Cross-border M&As in the Chinese Market: State-owned Enterprises and Legitimacy Concerns

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Abstract

As semi-political nature, state-owned enterprises (SOEs) are often subject to government interference in their M&A decision-making. Because of their political connections with local governments, both SOEs as acquirers or targets in cross-border mergers and acquisitions (M&As) are generally considered sources from legitimacy concerns. This thesis explores the relationship between legitimacy concerns from SOEs and cross-border M&A outcomes in the Chinese market. Further, the study also examines the impact of three moderating variables on SOE's legitimacy concerns in cross-border M&As.

The main findings of this thesis are that SOEs in cross-border M&As face legitimacy concerns both as acquirers and targets, which seriously and negatively affect their acquisition outcomes. In terms of the impact of the moderating variables on legitimacy concerns from SOEs, the empirical results are presented in the following three chapters:

Chapter 2 introduces the moderating influence of politically connected financial advisors (PC advisors) on legitimacy concerns raised by SOEs as targets in cross-border M&As. This chapter finds that the appointment of PC advisors as a 'helping hand' approach to government–business relationships to facilitates acquisition completion and shortens acquisition duration when the target company is a SOE, but this comes at the cost of higher advisory expenses than non-PC advisors.

Chapter 3 investigates the moderating effect of institutional shareholding on SOE acquirers through cross-border acquisitions. The chapter finds that foreign institutional ownership as a 'signal sender' among SOE acquirers tends to mitigate the negative impact of legitimacy concerns on acquisition completion, but domestic institutional ownership does not have the same effect.

Chapter 4 examines the moderating impact of the opening of high-speed railway (HSR) services on legitimacy concerns raised by SOE targets through cross-border M&As. Using the multi-period differences-in-differences (DID) model, this chapter finds that the opening of HRS as 'information bridge' increases both the probability and completion of cross-border acquisitions, as well as reduce the duration of such acquisitions when the target company is a SOE, implying that HRS opening mitigates legitimacy concerns raised by the Chinese regulatory agency.

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Dedication

To my parents, the reason I become myself today, thank you both for your consistent support and care.

To my wife, thank you for your encouragement and understanding to me when I am pursuing the dream abroad.

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Chapter 1 Research and Objectives

The rapid development of the Chinese economy has driven international firms to conduct cross-border M&As in the Chinese market, as well as Chinese acquirers to engage in cross-border M&As in the international arena. However, China is different from the traditional free economic market because it retains a government-led economy, this economic model, as the name implies, is where that local Chinese governments are more active in market intervention and controlling business operations (Du, Boateng & Newton, 2016; Xia *et al*, 2014; Zhang, Zhou & Ebbers, 2011). Forty years ago, after a long period of economic stagnation, China was not yet among the top eight economies in the world. Today, China's economy is the second largest in the world, behind only the United States. Since the introduction of President Deng Xiaoping's economic reforms, China has had what economists call a government-led economy - a dominant state-owned enterprise sector existing in parallel with market capitalism and private ownership. It was the active encouragement of private enterprise from 1978 onwards that accelerated China's transition to a market-led economy, allowing for a long period of expansive prosperity that continues to this day. Private enterprises now produce more than half of China's GDP and account for the majority of China's exports. They also create most of the new jobs (OECD,2005). However, because of China's history of communist, state-owned enterprises still occupy a very large share of the market, especially in important industries, and the government relies heavily on them to intervene in the market, even today, to fulfil many governmental roles (Bai et al., 2000; Cui & Jiang, 2012; Li, Li & Wang,2014). In this context of government interference, SOEs, as the mainstay of the government-led economy, are usually prevalent in the public utilities and infrastructure industries to which the government attaches great importance. The cross-border M&As involving SOE targets are, therefore, more likely to be perceived as a national security threat by the home-country governments, whose regulators may be reluctant to approve the acquisition of SOEs for fear of losing control of the national economy, leading to legitimacy concerns (Narayanan, 2006; Zhang & He, 2014; Zhang, Zhou & Ebber, 2011). On the other hand, when SOEs as acquirers go abroad for M&As, the possible political M&A purpose is more likely to raise legitimacy concerns from the host-country government because of its government interference (Bi & Wang, 2018; Du, Boateng, & Newton, 2016). This thesis thus analyses the relationship between legitimacy concerns from SOEs and

