agent and principal-principal problems (Li & Qian, 2013; Ning, Kuo, Strange, & Wang, 2014) and could cause political backlashes in certain host countries where free-market-oriented formal institutions are well established (Li et al., 2019). Indeed, some empirical studies show that the stock markets respond less positively to the CBAs undertaken by state-owned Chinese firms and thus suggest that government ownership may potentially compromise implementation of CBAs (Ning et al., 2014; Tao, Liu, Gao, & Xia, 2017).

The seemingly inconsistent results, largely based on short-term stock market response as noted above, suggest that the actual impact of government ownership on post-CBA long term performance may often not be straightforward and should be carefully examined based on the specific situation of the Chinese acquiring firm.

In addition, the effects of government ownership are subject to certain boundary conditions. As noted earlier, IB scholars such as Hennart (2012) and Rugman & Verbeke (2003) articulate that the interactions between FSAs and CSAs are central to the rationale and success of MNEs. In the specific context of CBAs of Chinese firms, the realization of the potential value resulting from government ownership partially depends on the effective communication between firm managers and relevant government officials. Research shows that Chinese firms often develop and strengthen their relationships with the governments by recruiting politically connected senior managers or directors (Fan, Wong, & Zhang, 2007; Li & Liang, 2015; Schweizer, Walker, & Zhang, 2019). Building managerial political connections is a relatively unique FSA in China and serves as a complement to government ownership (Hillman, 2005). Without managerial political connections, the information asymmetry between firms and government agencies could cause mismatches between the government-enabled resources and the firms' existing resources thereby leading to lack of synergy or even redundancy. The impact of information asymmetry, however, may not be significant if the Chinese firms possess abundant financial resources and depend less upon

government support in pursuing and managing CBAs. The ability of securing financial resources is a critical FSA for Chinese firms in the face of CBAs because a CBA is typically strategic and challenging and it is not only expensive to complete but also requires tremendous resources to manage afterwards. This line of reasoning in light of relatively unique FSAs suggests that political connections and financial slack are important firm-level boundary conditions with respect to the effect of government ownership on post-CBA long term performance.

The functioning of government ownership, as a relatively unique CSA for Chinese firms, is uncertain across nations and is contingent upon the host country institutional contexts which vary significantly. IB scholars have called for research to address different combinations of home and host country institutional characteristics in order to understand the challenges faced by Chinese firms investing abroad (Child & Marinova, 2014). Chinese firms tend to face serious challenges in managing their CBAs in developed Western countries where they are often struggling with the liability of country of origin associated with excessive government intervention, among others (Child & Marinova, 2014). Indeed, government support via government ownership probably causes serious legitimization challenges for Chinese firms in such institutional environments (Hofman, Li, Sun, & Sun, 2019). Other than formal institutions, informal institutions matter for the effectiveness of government support via government ownership as well. Cultural distance has proven to be a critical factor in the context of CBA in the literature. IB scholars reveal that cultural distance increases the difficulty of post-CBA integration and long term operation (Deng, 2010; Dikova & Sahib, 2013; Stahl & Voigt, 2008). Overall, we have limited knowledge about the post-CBA performance implications of government ownership of Chinese firms in face of the differences between home and host country institutions indicating the necessity of taking into account the institutional boundary conditions (Salomon & Wu, 2012).

The above theoretical arguments are delineated in Figure 1. Essentially, we seek to examine whether government ownership as a relatively unique CSA enhances post-CBA long term performance and investigate whether and how political connections and financial slack (as firm-level boundary conditions) and host country formal institutions and home-host country cultural distance (as country-level boundary conditions) influence the impact of government ownership on post-CBA long term performance.<sup>4</sup>

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Insert Figure 1 about here  
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### *2.3. Government ownership and post-CBA long term performance*

Given the Chinese government's promotion of the 'go global' policy in the recent two decades and the substantial government influences on business activities in China, government support via government ownership has been critical for Chinese firms to undertake CBAs and manage the post-CBA operations (Child & Rodrigues, 2005). We stress that the long-term benefits associated with government ownership such as preferential resources provision, policy advice and information advantage tend to be conspicuous for Chinese firms undertaking CBAs.

Chinese acquiring firms with larger government ownership are typically blessed with more preferential access to bank loans and subsidies, face fewer bureaucratic constraints and obtain more timely diplomatic support when needed (Duanmu, 2014). Also, large government ownership may help Chinese acquiring firms to reduce their power asymmetry with the host country governments (Duanmu, 2014). Specifically, it enables them to more effectively enforce contracts and reduce risks in the host countries (Cuervo-Cazurra, Inkpen, Musacchio, & Ramaswamy, 2014). In addition, the perceived government support related to larger

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<sup>4</sup> In an article published in *Organizational Research Methods*, Busse, Kach, and Wagner (2017) make it clear that moderator is a specific type of boundary condition, though the latter is conceptually broader. While we could use the term 'moderator' to replace 'boundary condition' in our study for empirical purposes, we feel that the use 'boundary condition' helps deliver our essential message more effectively.

government ownership as an institutional advantage tends to make Chinese firms more patient and long term oriented in the process of post-CBA integration (Pan et al., 2014), which benefits their long term development.

Granted, as indicated earlier, large government ownership may result in a situation where senior managers of government-owned firms are not challenged and/or incentivized to align their interests with the shareholders. Also government and non-government shareholders may have possible conflicts between the political and social agenda held by the government shareholders and the other shareholders' profit maximization objectives (Li & Qian, 2013; Ning et al., 2014).

However, the misaligned incentives and the conflicts of interests associated with government ownership have not been so problematic for Chinese firms in the face of international expansion in the recent two decades. For the Chinese firms undertaking CBAs, government ownership may mostly amplify institutional benefits and reduce agency-related costs because the incentives such as promotions and rewards for the concerned government officials are aligned with the performance improvement of the focal state-owned firm (Tian & Estrin, 2008). Under the guidance of "go global" policies, the Chinese government agencies and the Chinese acquiring firms tend to have the shared goals and therefore, the government has a strong tendency to incentivize the concerned officials to facilitate and support the operations of the Chinese acquiring firm during and after CBA so that the firm may deliver the desirable performance. As Hitt, Ahlstrom, Dacin, Levitas, and Svobodina (2004) and Peng et al. (2009) point out, both China's national interests and the interests of Chinese firms involved in CBAs are highly aligned when it comes to venturing abroad to acquire strategic assets and gain market access and improving their global competitive advantage. The shared goals between the Chinese government (officials) and the Chinese acquiring firm lead to much mitigated agency problems and increase the long term economic value orientation in

foreign investments, in particular for those firms with large government ownership (Heugens, Sauerwald, Turturea, & van Essen, 2020).

Overall, the presence of larger government ownership in the context of post-CBA operations of Chinese firms is associated with higher institutional benefits and lower agency costs and therefore the net impact is expected to be positive. Therefore, we propose the following hypothesis.

**Hypothesis 1.** Government ownership is positively associated with post-CBA long term performance of Chinese firms.

#### *2.4. Firm-level boundary conditions: Political connections and financial slack*

Political connections reflect precious relational capital and are commonly pursued by firms in the countries with relatively weak formal institutions such as legal systems (Faccio, 2010).

Managerial political connections are relatively unique FSAs of Chinese firms at home and are expected to be complementary to government ownership as a CSA. As noted earlier, the level of potential government support largely depends on the percentage of the government ownership of a Chinese firm (Du & Boateng, 2015). However, the potential government support does not equal the effective support the firm needs. First, the actual support from the Chinese government may vary among firms with the same level of government ownership because of the limit of government-enabled resources. Second, sometimes resources obtained through the government are not the resources the firm really needs.

We argue that managerial political connections may increase the positive impact of government ownership on the post-CBA long term performance by facilitating information flows between a Chinese firm and the Chinese government and thus fostering the firm's access to government-enabled resources really needed or complementary to its internal resources.

With the presence of political connections, a firm has more chances to communicate with government officials and ask for support than the one without political connections even if both have the same ownership structure. The government often has neither access to the firm's detailed information nor enough capacity to interpret them and thus hardly knows what essential support the firm might need for managing its post-CBA integration. Moreover, although laws and rules can guide and control government agencies' actions, prior studies find it is impossible for laws and rules to apply to all the circumstances (e.g., Mazmanian & Sabatier, 1989). Thus, government officials have considerable discretion in enforcing relevant laws and rules and allocating economic resources (Chen, Li, Su, & Sun, 2011), especially in a country with relatively weak formal institutions. Thus, firms with politically connected managers can more effectively lobby for the desired government support in conjunction with government ownership. Therefore, we propose the following hypothesis.

**Hypothesis 2.** Political connections enhance the positive relationship between government ownership and post-CBA long term performance of Chinese firms.

Apart from political connections, financial slack is a critical FSA for Chinese firms undertaking CBAs (Basuil & Datta, 2019), in particular because Chinese firms have the tendency to acquire target firms by cash.<sup>5</sup> In addition, financial slack tends to provide the necessary resources for managers to tackle organizational challenges (Cyert & March, 1963) which Chinese firms have to cope with in the unfamiliar host country institutional contexts.

However, it seems that financial slack and government ownership lack synergistic effects. It is well known that the dominant support associated with government ownership is financial support, such as government subsidies, low-interest loans and soft loans. The significant financial slack leads to the decreased importance of government ownership for Chinese firms

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<sup>5</sup> In our initial sample, more than 95% of Chinese acquiring firms use only cash to bid for the target firms.



to manage post-CBA operations. First, if a Chinese firm has larger financial slack, it would more likely finance and manage post-CBA operations on its own rather than relying on government-enabled resources. Moreover, external financial resources facilitated by government agencies only substitutes for rather than complements abundant internal resources. Second, by extending Jensen's (1986) free cash flow argument, we stress that external financial support via government ownership boosts free cash flow available to a Chinese firm with significant financial slack and thus increases the likelihood of the firm to misuse the financial resources in managing post-CBA integration based on senior managers' personal interests and ambition. Therefore, the higher financial slack a Chinese firm has, the less important and effective government ownership is for the firm. In other words, government ownership as a CSA and financial slack as an FSA are expected to substitute (at least partially) for each other in the context of post-CBA integration for Chinese firms. The above reasoning leads to the following hypothesis.