cross-border M&A outcomes in the Chinese market, and further investigates which factors can moderate the impact of legitimacy concerns on cross-border M&A outcomes. These moderating factors include: (i) external to the company: whether or not to hire an external politically connected financial advisor (PC advisor) (Chapter 2), (ii) internal to the company: shareholding held by institutional investors (Chapter 3), and (iii) the construction of infrastructure (high-speed railway construction) (Chapter 4), to shed light on how these factors affect legitimacy concerns in cross-border M&As, further develop a reference implication for foreign acquirers that are planning inbound M&As in China, as well as for Chinese acquirers that are considering outbound M&As abroad.

Chapter 1 presents the motivation for this thesis, from which the importance and necessity of this study can be seen. Moreover, the chapter also summarizes the structure and the contributions of this thesis.

1.1 Motivation

1.1.1 China M&A Market

With China experiencing a period of rapid economic growth lasting nearly 30 years, it has attracted the attention of global investment and has become one of the important investment destinations for international investors. Figure 1.1 shows the amount of inbound direct investment in the Chinese market and its proportion of total global inbound direct investment from 2000 to 2020. It can be clearly seen that the amount of inbound direct investment in 2020 is almost 3.5 times as much as that in 2000 and that China's inbound direct investment exceeds 10% of the total global inbound direct investment in 2019 and 2020, reaching the world's second-largest inbound direct investment market (UNCTAD, 2020). On the other hand, outbound direct investment by emerging-market countries has shown a dramatic increase in recent years. The amount of outbound direct investment of emerging-market countries only stood at $2393 million, accounting for 4.5% of total outbound direct investment in the world in 1980. Surprisingly, this figure reached $417,400 million, accounting for over 28% of total outbound direct investment in the world in 2019, roughly 175 times that of 1980. At the same time, outbound direct investment in emerging markets in Asia accounted for more than 83% of the entire emerging market, with the Chinese and Indian markets

contributing the most (UNCTAD, 2020). Notably, a recent surge in outbound direct investment has been witnessed in China (Huang, *et.al*, 2017； Karolyi & Liao, 2017), China is the largest emerging economic market and the second largest outbound direct investment. It made up about 30% of all outbound direct investment in emerging-market economics and over 70% in five major emerging-market economies (BRICS, Brazil, Russia, India, China, and South Africa) (UNCTAD, 2020). The cross-border M&A, is considered to be the predominant transaction activity for Chinese outbound and inbound direct investment, and is very actively in the Chinese market, which provides an ideal setting and an extensive database for studying cross-border M&As relying on emerging markets (Lv, Xiong, & Zheng, 2021; Zhou *et.al*, 2021). Particularly, the volume of cross-border M&A transactions exploded in 1979 after the Chinese government launched its 'Go Global' strategy, which aimed at encouraging domestic companies to use global resources to quickly integrate with international markets and conduct cross-border M&As in a timely manner. Even though the Chinese market has developed rapidly and has become one of the most popular investment destinations in the world, as well as a significant outward investment economy, it is worth noting that the Chinese market is different from the traditional western country markets. It has a history of communism and remains a government-led economy (Xia *et al*, 2014), which means that the Chinese government is likely to actively intervene and control companies' business activities based on their political interests, national interests, and market stability (Du, Boateng & Newton, 2016; Bi & Wang, 2018; Zhang, Zhou & Ebbers, 2011). At the same time, China's M&A market is also more vulnerable to adverse political sentiment and rulings imposed by regulatory agencies than in traditional free-economy western countries (Li, Li & Wang, 2018). Therefore, the study of the unique nature of the Chinese M&A system plays an important role not only in the development of the Chinese M&A market but also has implications for the development of the global M&A market.

1.1.2 State-owned Enterprises

In a government-led economy, sate-owned enterprises (SOEs) are a very important category of companies to study, unlike traditional non-SOE companies that aim to maximize of corporate profits, they are usually regarded as an asset of the government (Okhmatovskiy, 2010; Huang, *et al*, 2017; Zhang *et al*, 2011; Li *et al*, 2018), as their semi-political nature often are subject to government interference in their corporate strategic decision-making, business motivations, and

corporate management, so they are likely to shoulder more social responsibility to help the government maintain the market economic order. Likewise, when it comes to the business activities of SOEs, they can also be driven by the government to achieve political goals. Thus, their business

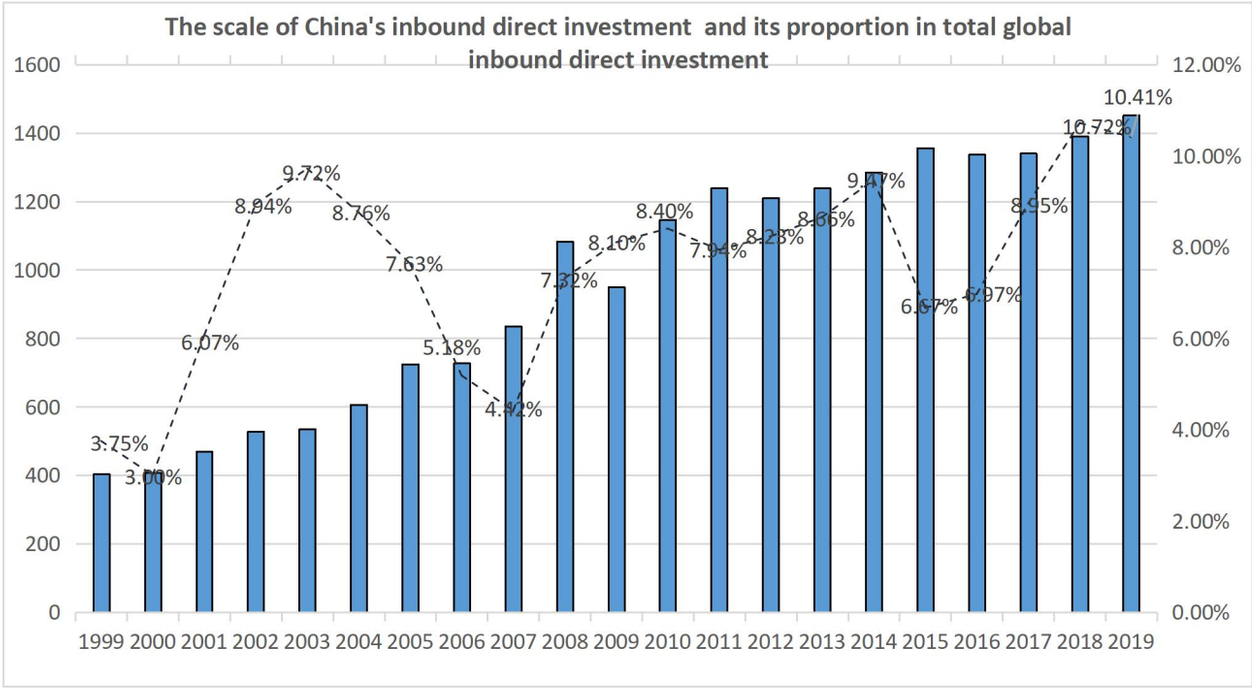


Figure 1.1: The scale of China's inbound direct investment and its proportion in total global inbound direct investment.

activities may be politically motivated when conducting cross-border M&As, rather than simply pursuing the maximization of corporate interests (Huang, *et al*, 2017; Zhang, Zhou & Ebbers, 2011; Li, Li & Wang, 2018; Cui & Jiang, 2012; Globerman & Shapiro, 2009; Li, Li, & Wang, 2014; Sauvant, 2010). This suggests that these SOEs may not be as constrained by the company's shareholders as other ordinary companies, they are more inclined to follow the government's guidelines in their business activities. In addition to its intervention in business activities, the government compensates SOEs with a number of incentives that have significantly increased their competitiveness and made them leaders in their industries. These favourable policies include: (i) Financial support: financial capital control mechanisms are commonly used by many emerging market countries to influence the business activities of domestic firms in line with their economic, social, and political objectives (Guo, 2014). As the largest emerging market country, China has been referred to as the 'factory of the world' for the past 30 years and has acquired large foreign exchange reserves through low labour costs and large exports. Luo, Xue, and Han (2010) disclose that the Chinese government strives to save foreign exchange in exchange for supporting domestic firms,

especially SOEs, to conduct more foreign direct investment. Nevertheless, cross-border M&A transactions are the primary preferred and major means of outbound investment transaction activities for SOEs, to acquire advanced technology, management experience and resources needed for development (Del, Ferraris, & Florio, 2017). Through the implementation of cross-border M&A transactions, SOEs can thus make up for their latecomer disadvantages and gain a competitive edge in the international market (Li, Su, & Wang, 2022; Morck, Yeung & Zhao, 2008).