**Hypothesis 3.** Financial slack weakens the positive relationship between government ownership and post-CBA long term performance of Chinese firms.

#### *2.5. Country-level boundary conditions: Host country formal institutional quality and home-host country cultural distance*

We have argued earlier that government ownership is expected to generate net positive impact on the post-CBA long term performance of Chinese firms because it tends to bring substantial benefits in the forms of low-cost financing, information resources, and diplomatic support etc. which outweigh the possible costs associated with agency problems under the specific circumstances we examine. However, government ownership, as a CSA, is not likely functioning in the same way in the host countries as in China. In fact, the importance and legitimacy of government ownership for the Chinese firms vary across different countries due

to heterogeneity of institutions.

Formal institutions are codified as explicit rules and standards (North, 1990). The high quality of host country formal institutions is expected to mitigate the positive influence of Chinese firms' government ownership on post-CBA long term performance for the following reasons.

First, although government support via government ownership may help bring institutional benefits for Chinese firms managing post-CBA operations, it is contextually dependent. Government support is especially beneficial in the host countries with weak formal institutions where there is a lack of intermediate markets and other resources and/or there are politically unstable situations (Child & Marinova, 2014). In those countries, institutional advantages for state-owned Chinese firms might be achieved through reducing the expropriation risks of the host country government and/or enforcing the execution of the contracts (Duanmu, 2014). In contrast, the significance of government support declines for Chinese firms managing their CBAs in the host countries with well-established formal institutions. High quality formal institutions (i.e., well-defined rules and strong legal enforceability) tend to ensure the efficiency of market mechanisms and mitigate the exposure of Chinese firms to abnormal risks in managing CBAs (Abdi & Aulakh, 2012; Meyer, Estrin, Bhaumik, & Peng, 2009).

Second, government ownership is at times deemed as illegitimate in the host country with well-developed formal institutions. On the one hand, Chinese firms with government ownership cause the suspicion that their CBAs are motivated by political agenda rather than firm business objectives (Wan & Wong, 2009). On the other hand, Chinese firms receiving government support are often accused of enjoying 'unfair' cost advantages over their competitors in the host countries with well-developed formal institutions (Globerman & Shapiro, 2009). Hence, Chinese firms with government ownership may face legitimization

challenges in post-CBA integration and further operation because of the ill-perception of government intervention in those host countries. Therefore, we argue that government ownership is less important if Chinese firms acquire target companies located in the host countries with higher-quality formal institutions leading to the following hypothesis.

**Hypothesis 4.** The quality of host-country formal institutions decreases the positive relationship between government ownership and post-CBA long term performance of Chinese firms.

Informal institutions refer to enduring systems of shared meanings and collective understanding which shape the behaviours of individuals in a society (Scott, 2005). Cultural distance, often referred to as informal institutional distance (Peng et al., 2008), has been recognized as a key factor determining the success of CBAs (Barkema & Schijven, 2008; Chakrabarti, Gupta-mukherjee, & Jayaraman, 2009). We expect that cultural distance affects the relationship between government ownership and post-CBA long term performance.

Home country government support via government ownership is more critical for Chinese firms acquiring targets in the more culturally distant host countries as the benefits from government ownership may become more salient in coping with the more uncertain environments (Pan et al., 2014). Larger cultural distance leads to greater obstacles for Chinese firms operating in the host countries. Specifically, significant cultural distance tends to hamper learning (Malik & Zhao, 2013) and makes the transfer of corporate practices difficult (Brock, 2005). Large cultural distance could also impede the process of assimilating and transforming acquired firms' know-how due to communication barriers (De Long & Fahey, 2000) and lack of mutual trust (McAllister, 1995) between employees of an acquirer and those of its acquired firm. Hence, cultural distance could aggravate uncertainty and information asymmetry for Chinese firms in the process of acquiring and integrating foreign

targets (Dikova, Sahib, & Van Witteloostuijn, 2010).

Whereas Chinese government ownership tends to be ill functioning in well-established formal institutional environments as opposed to relatively weak formal institutional environment in China, it may help Chinese firms to cope with distant informal institutions in certain respects. Among others, Chinese government support may help Chinese firms to better deal with the post-CBA problems arising from misunderstanding or misperception of the local societies because the government agencies or missions abroad can facilitate the access to local networks of stakeholders in general and local opinion leaders in particular (Roland Berger Management Consultants, 2014). In line with the reasoning above, when the CBAs involve the targets in the more culturally distant host countries, government support may be more important for post-CBA integration and operation in the long run. Thus, we propose the following hypothesis.

**Hypothesis 5.** Cultural distance enhances the positive relationship between government ownership and post-CBA long term performance of Chinese firms.

### **3. Method**

#### *3.1. Data collection*

We retrieve the data from the CSMAR database including the characteristics of Chinese acquiring firms and target firms, deal structures, accounting information and the exchange rates. All the accounting information of Chinese firms are collected from the parent companies' financial statements. We hand collect the data on the board members and senior managers of the acquiring firms, ultimate controlling shareholders from the Wind database, newspapers, magazines and company financial reports.

#### *3.2. Sample selection*

Our sample includes the CBAs completed by publicly listed Chinese firms on the Shanghai

and Shenzhen stock exchanges from 1999 to 2013. We exclude the acquisitions in the category of Chinese firms taking over foreign partners in the joint ventures incorporated in China and focus on the CBAs with the target firms registered in foreign countries.<sup>6</sup>

The initial sample has 375 CBAs. We remove observations with missing values for acquiring firms' accounting performance 2 years before and after the acquisition, ownership structure and deal-level and country-level characteristics controlled in our main regressions before the acquisition. The final sample includes 151 firms and 206 CBAs, suggesting that some firms undertook more than one CBA.

### 3.3. Measures

*Dependent variable.* To measure post-CBA long term performance, we compare the post-CBA profitability of the acquiring firm with the pre-CBA profitability of the same firm. Following Papadakis and Thanos (2010), the post-CBA profitability is measured with the two-year average return on assets (ROA) after CBA while the pre-CBA profitability is the two-year average ROA before CBA, where ROA is the ratio of the profits to the average total assets in the year.<sup>7</sup> The change of the acquiring firm's ROA is expressed as follows:

$$\text{Change of ROA}_j = \text{ROA}_{j,t+2} - \text{ROA}_{j,t-2} \quad (1)$$

where Change of ROA<sub>j</sub> (AROA) is the difference between the two-year average ROA of firm *j* after CBA ( $\text{ROA}_{j,t+2}$ ) and the two-year average ROA of firm *j* before the CBA ( $\text{ROA}_{j,t-2}$ ).

We have chosen the time period between two years before and after the CBA for three reasons. First, two years are usually sufficient for the completion of the integration process (Morosini, Shane, & Singh, 1998). Second, as the outcomes of the post-CBA integration can

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<sup>6</sup> We find 318 events where foreign firms sold their shares back to Chinese partners in the joint ventures incorporated in China during our observation period.

<sup>7</sup> Note that the accounting-based measures are appropriate because the synergies arising from CBAs are reflected in the acquiring firm's income statement (Hitt, Harrison, Ireland, & Best, 1998). Among various accounting-based metrics, return on assets (ROA) is most widely accepted in the literature on mergers and acquisitions (e.g., Zollo & Singh, 2004). Compared with other metrics (i.e., profit/sales ratio, return on equity), ROA is less likely to be influenced by the possibility of upward/downward estimation bias arising from intra-firm sales and changes in financial leverage etc. (Meeks & Meeks, 1981).

be measured effectively after a two-year assimilation period (Datta & Puia, 1995), a two-year period is adequate to show whether an acquisition could be successful (Papadakis & Thanos, 2010). Third, if measured over a longer period, the performance of the acquiring firm could be affected by some other strategic initiatives than the completed CBA.

*Main explanatory variables.* Government ownership is measured with the percentage of the equity of a firm owned by the government and largely reflects the level of support and protection from the home country government (Child & Marinova, 2014). We also adopt a dummy variable for government control (coded 1 if the government is the ultimate controlling shareholder of the acquiring firm and 0 otherwise) as an alternative measure for robustness check.

*Other explanatory variables.* To measure the boundary conditions of the impact of government ownership, we employ four variables. At the firm level, we use *political connections* and *financial slack* to test Hypotheses 2 and 3 respectively. *Political connections*, a dummy variable, reflects personal-level managerial political linkage between a firm and the government and equals 1 if the board members and/or the CEO of the acquiring firm are politically connected and 0 otherwise. Following Fan et al. (2007), we define an individual to be politically connected if that person has served in the central or local government, or in the military. The proxy for *financial slack* is the current ratio, the ratio of a firm's current assets over current liability (e.g., Bromiley, 1991; Zona, 2012), which reflects the amount of unabsorbed resources held by the firm that is above the minimum level of operational need and can be easily redeployed at the discretion of senior managers (George, 2005). To test Hypotheses 4 and 5, at the country level, we use the *quality of legal institutions* in the host country and home-host country *cultural distance*. The legal system is the most important aspect of formal institutions and has profound influences on foreign investors. Specifically, *quality of legal institutions* in a host country is measured with the average of two indicators

(i.e., property rights and freedom from corruption) collected from the Economic Freedom Index developed by the Heritage Foundation. *Cultural distance* captures the essential differences of values, norms and behaviours between China and a host country. We adopt the method developed by Kogut and Singh (1988) and use Schwartz's seven dimensions of national culture to calculate the composite index of cultural distance.<sup>8</sup> *Cultural distance* is calculated with the numerical values of the seven Schwartz's dimensions and equals the natural logarithm of  $\frac{\sqrt{\sum_{i=1}^7 (S_{A,i} - S_{T,i})^2}}{7}$ , where  $S_{A,i}$  is the score on dimension  $i$  for China and  $S_{T,i}$  is the score on dimension  $i$  for the host country.