In addition to financial support above in cross-border M&As, the state ownership as a resource for companies often receive additional government policy support, such as favorable insurance clauses, preferential tax treatment, efficient transaction approval, facilitation of foreign exchange, and foreign industrial guidance assistance, while non-SOEs are unlikely to obtain (Feng, Johansson & Zhang, 2015). The policy support for non-SOEs is only reflected in customs inspection and overseas protection, which is negligible compared with SOEs (Ahlstrom, Chen & Yeh, 2010) Moreover, in terms of diplomatic support, the domestic government can utilise the diplomatic relationship with the host government to promote the of cross-border M&As by SOEs (Damioli & Gregori, 2022). Bilateral political relationships, trade volume, and the number of bilateral trade agreements will encourage domestic companies to invest in the host country (Reddy, Xie & Huang, 2016). The establishment of these relationships and the signing of agreements play a vital role. When governments establish and sign bilateral agreements, they will likely note favourable conditions for SOEs (Li, 2018). For example, in emerging countries, particularly China, the Chinese government often provides subsidised credit to host countries through the 'One Belt, One Road' policy, and these subsidised loans are to be used for infrastructure in the host country, but much of this infrastructure is built by Chinese SOEs. Besides, it can support the operations of SOEs in the host country in industries favoured by the SOEs in the negotiated terms of bilateral trade treaties. These SOE advantages may not be available to non-SOEs (Cuervo, *et.al*, 2014).

The significance of this dissertation is is to explore whether political connections, institutional ownership and infrastructure construction can play a role in the legitimacy building of cross-border M&A transactions in China's unique government-led economy, thus revealing the important role of political connections, institutional ownership and the opening of high-speed railway infrastructure construction in business activities from a legitimacy perspective. The main motivation is that legitimacy is identified as an important determinant in the success of cross-border mergers and

acquisitions (M&As). Yet, the empirical studies exploring the cross-border M&A strategies of foreign and domestic acquirers to develop legitimacy in emerging markets are scarce. This thesis examines how foreign acquirers establish legitimacy when entering the Chinese market and how Chinese acquirers establish legitimacy when entering international markets. We identify a non-market strategy, hiring an politically connected financial advisors(PC advisors), holding institutional ownership and the opening of high-speed railway, to investigate whether these moderating variables can help foreign acquirers enhance their legitimacy, thereby mitigating legitimacy concerns raised by host governments and achieving favorable acquisition outcomes.

1.2 Disadvantages of SOEs in Cross-border M&As

1.2.1 Theoretical Background-- Resource Dependence Theory

Pfeffer and Salancik (1978) indicate that resource dependence theory highlights the interdependence of the company and external factors (such as individuals, companies, and governments), and these external factors significantly impact the company's decisions and behaviours. Companies rely on external actors to access essential resources such as material resources, information and social legitimacy. However, dependency leads to power imbalances between firms and external factors, and therefore external factors tend to interfere with the firm's decisions and behaviour. Similarly, Hillman, Withers and Collins (2009) agree with the above view and argue that this theory considers the power relationship between two parties. When one party is dependent on specific resources of the former, one party can exert influence over the other. The traditional solution to reducing the power relationship is to absorb those with power and integrate them into the company to ensure that their goals are aligned with the company's goals.

This study considers extending the resource dependency theory further and applying it to cross-border M&A transactions of SOEs in emerging markets. Specifically, this thesis argues that state ownership is an important resource for obtaining support from the home government. Choudhury and Khanna (2014) indicate the higher the state ownership of a company, the easier it is for them to obtain government support such as preferential treatment, favourable resource allocation and support in adverse situations (Luo, Xue, and Han, 2010) and, with these supports, these companies have a significant advantage in the domestic market and even a monopoly position in

their industry. However, on the other hand, as such enterprises depend on the government for resource support, the government may exercise power over them through state ownership, which may make them more vulnerable to government intervention. Thus, the presence of state ownership may expose the companies to lower levels of autonomy, and market orientation (Lioukas, Bourankas, & Papadakis, 1993), especially as the higher the presence of state ownership, the more vulnerable companies are to government intervention when engaging in cross-border M&A transactions (Xia, *et al*, 2014).