*Control variables.* Based on extant M&A literature, we include the following control variables in the regression models to isolate the influence of government ownership on the acquiring firm's post-CBA long term performance. The control variables include: (1) *Firm size*, measured with the logarithmic transformation of firm market value; (2) *Tobin's q*, measured with firm market value divided by book value (Doukas, 1995); (3) *Financial leverage*, measured with the ratio of long-term debt to the sum of book value of long-term debt and equity (Li & Qian, 2013), reflecting the acquiring firm's use of debt to finance business activities; (4) *Equity concentration*, measured with ownership percentage of the largest shareholder, to account for the potential role of the largest shareholder in alleviating the principal-agent problem (Claessens, Djankov, Fan, & Lang, 2002); (5) *Relative deal size*, measured with the ratio of the deal size over the total market value of the acquiring firm, indicating the potential extent of economic benefits and difficulties (Eckbo & Thorburn, 2000); (6) *Public target*, a dummy variable that equals 1 if a Chinese firm acquires a public target and 0 otherwise, to account for greater liquidity and thereby a higher premium required

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<sup>8</sup> Schwartz's framework is arguably more desirable than Hofstede's as it seems to have a stronger theoretical foundation (Steenkamp, 2001) and is developed with systematic sampling, measurement and analytical techniques (Brett & Okumura, 1998).

by a public target (Fuller, Netter, & Stegemoller, 2002); (7) *Related M&A*, a dummy variable that equals 1 if the acquiring firm and the target are in the same industry and 0 otherwise (Zollo & Singh, 2004); (8) *Industry-average ROA*, measured with the change of the two-year average ROA of all listed firms in the acquiring firm's industry from before to after the acquiring firm's CBA,<sup>9</sup> to control for the variations of the industry-level performance (Zollo & Singh, 2004); (9) *GDP per capita in a host country* from World Development Indicator in constant 2005 US\$, to control for the effect of host country's economic condition on the acquiring firm's post-CBA long term performance; (10) *Asia*, a dummy variable that equals 1 if the target is an Asian firm and 0 otherwise, to control for the influence of geographical location; (11) *Regional legal protection* of intellectual property, an indicator of the provincial level market liberalization indices (NERI indices) developed by Fan et al. (2011), to control for regional variation of formal institutions within mainland China (Hong et al., 2015); and (12) As prior research indicates that firm performance varies across broad industrial sectors, we use two dummies to control for manufacturing industries (coded as 1 if the acquiring firm belongs to manufacturing industries and 0 otherwise) and service industries (coded as 1 if the acquiring firm belongs to service industries and 0 otherwise) (e.g., Du & Boateng, 2015).

### *3.4. Econometric approach*

We test our hypotheses using Ordinary Least Square (OLS) regressions to run *change of ROA* on the explanatory and control variables. OLS is widely applied to the CBA research (e.g., Gubbi, Aulakh, Ray, Sarkar, & Chittoor, 2010). In addition, we use Huber-White sandwich estimations to account for the standard errors following Gubbi et al. (2010) to reduce the bias caused by heteroscedasticity. To alleviate the potential problem of endogeneity, we lag all the explanatory and control variables by one year except for *Industry-average ROA*.

The model is expressed as follows:

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<sup>9</sup> We use three-digit industry codes issued by China Securities Regulatory Commission.



$$AROA(-2, 2) = \beta_0 + \beta_1 * X + \beta_2 * M + \beta_3 * X * M + \beta_4 * C + \varepsilon \quad (2)$$

where X, M, and C denote main explanatory variables, other explanatory variables (i.e., boundary conditions), and control variables, respectively.

In the models with interaction terms, there is a conditional relationship between main explanatory variable (X) and dependent variable (AROA (-2, 2)) as expressed in the following:

$$\frac{\partial AROA(-2,2)}{\partial x} = \beta_1 + \beta_3 M \quad (3)$$

The marginal effect of X on AROA (-2, 2) is dependent on the value of M. Therefore, it shows that the relationship between the change of X and the change of AROA (-2, 2) is a linear function of M, and that  $\beta_1$  only reflects the effect of a one-unit change of X on AROA (-2, 2) when M equals zero. Only by taking into account of  $\beta_3$  can we fully explain the change of the marginal effect of X on AROA (-2, 2) with the change of M. We note that one cannot determine whether an interaction term is meaningful in a model simply by looking at the significance of its coefficient estimate ( $\beta_3$ ) *per se* (Aiken & West, 1991; Meyer, Witteloostuijn, & Beugelsdijk, 2017).

## 4. Results

### 4.1. Descriptive statistics

Table 1 displays descriptive statistics of ROA. We report the annual ROAs from year -3 to year 3 in Panel A. The means of ROAs in all years are all significantly different from zero at the 1% level. The mean of annual ROAs for each year is positive before the acquisition but declines afterwards. In fact, as reported in Panel B, the mean change of ROA (AROA), defined as difference between post-CBA performance and pre-CBA performance, is negative and significantly different from zero at the 1% or 5% level depending on the calculating period.<sup>10</sup> As for the means in Panel B, the changes of ROAs during different periods are all

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<sup>10</sup> The acquisition year is year 0.

negative, ranging between -2.3% and -3.5%. Those negative results indicate that Chinese firms' CBAs are generally not so successful, at least within the first 3 years after the acquisition. The declining performance of Chinese acquiring firms is consistent with the limited extant literature (Bertrand & Betschinger, 2012; Du et al., 2016; Morosini et al., 1998).

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Insert Table 1 about here  
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Table 2 displays the sample distribution by host country/economy, geographical region and host country/economy development status. For Chinese firms, the top three host countries/economies are Hong Kong (47 observations)<sup>11</sup>, United States (37 observations) and Germany (23 observations). Among the target firms, 91.7 percent are located in developed economies and 35.4 percent are in Asia. The statistics provide a strong indication that Chinese acquiring firms have the tendency to seek strategic assets through CBAs in addition to market access.

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Insert Table 2 about here  
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The descriptive statistics and correlations of all variables used in the main regressions are displayed in Table 3. The correlation matrix indicates that the correlations among the control variables are low in general. For our main regressions in next section, we consistently find variance inflation factors (VIFs) are well below the level of 10 except for the interaction terms,<sup>12</sup> alleviating the concerns with the possible estimation bias due to multicollinearity

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<sup>11</sup> Following Kang and Jiang (2012), we treat Hong Kong as a special host economy of Chinese FDIs as its institutions are substantively different than those in mainland China as a result of the one country-two system arrangement (So, 2011).

<sup>12</sup> In Models 5 and 7, the VIFs for the interaction term between government ownership and quality of host country legal institutions are higher than 10. This is not a concern as it is normal to have a high VIF for higher order terms, and the *p*-value for *X\*M* is not affected by multicollinearity (Allison, 2012). Some scholars suggest that the models with the interaction terms do not suffer from a multicollinearity problem even if the main explanatory variables are highly correlated with their interaction terms, since this high correlation is a matter of interval scaling which neither affects the value of the coefficient estimate of the interaction term nor inflates its standard error (e.g., Disatnik & Sivan, 2016).

(Kutner, Nachtsheim, & Neter, 2004).

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Insert Table 3 about here  
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#### 4.2. Regressions

Table 4 reports the results concerning the effects of government ownership on post-CBA long term performance of Chinese firms. Model 1 includes only control variables and the explanatory variable for boundary conditions and shows that more positive post-CBA long term performance is delivered by the Chinese acquiring firms which are smaller, have higher financial leverage, lack political connections, and are headquartered in the subnational regions with higher quality legal institutions. The negative direct effect of political connections, though not hypothesized, requires a bit interpretation here. We note that (informal) political connections *per se* could as well be associated with tangible or intangible private benefits of top managers and/or the concerned government officials at the expense of firm performance. For example, Schweizer et al. (2019) show that the presence of political connections seems to increase the likelihood of completing a CBA but compromise post-CBA accounting performance. For those political-connected top managers and/or the concerned government officials in our research context, the completion of a CBA could be more important than post-CBA long-term operation because the former could more readily enhance their reputation and increase their political capital. The desire and eagerness for completing a CBA could result in suboptimal acquisitions and/or over bidding and ultimately are detrimental to post-CBA long term performance.

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Insert Table 4 about here  
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In Model 2, we test the influence of government ownership on post-CBA long term performance. The coefficient estimate of *government ownership* is significantly positive at the 5% level. The result supports Hypothesis 1, that is, *government ownership is positively*

associated with post-CBA long term performance of Chinese firms. Specifically, an increase of one standard deviation of *government ownership* (standard deviation=0.22) could lead to a 1.23% increase in AROA (-2, 2). Given that the unconditional mean of AROA (-2, 2) is -0.029, the magnitude of this effect is economically sizable.

In Models 3 to 6, we test how each of the four boundary conditions affects the relationship between government ownership and post-CBA long term performance, and in Model 7, we include all the variables. To show the results in a finer-grained manner, we generate Table 5 to report the calculation of the critical ranges of the values of the variables for boundary conditions.<sup>13</sup> The critical range refers to the range wherein the marginal effect of government ownership on post-CBA long term performance is significant. Based on Tables 4 and 5, we draw Figures 2 to 5 to illustrate the marginal effects of *government ownership* on post-CBA long term performance conditional on *political connections*, *financial slack*, host country *quality of host country formal institutions (i.e., legal institutions)* and home-host country *cultural distance* respectively (see Models 3-6 in Table 4). The solid line in each figure represents the marginal effects of government ownership on the acquiring firms' long term performance after the CBA along the full range of possible values of the particular boundary condition. The 95% confidence interval between the two dashed curves determines the conditions under which government ownership has a statistically significant effect on post-CBA long term performance. Only when the confidence intervals are both below or above the horizontal zero line, the interaction effect is statistically significant, indicating the marginal effect of government ownership is significantly different from zero at the 5% level (Meyer et al., 2017).

Specifically, Model 3 in Table 4 indicates that the marginal effect of government

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<sup>13</sup> Following Zhang, Zhou, and Ebberts (2011), we construct standard errors for the marginal effect of X for any value of M using variances for X and M, and covariance between X and M for the interaction term. Then we get  $t\text{-statistic} = \text{coefficient of marginal effect of X} / \text{standard errors for the marginal effect of X}$ .

ownership on the post-CBA long term performance is positive and significant at the 5% level if the acquiring firm has political connections. Table 5 and Figure 2 show in more detail that the marginal effect of *government ownership* on post-CBA long term performance is positive and significant ( $p$ -value=0.003,  $t=3.04$ ) when the acquiring firm is politically connected (representing 55% of our sample). Overall the results support Hypothesis 2 that *political connections enhance the positive relationship between government ownership and post-CBA long term performance of Chinese firms.*

Model 4 in Table 4 shows the marginal effect of *government ownership* on change of ROA is  $0.11-0.041*financial\ slack$ , with the coefficient estimates of *government ownership* and the interaction term between *government ownership* and *financial slack* both being significant at the 1% level. When *financial slack* is at the mean value (2.9), the average marginal effect of *government ownership* on AROA (-2, 2) is -0.009. Additionally, Table 5 and Figure 3 show the decreasing marginal effect of *government ownership* is positive and significant at the 5% level when *financial slack* is smaller than 1.58 (representing 60% of our sample), but becomes indifferent from zero under the 95% confidence intervals when *financial slack* is in the range from 1.58 to 5.65 and then turns to significantly negative at the 5% level when *financial slack* is larger than 5.65 (representing 10% of our sample). Overall, the finding supports Hypothesis 3 that *financial slack weakens the positive relationship between government ownership and post-CBA long term performance of Chinese firms.*

In Models 5 and 6 in Table 4, we test the impact of host country quality of legal institutions and home-host country cultural distance by incorporating the respective interaction terms (i.e., *government ownership\* quality of legal institutions*, *government ownership\*cultural distance*). In Model 5, we find that the marginal effect of *government ownership* on the change of ROA is  $0.271-0.003* quality\ of\ legal\ institutions$ , with the coefficient estimates of *government ownership* and the corresponding interaction term being significant at the 1% and

5% level respectively. If *quality of legal institutions* is at the mean value (80.49), the average marginal effect of *government ownership* on AROA (-2, 2) is 0.03. Additionally, Table 5 and Figure 4 show the decreasing marginal effect of *government ownership* is positive and significant at the 5% level when *quality of legal institutions* in a host country is smaller than 84.50 (representing 45% of our sample) but becomes indifferent from zero when *quality of legal institutions* is larger than 84.50. Overall the results are consistent with Hypothesis 4 that *the quality of host-country formal institutions decreases the positive relationship between government ownership and post-CBA long term performance of Chinese firms.*

As for *cultural distance* in Model 6 in Table 4, we find that the marginal effect of *government ownership* on the change of ROA is  $0.011+0.224*\textit{cultural distance}$ . If *cultural distance* is at its mean value (0.21), the average marginal effect of *government ownership* on AROA (-2, 2) is 0.06 and it is increasing as *cultural distance* gets larger. Nevertheless, the coefficient estimate of the interaction term between *government ownership* and *cultural distance* is not statistically significant in the model. However, Table 5 and Figure 5 show that the marginal effect of *government ownership* is only indifferent from zero initially and it becomes significantly positive at the 5% level when *cultural distance* is larger than 0.15 (representing 69% of our sample). Consistent with Brambor, Clark, and Golder (2006) and Meyer et al. (2017), the finer-grained analysis supports Hypothesis 5 that *cultural distance enhances the positive relationship between government ownership and post-CBA long term performance of Chinese firms.*

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Insert Table 5 about here  
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Insert Figures 2 to 5 about here  
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#### 4.3. Robustness check

##### 4.3.1 Potential endogeneity

One potential concern with our empirical analysis is the endogeneity stemming from the non-random sampling problem that could bias the coefficient estimates of our key variables (Reeb, Sakakibara, & Mahmood, 2012). The biases may result from some unobserved factors that influence government ownership and the acquiring firms' post-CBA long term performance simultaneously, namely *covariance* (government ownership,  $\varepsilon_{i,t}$ )  $\neq 0$  (Hamilton & Nickerson, 2003). Specifically, Chinese acquiring firms' government ownership is likely influenced by a number of factors (Aguilera, Duran, Heugens, Sauerwald, Turturea, & VanEssen, 2020) such as firm characteristics (Beuselinck, Cao, Deloof, & Xia, 2017), prior firm performance (Tian & Estrin, 2008), industry nature (Wei, Xie, & Zhang, 2005), and local institutions (Boubakri, Cosset, & Guedhami, 2005; Boubakri, Guedhami, Kwok, & Saffar, 2016), which may also affect the acquiring firms' post-CBA long term performance.

To alleviate the endogeneity concerns, we follow Beuselinck et al. (2017) and use the propensity score matching (PSM) approach to form a sample of matched CBAs. This method has increasingly been adopted in business research in recent years (e.g., Brockman, Rui, & Zou, 2013). Our treatment is the level of government shareholding of an acquiring firm.<sup>14</sup> We match a CBA deal made by an acquiring firm with high-level government ownership with a CBA deal by an acquiring firm with low-level government ownership. After matching, we run our main regressions using the matched sample. We continue to find that *Government ownership* is positively and significantly associated with the post-CBA long term performance, and the boundary condition effects are also consistent. We describe the details of our PSM procedures in the Appendix.

#### 4.3.2 Other robustness checks

There might be a concern that government ownership percentage does not fully reflect the

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<sup>14</sup> The level of government shareholding of an acquiring firm is defined based on the mean value of government shareholding in the sample (the mean value= 0.168). The level of government shareholding of an acquiring firm is regarded as high-level when *government ownership* is larger than 0.168, low-level if otherwise.

level of government control. To alleviate the above concern, we use a dummy variable indicating whether the controlling shareholder of an acquiring firm is the Chinese government<sup>15</sup> as an alternative measure of government ownership and run the same models in Table 4. Our findings, as reported in Table 6, remain largely unchanged with this alternative measure. One exception is that the positive moderating effect of political connection becomes statistically less significant. The possible interpretation is that the communicating benefits based on political connections decline when the government is a controlling shareholder.

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Insert Table 6 about here  
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We also carry out a series of other robustness tests to rule out concerns. First, we use alternative measures for post-CBA long term performance including the change of ROA from the period of (-2, 2) to the period of (-1, 2), the change of two-year industry-adjusted average ROA from pre-CBA to post-CBA<sup>16</sup> to run the models in Table 4 repeatedly. In addition, to mitigate the concern with profit manipulation or earning management before the acquisition, we use the change of three-year average ROA from pre-CBA to post-CBA as an alternative measure to re-run the models in Table 4.

Second, we use alternative samples to run our regressions. We exclude Chinese acquiring firms in the finance industry to alleviate the concern that they may perform differently due to the idiosyncratic nature of the industry (Uddin & Boateng, 2009). We also exclude those with more than one CBA within two years to rule out the concern that the acquiring firms' performance change may be the results of multiple CBAs. Additionally, we exclude the acquiring firms with zero government shareholding.<sup>17</sup>

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<sup>15</sup> Using whether the acquiring firm has government controlling shareholder as the standard, we have 85 observations with government controlling shareholder but 121 observations without government controlling shareholder.

<sup>16</sup> Following Papadaki & Thanos (2010), we also adjust the acquiring firm's ROA against the performance of its peers in the same industry to control for competitive conditions and industry trend instead of including the variable, *Industry-average ROA*, in the relevant models.

<sup>17</sup> We have 106 observations with government shareholding but 100 observations without government shareholding (i.e., zero government ownership).



Third, to reduce the concern with the influence of acquiring firms' domestic market orientation, we repeat regressions after controlling for the level of internationalization of Chinese acquiring firms. The level of internationalization is measured with the ratio of foreign to total sales following traditional IB literature (Cavusgil, 1984). The results are largely consistent. We also do a subsample analysis of the firms with high degree of internationalization (based on the median value of the ratio of foreign to total sales) so that we can reasonably assume that these firms were not domestically oriented.

Fourth, to reduce the concern about the possible outliers, we winsorize all firm-level variables at the 1% level in each tail and also use the winsorized firm-level variables to create the interaction terms.<sup>18</sup>

The key results from the above robustness check (not reported here to conserve space)<sup>19</sup> are all largely consistent suggesting that our main findings are fairly reliable.

## **5. Discussion**

The traditional IB research indicates that *raison d'etre* and performance of MNEs are influenced by internal firm-level factors, external home and host country-level factors and transaction cost economizing governance (Dunning & Lundan, 2008; Rugman & Verbeke, 2003). IB scholars focusing on EE contexts have brought to the fore the significance of institutional environments in recent two decades (Du et al., 2016; Li, Li, & Wang, 2016). Despite the growing research on EE MNEs, IB scholars realize that unique theoretical insights will not be developed without adequately examining institutional contexts of EE firms (Deng et al., 2020; Hennart, 2012; Peng, 2012). In the case of Chinese MNEs, a relatively unique institutional force is the active role of the Chinese government in affecting Chinese firms' FDIs and post-FDI performance. This study builds upon Hennart's (2012) revisiting and

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<sup>18</sup> This is a common practice in finance to reduce the influence of outliers. It means the values of a variable that are within the bottom 1% and top 1% will take the value of that variable at 1% percentile and 99% percentile, respectively.