1.2.2 Disadvantage of SOEs as the Acquirer Firm

1.2.2.1 Information Asymmetry and SOEs

Opaqueness, or lack of transparency, is an essential reason for information asymmetry (Bushman, *et.al*, 2004). Opaqueness is regarded as a severe problem in commercial transactions, closely related to whether the company can survive in a fiercely competitive market. Bushman, *et.al* (2004) support this opinion and point out that opaqueness is seen as a negative signal that companies cannot provide credible company-level information to stakeholders. This practice leads to shareholders without accurate information, making correct judgments, and then increasing their investment risk. Opaqueness happens when the company cannot disclose the company-level information to the public or the information disclosed is invalid. Bushman, Piotroski, and Smith (2004) and Wang, Wong, and Xia (2008) suggest that severe information asymmetries caused by the existence of information opacity in SOEs have led to resistance from host governments and target company stakeholders when SOEs undertake cross-border M&As (Choi, Sami,& Zhou, 2010). According to resource dependency theory, the higher the state ownership, the stronger the company's support from the government, while the more influence the government has on the behaviour and decisions of these companies. Li *et.al* (2018) state that information asymmetry is inevitable in any cross-border M&A transaction. However, when SOEs engage in such activities, information asymmetries are exacerbated for several reasons. Firstly, SOEs are likely to deliberately withhold information from the public because of government intervention, as the government fears that disclosure of company information could affect national security. Secondly, managers of SOEs also do not want to disclose information to the outside world to minimise public scrutiny to pursue their interests and enjoy an easier life (Chen & Young, 2010). The above ambiguous behaviour can

lead to a more significant information asymmetry problem for SOEs than for non-SOEs (Wang, *et al*, 2008). Therefore, the more state ownership a company has, the greater the likelihood that the home government tends to intervene and the more likely it is to cause problems with the company's information asymmetry in the transaction, which often harms its M&A outcomes. Information asymmetry usually occurs in cross-border M&A transactions, which can lead to a lack of sufficient information for local governments, acquirers, and target firms, thus likely reducing the likelihood of completion, prolonging the time needed to complete the M&A, and undermining the performance of the M&A (Li, Li & Wang, 2018). On the other hand, due to the lack of information, companies need to spend significant capital and time costs to discover company and deal information, thus increasing the overall cost of M&A activities. In summary, information asymmetry tends to influence cross-border M&A activities negatively.

1.2.2.2 Acquisition Motivation and SOEs

As companies with the state ownership are likely to have a significant information asymmetry problem, their motives for cross-border M&As are generally difficult to judge by the host government and the target company, and may therefore raise political concerns, national security concerns, economic concerns and adverse market reactions in the host country (Holmstrom, 1979; Jensen & Meckling, 1976). The objectives of cross-border M&As by SOEs are more complex than those of rival non-SOEs. For non-SOEs, usually survive in a highly competitive market intending to maximize the company's profits. However, due to the unique company nature of SOEs, outsiders often regard them as government assets (Okhmatovskiy, 2010), and as such, they are easily supported by their government and do not face the same pressure to raise finance as non-SOEs. On the other hand, SOEs also tend to be interfered with by their governments, and when they engage in cross-border M&As, they not only seek to maximize profits but also help their home governments to pursue political objectives. Thus, the acquisition of SOEs can create an image of semi-political and non-economic goals for host governments and target firms (Bai *et.al*, 2000), as well as poor corporate performance due to agency problems (La Porta, Lopezde-Silanes, & Shleifer, 2002). In addition, SOE managers tend to get closer to the government by including politicians on their boards, perhaps even through pay-for-performance schemes, to ensure that their wishes are aligned (Shleifer & Vishny, 1994). However, in the case of SOEs, although the politician is already a board

member, the manager is likely to have been appointed a politician. As a result, the politician may still try to lead the company in pursuing political goals that are of little value to the company but high value to the politician. Furthermore, Li, Li, and Wang (2018) demonstrate that governments are likely to deliberately use their state-owned stakes to prevent SOEs from disclosing their acquisition motives externally, thereby avoiding external scrutiny and maintaining the political flexibility of SOEs. Such unclear acquisition motives of SOEs can seriously affect mistrust and even conflict between host governments, target companies and investors, who tend to reject such deals by foreign SOEs, significantly negatively impacting the outcome of overseas acquisitions by SOEs.