<sup>19</sup> We have tabulated the results in a series of tables which are available upon request.

extension of OLI paradigm and incorporate the institution-based view to examine the impact of government ownership on Chinese firms' post-CBA long term performance and address some important firm-level and country-level boundary conditions.

Our main findings are recapitulated here. First, we reveal that the post-CBA long term performance of Chinese firms declines in general, indicating that the aggressive strategic assets-seeking and market-seeking objectives of Chinese firms have not really been achieved or will likely take much longer to realize. The finding is in salient contrast with the overall positive stock market response at the time of the CBA announcement as reported in prior research (e.g., Du & Boateng, 2015; Li et al., 2016).

Second, despite the overall decline of the performance after the CBA, government ownership does seem to bring net benefits to help mitigate the decline of the post-CBA long term performance. This suggests that government ownership as a CSA for Chinese firms is not as location bound as typically anticipated.

Third, while (domestic) political connections are relatively unique FSAs, their direct effects are negative or non-significant in part because political connections are socially embedded and location-bound and in part because political connections *per se* could as well be associated with tangible or intangible private benefits of senior managers and/or the concerned government officials at the expense of firm performance. The result here is opposite to the ones reported in the domestic context (e.g., Chen, Zheng, & Huang, 2020). Direct effects aside, political connections tend to serve as complements to government ownership and enhance the positive effects of government ownership on post-CBA long term performance. As noted earlier more personal relationships with the government officials help the Chinese firms to reduce information asymmetry and mobilize government-enabled resources and thus benefit post-CBA operations. This finding reveals the context-specific properties of FSAs and CSAs in the Chinese context. Socially embedded and location-bound

FSAs such as political connections may only be helpful to post-CBA long term performance when being combined with the CSAs such as government ownership. The evidence enriches the institution-based view because it indicates specifically whether and how some Chinese firms were able to act proactively to leverage complementarity between political connections and government ownership. Moreover, we show clearly that the larger the financial slack a Chinese firm has, the less important the government ownership is in influencing its post-CBA long term performance. With abundant internal financial resources, a Chinese firm may have alternative choices to finance the post-CBA integration without relying much on government support. This suggests that an FSA may serve as a substitute for rather than a complement to a CSA.

Fourth, while we demonstrate that Chinese firms with larger government ownership show better post-CBA long term performance, we also highlight country-level institutional boundary conditions such as the host country formal institutional quality and home-host country cultural distance. Specifically, for Chinese firms, the effect of government ownership on post-CBA long term performance is weaker in higher-quality formal institutional environments, but stronger in the culturally distant host country environments. Put differently, well-established formal institutions mean clear formal ‘rules of the game’ and thus render government support less important in the business activities. Moreover, the host countries with well-established formal institutions often value transparent and fair market practices which are not consistent with the approaches relying on government support. Thus, larger government ownership would make Chinese firms to face more legitimization challenges in such an environment rather than bringing more institutional benefits. In contrast, larger cultural distance indicates more barriers rooted in informal rules which may be overcome with substantive government support from agencies located in the host countries. It should be pointed out that extant literature shows negative direct effects of cultural distance on FDI

location choice of Chinese firms (e.g., Kang & Jiang, 2012; Li, Zhang, & Shi, 2019). This study suggests that culturally distant locations are likely the right circumstances for Chinese firms to leverage the government support despite the expected challenges arising from unfamiliarity with informal rules.

This study adds to the literature on EE MNEs in several important ways. First, it reveals the complex effects of government ownership on post-CBA long term performance of Chinese firms. By reconceptualizing government ownership as a relatively unique CSA, we provide a cogent explanation about the roles of government ownership in the post-CBA operations of Chinese firms thereby making a context-specific extension of the OLI paradigm. This is relevant to EE firms in general because the influence of the government is salient in broadly defined EE contexts (Hennart, 2012). Second, we explore the combination of FSA and CSA in the home country rather than in the host country in terms of its impact on the post-CBA long term performance and reveal that some FSAs such as political connections are complements to government ownership as a CSA and some other FSAs such as financial slack are substitutes. This sheds new light on the interaction between FSAs and CSAs as an important mechanism influencing long term success of EE MNEs (Rugman, 2009; Zollo & Meier, 2008). Third, we address the cross-national transferability of government ownership as a CSA, a departure from the traditional focus on the fungibility of FSAs abroad (Rugman & Verbeke, 2003). Consistent with the prediction of the institution-based view, the positive roles of government ownership in post-CBA long term performance are compromised in light of high-quality host country formal institutions. In contrast, the informal institutions (from the cross-cultural perspective) tend to be conducive to the functioning of government ownership.

This study bears several important scholarly implications. The OLI paradigm and the institution-based view are well recognized in IB research. However, there has been a lack of adequate integration between the two theoretical streams in extant literature. This study shows

how the two perspectives are applicable in lockstep in the context of Chinese firms' post-CBA operations. Indeed, context-specific research on EE MNEs based on these two theories seems to be promising. For example, performance impact of FSA-CSA interactions for EE MNEs is clearly warranted. Further, the differential influences of host country's formal and informal institutions as boundary conditions as revealed in this study suggest that liability of country of origin or legitimization challenges faced by Chinese and other EE MNEs could be (re)examined by separating formal and informal institutional forces.

Given that this study focuses only on Chinese firms pursuing CBAs, future research is warranted to further our understanding of the impact of government support via government ownership or other channels in the complex global institutional environments. In particular, some nuances of government ownership such as the differences between local and central government ownership would be worthy examination in the future in the context of both Chinese and other EE MNEs.

It should be noted that it is somewhat debatable whether a Chinese firm's post-CBA long term performance is determined by the CBA *per se*. Indeed, it's difficult to isolate the performance impact of CBA as Chinese firms are engaged in many activities other than the CBA itself. This should be noted as a limitation of this study. Nevertheless, a CBA for a Chinese firm is disproportionately important as it is not just a strategic move for the firm but also a serious response to the government's 'go global' policy during our observation period.

This study also has some practical implications. First, senior managers of Chinese firms should be aware of the challenges of managing post-CBA operations. The overall decline of the performance in the process of post-CBA integration suggests that Chinese firms often have to cope with a prolonged phase of learning and adaptation after CBAs. There is a need for senior managers to consider whether the firm is strong enough to experience losses in the first couple of years after a CBA. Senior managers need to be patient to acquire strategic

assets and/or gain market access via CBAs. This is expectedly applicable to the senior managers of other EE firms as well. Second, government ownership as a CSA could be useful for improving the post-CBA long term performance of Chinese firms as it brings substantive institutional benefits. Nevertheless, senior managers of Chinese firms need to realize that this might have happened because of the central government's 'go global' policy which is idiosyncratic to China in the recent two decades. Other EE firms should be cautious because government ownership could as well generate negative impact resulting from agency problems. Third, Chinese firms with government ownership should try to build and leverage managerial political connections to increase the likelihood of obtaining the government-enabled resources they really need. In contrast, Chinese firms with abundant financial resources may consider downplaying the role of government support. The implications here should be relevant to other EE firms to a varying extent (Hennart, 2012). Fourth, Chinese firms with government ownership should consider carefully the influence of host country formal institutions when they make CBA decisions and manage post-CBA operations. While MNEs experience liabilities of foreignness in general, Chinese MNEs tend to face additional challenges due to the liability of country of origin in the process of managing post-CBA operations (Cuervo-Cazurra et al., 2014). Chinese firms (and many other EE firms for that matter) need to pay serious attention to the legitimization challenges in well-established formal institutional environments (Hofman et al., 2019). Finally, Chinese firms with government ownership should perceive cultural distance not just as an obstacle but also as an opportunity. Other EE firms may try to rely on government support to deal with the difficulties arising from cultural distances.

## **6. Conclusion**

Drawing upon and integrating the insights from the recent extension of the OLI paradigm and the institution-based view, this study examines the impact of government ownership as a CSA

on the post-CBA long term performance of Chinese firms. We find that the Chinese firms with higher government ownership leverage more effectively their home country government support and therefore show better post-CBA long term performance. We also reveal that the above relationship is enhanced when the focal firm is politically connected or acquires a target located in a culturally more distant country. The same relationship, however, is mitigated when a firm has larger financial slack or acquires a target located in more established formal institutional environment. By contextualizing and integrating the OLI paradigm and the institution-based view and probing into complementarity (or substitution) between government ownership as a CSA and the key FSAs such as political connections and financial slack, this study contributes some novel theoretical insights about cross-border acquisitions of Chinese firms and other EE firms.

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## Appendix

### Propensity score matching (PSM) approach

Rosenbaum and Rubin (1983) define propensity score as the probability of an individual being selected into the treatment group conditional on a vector of observable characteristics. In our paper, the treatment is the level of government shareholding in an acquirer<sup>20</sup>.