1.2.2.3 Legitimacy Concerns (Host-country Governments) and SOEs

The legitimacy perspective is rooted in institutional theory (DiMaggio & Powell, 1991). Debroux (2010) explains that institutional theory focuses on the roles of social, political, and economic systems within which companies operate and gain legitimacy. Moreover, Scott (2005) demonstrates that institutions define the rules for the 'game' and guide the choice of available approaches to operation by encouraging, constraining, or discouraging given a behavioural pattern. If a company's actions are within the specified regulations, it is subject to fewer external evaluations. By contrast, if a company's actions deviate from the rules of the 'game', it is more likely to raise legitimacy concerns (Henisz & Zelner, 2005), leading to a 'theorization' process by the regulatory agencies. The 'theorization' process usually undertakes two main tasks, justification (legitimizing the phenomenon) and specification (simplifying a phenomenon). Through the 'theorization' process, these reviewing agencies try to understand the intentions behind the organizational behaviour (Green, 2004) and 'the meaning related to these actions' (Ruef & Scott, 1998: 879).

Furthermore, they try to assess these actions' potential impact and identify the activities that should be encouraged (or discouraged) (King & Kugler, 2000; Li, Xia & Lin, 2017; Munir, 2005; Strang & Meyer, 1993). The 'theorization process' of the local government is time-consuming, and its outcomes are uncertain. Host-country regulators, as the representatives of local governments, can require foreign acquirers to comply with certain procedures or regulations to address their specific concerns, such as national security threats, political instability, market disruption and technology leakage. It is also highly likely that local governments' theorization processes will delay or even

reject acquisition deals that are deemed unideal or inappropriate.

With the intervention and support of domestic governments, when SOEs act as acquirers, on the one hand, it is difficult for host governments and target companies to accurately judge the acquisition objectives of foreign SOE acquirers due to the opaqueness of SOEs, which is common in emerging market countries, thus negatively affecting the outcome of cross-border acquisitions by SOEs (Li, Li, & Wang, 2018; Shleifer & Vishny, 1994). On the other hand, the management of SOEs mainly serves their government goals, leading to a considerable loss of market orientation (Li, Li & Wang, 2018). Thus, these companies cannot adapt to the fiercely competitive market in the host countries. At the same time, as an important part of the government's outward foreign direct investment, SOEs will receive strong government encouragement and support from local governments, such as preferential treatment, favourable allocation of resources and backing in adverse circumstances (Luo, Xue, & Han, 2010; Sun & Tong, 2003; Tian & Estrin, 2008). These supports will give them a huge advantage when compared to non-SOE companies when conducting cross-border M&As, thereby disrupting the host country's market order and raising legitimacy concerns. The thesis predicts that legitimacy concerns may be the most severe obstacles encountered by SOEs, while other ordinary companies without government interference and support are rarely faced, and these concerns may seriously affect the cross-border M&A outcomes by SOEs.

The legitimacy of the company is considered to be the fact that the company's actions as an actor are constrained by the institutional system (Stevens, Xie, & Peng, 2016; Suchman, 1995). Xie, Huang, and Li (2017) imply that substantial state ownership is more likely to reduce the legitimacy of SOEs. Deng (2013) notes that foreign acquirers with large state stakes may be perceived as illegitimate by host country audiences, who may perceive foreign SOEs as acquirers that typically bring political objectives rather than just other types of firms that pursuing economic objectives, a practice that often threatens the security and economic interests of the host country (Globerman & Shapiro, 2009). From another perspective, the legitimacy of SOEs is questioned because of the institutional differences between the home and host countries, especially if the home country is an emerging market. Li, Li and Wang (2018) show that the institutional system in emerging markets is not well developed compared to developed countries. Domestic companies can exploit some institutional loopholes, leading them to engage in unfavourable transactions and gain illegal benefits for market development. Therefore, from the perspective of the host country, especially the host

country is a developed country following an institution-based view (Rosenzweig & Singh, 1991; Xu & Shenkar, 2002), the distance between national systems makes it easier for the host country to question the legitimacy of buyers from emerging countries (Cogman, Gao, & Leung, 2017).