Therefore, in the first stage, we match each CBA deal made by an acquiring firm with high-level government ownership with an untreated CBA deal by an acquiring firm with low government ownership, but similar in terms of other variables. Based on previous literature (Aguilera et al., 2020; Beuselinck et al., 2017; Boubakri et al., 2016; Le & O'Brien, 2010; Tian & Estrin, 2008), we have identified the factors that affect the level of government ownership and include them in a Probit model to estimate an acquiring firm's likelihood of having large government ownership. The factors<sup>21</sup> included are firm age (measured by the number of years elapsed since the firm was first incorporated), firm size, firm leverage, equity concentration, prior firm performance (measured by lagged ROA, net income over total asset), Industry

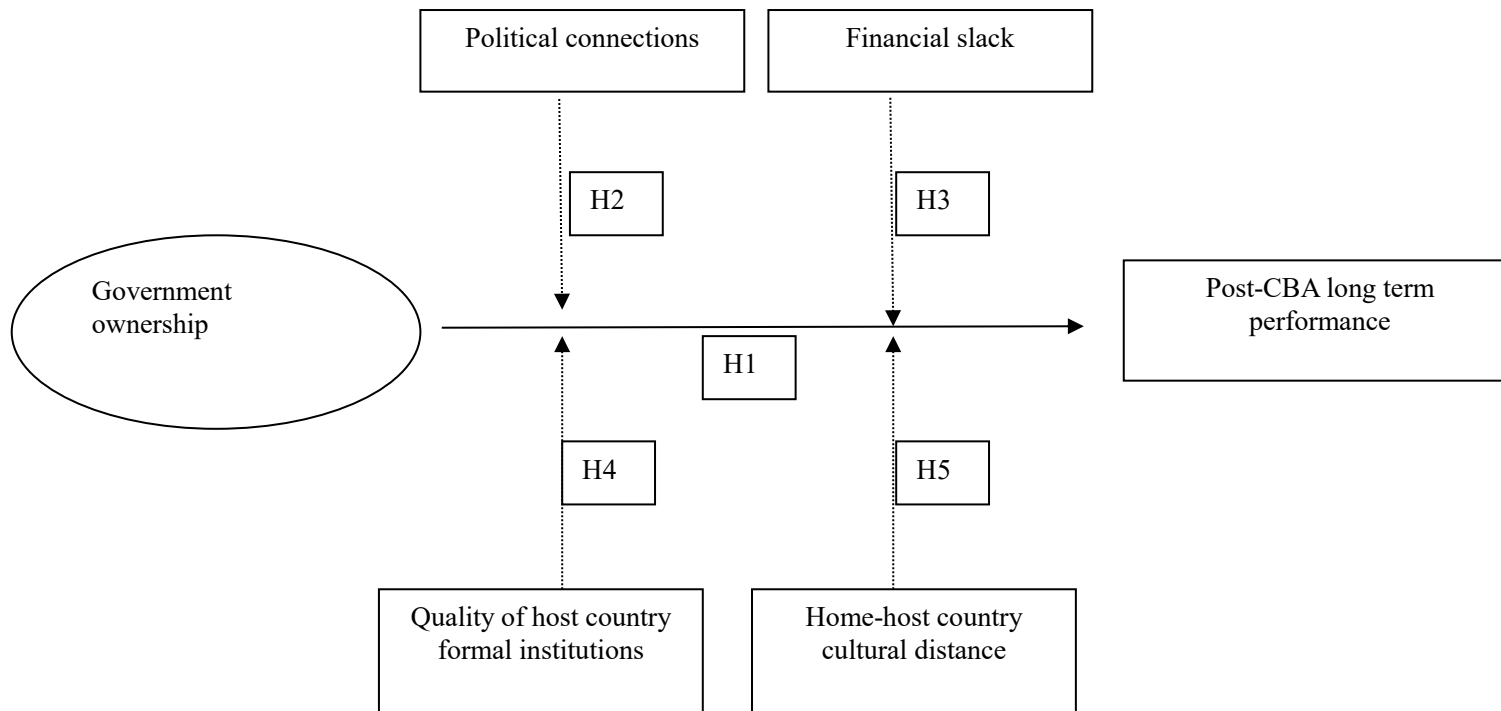
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<sup>20</sup> The level of government shareholding in an acquirer is defined based on the mean value of government shareholding in the sample (the mean value= 0.168). The level of government shareholding in an acquirer is regarded as high-level when *government ownership* in that firm is larger than 0.168, low-level if otherwise.

<sup>21</sup> The measurement for variables also controlled in main regressions are consistent in the probit model.

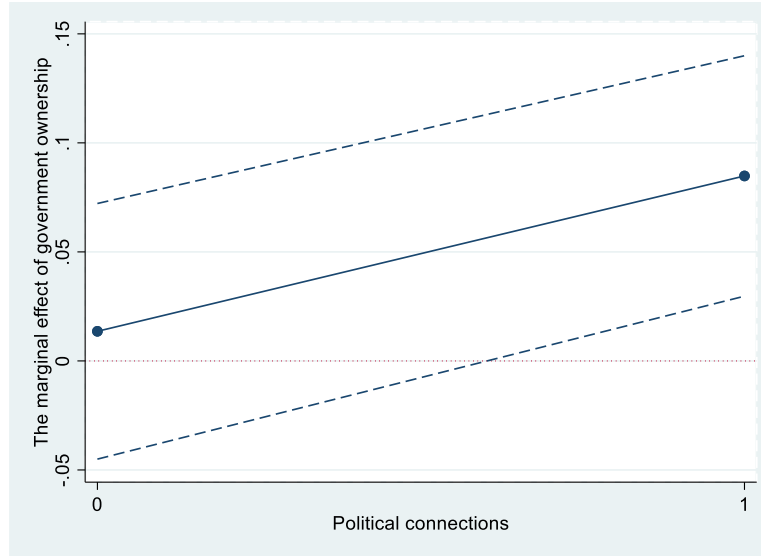
government ownership (measured by the industry median level of government ownership based on three-digit industry code). Boubakri and his colleagues show that residual government ownership is higher for the firms located in the countries with better legal protection and higher collectivism (Boubakri et al., 2016). Hence extending their researches, we control for Regional level protection and Regional conservative value to reflect the influence of unique local institutions in China on the level of government ownership. *Regional level protection* is constructed based on the provincial level market liberalization indices (NERI indices) developed by Fan et al. (2011), while *Regional conservative value* is constructed by the mean score of Schwartz conservative value for people in each province who answers the question “it is important to live in secure surroundings” on a scale from 1 (very much like me) to 6 (not at all like me), collected from Wave 6 of the World Values Survey.

We carry out tests for the balancing of variables before and after matching, and also check out the differences on post-CBA long term performance for the treated CBAs and untreated CBAs before and after matching. Then, in the second stage, we re-estimate our main regressions using the matched sample. We continue to find that *Government ownership* is positively and significantly associated with the post-CBA long term performance. In addition, the results from interaction terms are also consistent.

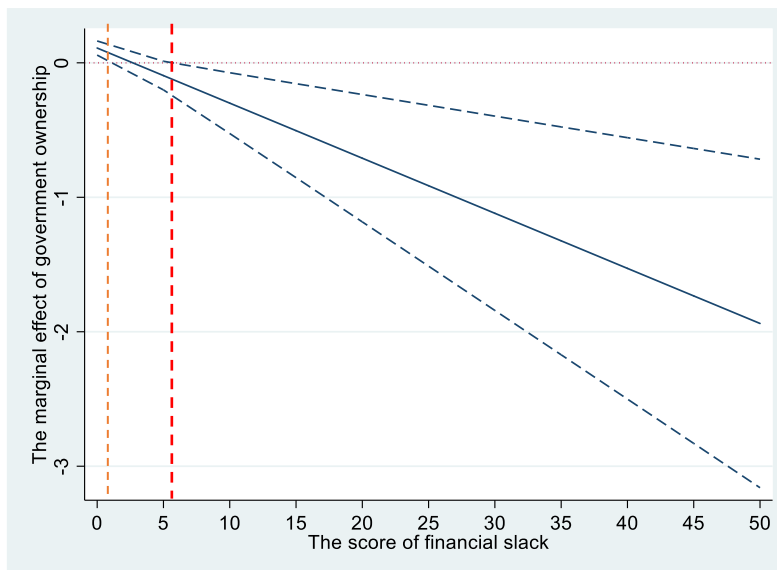


**Figure 1** Government ownership and post-CBA long term performance: a conceptual framework

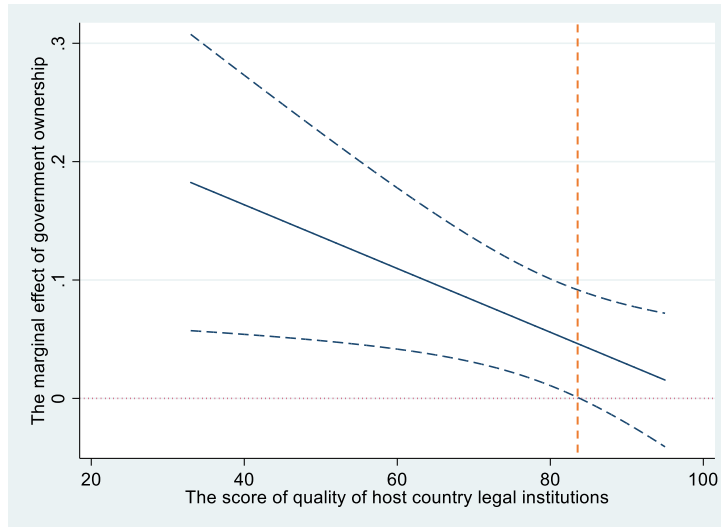




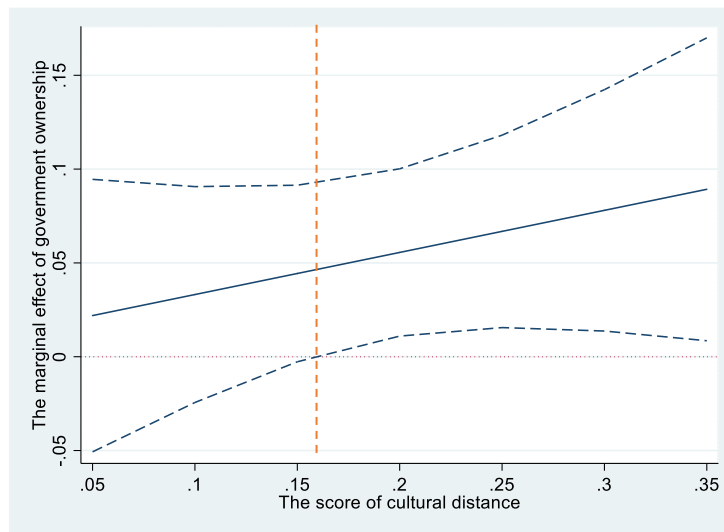
**Figure 2.** The average marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms (conditional on political connections): (a) The vertical axis measures  $\frac{\partial \text{AROA}(-2,2)}{\partial x}$ , the marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms; and the horizontal axis measures the *political connections* (the value equals to 0 or 1). (b) The dashed curves indicate the upper or lower bound of 95% confidence interval. (c) The horizontal dotted line is a reference line to indicate that the marginal effect is equal to zero.



**Figure 3.** The average marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms (conditional on financial slack): (a) The vertical axis measures  $\frac{\partial \text{AROA}(-2,2)}{\partial x}$ , the marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms; and the horizontal axis measures *financial slack*. (b) The dashed curves indicate the upper or lower bound of 95% confidence interval. (c) The horizontal dotted line is a reference line to indicate the marginal effect is equal to zero. (d) The vertical dotted line reflects that the range of values for financial slack make the upper or lower bound of 95% confidence interval both are above or below the horizontal zero reference. (Note: There are only 10% of the total observations to the right of the dashed red line because the distribution is wide spread when the values of financial slack are large.)



**Figure 4.** The average marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms (conditional on quality of legal institutions in host country): (a) The vertical axis measures  $\frac{\partial AROA (-2,2)}{\partial x}$ , the marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms; and the horizontal axis measures *quality of legal institutions*. (b) The dashed curves indicate the upper or lower bound of 95% confidence interval. (c) The dotted line is a reference line to indicate the marginal effect is equal to zero. (d) The vertical dotted line reflects that the range of values for the quality of host country legal institutions make the upper or lower bound of 95% confidence interval both are above or below the horizontal zero reference.



**Figure 5.** The average marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms (conditional on cultural distance): (a) The vertical axis measures  $\frac{\partial AROA (-2,2)}{\partial x}$ , the marginal effect of government ownership on post-CBA long term performance of Chinese acquiring firms; and the horizontal axis measures *cultural distance*. (b) The dashed curves indicate the upper or lower bound of 95% confidence interval. (c) The dotted line is a reference line to indicate the marginal effect is equal to zero. (d) The vertical dotted line reflects that the range of values for cultural distance make the upper or lower bound of 95% confidence interval both are above or below the horizontal zero reference.

**Table 1** Pre- and post- CBA return on assets (ROAs)

Years around the CBA	Observations	Mean	Std. Dev.	Min	Max
Panel A: Return on assets (ROAs) by year (relative to the CBA announcement)					
-3	261	0.06***	0.073	-0.329	0.378
-2	302	0.067***	0.071	-0.222	0.484
-1	334	0.061***	0.064	-0.345	0.466
0	348	0.053***	0.071	-0.62	0.678
1	348	0.038***	0.064	-0.458	0.213
2	346	0.035***	0.063	-0.586	0.318
3	339	0.029***	0.088	-0.775	0.377
Panel B: Change of mean return on assets by time window					
ROA (-1, 1)	334	-0.023***	0.071	-0.438	0.386
ROA (-1, 2)	332	-0.026***	0.076	-0.526	0.554
ROA (-2, 2)	313	-0.035***	0.093	-0.704	0.314
ARO A (-2, 2)	308	-0.029***	0.073	-0.552	0.348
ARO A (-3, 3)	249	-0.028**	0.098	-0.939	0.324

Notes: The sample size in this table is 375. The table displays the pre- and post-CBA ROA for Chinese firms undertaking CBAs over the period of 1999–2013. ROA (-1, 1), ROA (-1, 2) and ROA (-2, 2) are the changes of ROA of acquiring firms by time windows of (-1, 1), (-1, 2) and (-2, 2) respectively. ARO A (-2, 2) and ARO A (-3, 3) are the change of two-year average ROA and three-year average ROA of acquiring firms between post-CBA and pre-CBA respectively. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 2** Sample distribution by the host country/economy

<b>Host country/Economy</b>	<b>The number of observations (i.e., CBAs)</b>	<b>Host country/Economy</b>	<b>The number of observations (i.e., CBAs)</b>
Hong Kong	47	Ukraine	2
United States	37	Czech Republic	2
Germany	23	India	2
Australia	18	Malaysia	2
Canada	16	Austria	1
Singapore	11	Belgium	1
Japan	7	Bulgaria	1
France	6	Brazil	1
Italy	5	Ghana	1
United Kingdom	5	Hungary	1
Netherlands	5	Israel	1
Sweden	3	Mexico	1
Thailand	3	New Zealand	1
South Africa	3		
<b>Geographic region of target firms</b>	<b>The number of observations (i.e., CBAs)</b>	<b>Host country/ economy development status</b>	<b>The number of observations (i.e., CBAs)</b>
Asia	73	The developed economy	189
North America	53	The developing economy	17
Europe	55		
Oceania	19		
Africa	4		
South America	2		

Notes: Following Nicholson & Salaber (2013), the categorization of developing and developed economies is based on the IMF's classification. Hong Kong, as a special administrative region of China, was treated as a developed economy. The sample includes 206 observations (i.e., CBAs) after deleting transactions with missing variables.

**Table 3** Descriptive statistics and Pearson correlation matrix

Variables	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
<b>Plane A: Descriptive statistics</b>																
<b>Observations</b>	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206
<b>Mean</b>	22.82	1.76	0.14	37.05	0.07	0.21	0.85	-0.01	33791	0.35	25.14	0.17	0.55	2.9	80.49	0.21
<b>S.d.</b>	1.34	0.89	0.15	15.76	0.19	0.41	0.35	0.07	9946	0.48	18.7	0.22	0.5	5.37	12.96	0.08
<b>Min.</b>	20.32	0.5	0	0.09	0	0	0	-0.46	570	0	0.47	0	0	0.22	34	0.09
<b>Max.</b>	27.03	6.93	0.64	0.75	1.9	1	1	0.33	46699	1	53.51	0.75	1	54.34	94.5	0.36
<b>Panel B: Pearson correlation matrix</b>																
<b>A: Firm size</b>	1															
<b>B: Tobin's q</b>	0.092	1														
<b>C: Financial leverage</b>	0.495*	-0.139*	1													
<b>D: Equity concertation</b>	0.205*	-0.076	0.050	1												
<b>E: Relative deal size</b>	-0.078	0.139*	-0.054	-0.002	1											
<b>F: Public target</b>	0.030	0.033	-0.036	0.023	-0.016	1										
<b>G: Related M&amp;A</b>	0.022	-0.013	-0.015	-0.192*	-0.057	-0.020	1									
<b>H: Industry-average ROA</b>	-0.100	0.044	-0.035	-0.033	-0.030	0.091	-0.035	1								
<b>I: GDP per capita in a host</b>	-0.125*	0.104	-0.027	-0.039	-0.003	0.044	0.105	0.059	1							
<b>J: Asia</b>	0.046	-0.099	-0.057	0.126*	0.019	-0.039	-0.183*	-0.075	-0.375*	1						
<b>K: Regional legal protection</b>	-0.022	-0.093	-0.108	-0.155*	-0.077	-0.072	-0.108	0.016	-0.094	0.039	1					
<b>L: Government ownership</b>	0.350*	-0.144*	0.289*	0.390*	-0.077	0.106	0.054	0.060	-0.182*	0.057	-0.181*	1				
<b>M: Political connections</b>	0.239*	-0.047	0.158*	0.009	0.040	-0.104	-0.066	-0.102	-0.119*	0.114	-0.017	0.141*	1			
<b>N: Financial slack</b>	-0.297*	-0.041	-0.214*	-0.096	-0.024	0.002	0.047	0.030	0.123*	-0.089	0.149*	-0.231*	-0.111	1		
<b>O: Quality of legal institutions</b>	0.037	0.067	-0.010	0.114	0.025	0.149*	0.039	-0.044	0.690*	0.048	-0.104	0.028	0.035	0.130*	1	
<b>P: Cultural distance</b>	-0.047	0.018	0.039	-0.184*	-0.019	-0.051	0.177*	0.077	0.295*	-0.763*	-0.010	-0.078	-0.057	0.072	-0.021	1

Notes: The table reports the basic descriptive statistics and correlations of the dependent, explanatory and control variables in the regressions. The sample size is 206. Mean and S.d. refer to the mean and standard deviation of each variable. \*P<0.05

**Table 4** OLS regressions: Changes of ROAs of Chinese acquiring firms on the percentage of government shareholding

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Firm size	-0.009** (-2.485)	-0.010*** (-2.794)	-0.009*** (-2.773)	-0.010*** (-2.987)	-0.010*** (-2.735)	-0.010*** (-2.833)	-0.010*** (-2.973)
Tobin's q	-0.000 (-0.004)	0.002 (0.365)	0.001 (0.194)	0.003 (0.554)	0.001 (0.268)	0.002 (0.357)	0.001 (0.279)
Financial leverage	0.084*** (3.010)	0.074*** (2.819)	0.074*** (2.891)	0.063** (2.416)	0.080*** (3.046)	0.070*** (2.642)	0.059** (2.304)
Equity concentration	0.017 (0.640)	-0.007 (-0.234)	-0.006 (-0.220)	-0.011 (-0.394)	-0.010 (-0.342)	-0.005 (-0.178)	-0.011 (-0.384)
Relative deal size	0.017 (0.686)	0.021 (0.855)	0.024 (0.930)	0.021 (0.862)	0.019 (0.783)	0.019 (0.823)	0.021 (0.859)
Public target	-0.002 (-0.160)	-0.004 (-0.350)	-0.005 (-0.460)	-0.002 (-0.215)	-0.001 (-0.061)	-0.004 (-0.414)	-0.002 (-0.211)
Related M&A	-0.010 (-1.116)	-0.014 (-1.536)	-0.014 (-1.565)	-0.014 (-1.550)	-0.014 (-1.462)	-0.015 (-1.571)	-0.015 (-1.584)
Industry-average ROA	-0.162 (-1.532)	-0.182* (-1.744)	-0.171 (-1.625)	-0.192* (-1.783)	-0.191* (-1.835)	-0.182* (-1.754)	-0.185* (-1.737)
GDP per capita in a host country	0.000 (0.829)	0.000 (1.287)	0.000 (1.067)	0.000 (1.348)	0.000 (1.381)	0.000 (1.279)	0.000 (1.149)
Asia	0.020 (1.142)	0.024 (1.366)	0.023 (1.324)	0.021 (1.226)	0.025 (1.440)	0.025 (1.447)	0.023 (1.345)
Regional legal protection	0.001** (2.570)	0.001*** (2.834)	0.000** (2.365)	0.001*** (3.005)	0.001*** (2.938)	0.001*** (2.938)	0.001*** (2.761)
Political connection	-0.015* (-1.832)	-0.016* (-1.902)	-0.027** (-2.568)	-0.013 (-1.538)	-0.016* (-1.956)	-0.015* (-1.870)	-0.026** (-2.449)
Financial slack	-0.001 (-1.123)	-0.001 (-0.884)	-0.001 (-0.920)	-0.001 (-0.905)	-0.001 (-0.979)	-0.001 (-0.871)	-0.001 (-1.003)
Quality of legal institutions	-0.000 (-0.158)	-0.000 (-0.555)	-0.000 (-0.287)	-0.000 (-0.525)	0.000 (0.265)	-0.000 (-0.574)	0.000 (0.434)
Cultural distance	-0.101 (-1.225)	-0.101 (-1.256)	-0.094 (-1.168)	-0.094 (-1.170)	-0.098 (-1.246)	-0.128 (-1.403)	-0.133 (-1.473)
Government ownership		0.056** (2.457)	0.014 (0.457)	0.110*** (4.132)	0.271*** (2.647)	0.011 (0.235)	0.156 (1.455)
Government ownership *Political connection			0.071** (2.031)				0.085** (2.570)
Government ownership *Financial slack				-0.041*** (-3.236)			-0.045*** (-3.415)
Government ownership *Quality of legal institutions					-0.003** (-2.183)		-0.002* (-1.863)
Government ownership *Cultural distance						0.224 (1.062)	0.399* (1.922)
Constant	0.145 (1.622)	0.162* (1.869)	0.156* (1.820)	0.174** (2.018)	0.121 (1.282)	0.165* (1.914)	0.141 (1.513)
Broad industrial sector effect#	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	206	206	206	206	206	206	206
R-squared	0.196	0.219	0.233	0.239	0.236	0.223	0.277
Adjusted R-squared	0.114	0.135	0.145	0.152	0.148	0.134	0.181
F-value	4.789***	2.005***	3.296***	3.063***	2.105***	1.944**	3.340***
Largest VIF	3.2	3.42	3.66	3.61	30.21	9.10	39.96
The mean value of VIF	1.62	1.66	1.89	1.82	5.21	2.39	5.58

Notes: This table presents the results of the influence of government ownership on post-CBA long term performance of Chinese firms. The dependent variable is AROA (-2, 2). White's heteroscedasticity t-statistics are given in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 based on two-tailed tests.

#Control for broad industrial sectors such as manufacturing and services.

**Table 5** The effects of firm-level and country-level boundary conditions

Boundary conditions (M)	Main explanatory variable (X)	Marginal effect ( $\frac{\partial \text{AROA}(-2,2)}{\partial X} = \beta_1 + \beta_3 * M$ )	Significance of marginal effect
Political connections	Government ownership	0.085 for M=1 (t=3.04); 0.014 for M=0 (t=0.46)	$\frac{\partial \text{AROA}(-2,2)}{\partial X} > 0$ is significant (t=3.04, p-value=0.003), for M=1 (55.34% of sample observations)
Financial slack	Government ownership	0.11-0.041*M	$\frac{\partial \text{AROA}(-2,2)}{\partial X} > 0$ is significant (p-value =0.05), for M<1.58 (59.77%) $\frac{\partial \text{AROA}(-2,2)}{\partial X} < 0$ is significant (p-value =0.05), for M>5.65 (9.71%)
Quality of legal institutions	Government ownership	0.271-0.003*M	$\frac{\partial \text{AROA}(-2,2)}{\partial X} > 0$ is significant (p-value =0.05), for M<84.50 (44.66%)
Cultural distance	Government ownership	0.011+0.224*M	$\frac{\partial \text{AROA}(-2,2)}{\partial X} > 0$ is significant (p-value =0.05), for M>0.15 (68.93%)

Notes: This table includes equations and significance of every marginal effect of the main explanatory X (i.e., government ownership) on the dependent variable AROA (-2, 2) depending on the boundary conditions (M).

**Table 6** Cross-sectional regressions based on the presence of government controlling shareholder: change of ROA of Chinese acquirers

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Firm size	-0.009** (-2.485)	-0.012*** (-3.117)	-0.012*** (-3.336)	-0.012*** (-3.270)	-0.011*** (-2.887)	-0.011*** (-3.105)	-0.012*** (-3.258)
Tobin's q	-0.000 (-0.004)	0.001 (0.197)	0.000 (0.074)	0.002 (0.436)	0.000 (0.074)	0.001 (0.185)	0.001 (0.184)
Financial leverage	0.084*** (3.010)	0.076*** (2.943)	0.078*** (3.055)	0.068*** (2.692)	0.079*** (3.094)	0.074*** (2.862)	0.068*** (2.784)
Equity concentration	0.017 (0.640)	0.007 (0.279)	0.013 (0.483)	0.005 (0.193)	0.004 (0.143)	0.011 (0.408)	0.013 (0.491)
Relative deal size	0.017 (0.686)	0.021 (0.858)	0.024 (0.937)	0.021 (0.858)	0.016 (0.668)	0.019 (0.829)	0.018 (0.753)
Public target	-0.002 (-0.160)	-0.004 (-0.377)	-0.004 (-0.414)	-0.002 (-0.192)	-0.000 (-0.047)	-0.004 (-0.343)	0.001 (0.136)
Related M&A	-0.010 (-1.116)	-0.014 (-1.526)	-0.014 (-1.466)	-0.014 (-1.535)	-0.016 (-1.619)	-0.014 (-1.404)	-0.014 (-1.377)
Industry-average ROA	-0.162 (-1.532)	-0.174* (-1.663)	-0.161 (-1.493)	-0.180* (-1.672)	-0.187* (-1.794)	-0.181* (-1.741)	-0.185* (-1.726)
GDP per capita in a host country	0.000 (0.829)	0.000 (1.297)	0.000 (1.117)	0.000 (1.298)	0.000 (1.404)	0.000 (1.305)	0.000 (1.193)
Asia	0.020 (1.142)	0.024 (1.366)	0.023 (1.336)	0.022 (1.292)	0.024 (1.400)	0.025 (1.418)	0.022 (1.346)
Regional legal protection	0.001** (2.570)	0.001*** (2.711)	0.000** (2.285)	0.001*** (2.889)	0.001*** (2.798)	0.001*** (2.829)	0.001*** (2.728)
Political connection	-0.015* (-1.832)	-0.018** (-2.061)	-0.027** (-2.409)	-0.017* (-1.895)	-0.018** (-2.118)	-0.017* (-1.955)	-0.026** (-2.264)
Financial slack	-0.001 (-1.123)	-0.001 (-0.904)	-0.001 (-0.947)	-0.001 (-0.876)	-0.001 (-1.061)	-0.001 (-0.885)	-0.001 (-1.041)
Quality of legal institutions	-0.000 (-0.158)	-0.000 (-0.610)	-0.000 (-0.409)	-0.000 (-0.532)	0.000 (0.538)	-0.000 (-0.715)	0.000 (0.575)
Cultural distance	-0.101 (-1.225)	-0.110 (-1.387)	-0.100 (-1.249)	-0.100 (-1.252)	-0.101 (-1.278)	-0.155 (-1.585)	-0.146 (-1.506)
Government ownership		0.026** (2.370)	0.010 (0.664)	0.044*** (3.552)	0.143** (2.420)	0.025** (2.247)	0.130** (2.229)
Government ownership *Political connection			0.026 (1.437)				0.029* (1.682)
Government ownership *Financial slack				-0.012** (-2.514)			-0.013** (-2.509)
Government ownership *Quality of legal institutions					-0.001** (-2.065)		-0.001* (-1.836)
Government ownership *Cultural distance						0.118 (1.278)	0.173* (1.899)
Constant	0.145 (1.622)	0.210** (2.314)	0.223** (2.483)	0.212** (2.365)	0.144 (1.359)	0.214** (2.364)	0.173* (1.675)
Broad industrial sector effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	206	206	206	206	206	206	206
R-squared	0.196	0.224	0.232	0.240	0.247	0.230	0.280
Adjusted R-squared	0.114	0.140	0.145	0.153	0.161	0.142	0.184
F-value	4.789***	2.084***	2.923***	2.630***	2.379***	2.090***	4.280***

Notes: This table presents the results of the influence of government ownership on post-CBA long term performance of Chinese acquiring firms. In this table, government ownership is measured with government controlling shareholder dummy (Government controlling) instead of the percentage of government ownership. The dependent variable is AROA (-2, 2). White's heteroscedasticity t-statistics are given in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 based on two-tailed tests.