However, in the case of SOEs from emerging markets, established host countries tend to question the legitimacy of these SOEs more seriously. As noted above, because SOEs are so problematic in terms of opacity, they are subject to government interference and are deliberately reluctant to release information about their companies to the public, thereby protecting national security or pursuing private interests. Whatever the reason, the non-disclosure of information about a company to the public will significantly affect trading activity, particularly in cross-border transactions. The shareholders of target companies are generally less willing to accept less familiar, more obscure or unknown risks (Bornstein & D'Agostino, 1992; Moreland & Beach, 1992; Zajonc, 1968). Agency problems are more severe when information is unavailable (Holmstrom, 1979; Jensen & Meckling, 1976). Li, Li and Wang (2018) also disclose that state ownership raises political, national security, economic, and suspicions and triggers adverse reactions from host countries. Such concerns and worries in host countries tend to question the legitimacy of acquirers, especially those from emerging markets.

Similarly, Cui and Jiang (2012) reveal that based on the resource dependency theory, state ownership makes it more likely that the firm's legitimacy in the host country will decline, as such governments and shareholders may view these cross-border M&A transactions of SOEs as political tools of their home governments.

In summary, SOEs in emerging markets have many problems in cross-border M&A transactions due to information asymmetry, opaque acquisition motives, inefficient management and corporate legitimacy. And according to resource dependency theory, the more state-owned shares in the SOEs and the more government intervention, the more serious the above problems are. Because of these problems, the host governments question these SOEs and have concerns about trade activities, such as politics, national security, and the future economic development of the target company (Li & Ming, 2018). These worries will likely lead to legitimacy concerns raised by the host governments or the target companies, thus negatively affecting the outcomes of SOEs' cross-border M&As.

1.2.3 Disadvantages of SOEs as the Target Firm

1.2.3.1 Legitimacy Concerns (Home-country Governments) and SOEs

With the further reform and opening up of the Chinese market, more and more foreign acquirers are eligible to enter the Chinese market to invest and have the opportunity to participate in the privatisation and reconstruction of SOEs (Li, Li, & Wang, 2018). However, this opening up is not meant to be unreserved, and Chinese politicians continue to emphasise the core role of public ownership in the national economy. This is mainly because, in a government-led economy, which is contradictory primarily to a policy of complete market opening, the government needs to persistently advocate a policy of public ownership and the dominance of SOEs in the market to avoid losing absolute control of the national economy (Narayanan, 2006). Furthermore, SOEs, as the mainstay of the government-led economy, are usually prevalent in public utilities and infrastructure sectors, which the government highly emphasises. Therefore, cross-border M&As engaging SOEs are more likely to be perceived as a threat to national security, and such M&As are more likely to face legitimacy, and public challenges are obstructed by political forces (Zhang, Zhou & Ebber, 2011; Li, Li & Wang, 2018). Meanwhile, Zhang and He (2014) echo this view and show that in a government-led economy, SOEs are a key force in dominating market trends. Therefore regulators may be hostile to SOE acquisitions for fear of losing control of the national economy, leading to legitimacy concerns.

The privatisation of SOEs does not mean the abandonment of protectionism, and foreign companies still face higher barriers to acquiring SOEs than domestic companies. Similarly, Lin (2008) and Zhang, Zhou, and Ebber (2011) note that although foreign acquirers have the opportunity to participate in the reform and privatisation of SOEs, the vigilance and sensitivity of local governments lead to legitimacy concerns for these acquisitions, negatively affecting their outcomes of cross-border M&As.

1.3 Advantages of SOEs in Cross-border M&As

1.3.1 Theoretical Background-- Resource-based Theory

The reference as mentioned above to state ownership may be a disadvantage for cross-border M&As of SOEs, as the host government or overseas consumers perceive foreign SOE acquirers as inefficient and illegitimate, with opaque acquisition motives and serious information asymmetry

problems, leading to host government concerns about national security (Cuervo-Cazurra, Maloney & Manrakhan, 2008; Globerman & Shapiro, 2009). While state property rights present many of the above disadvantages that undermine the outcomes of cross-border M&As undertaken by SOEs, the support from home governments is also likely to give SOEs an advantage in cross-border M&As. Our research extends the resource-based theory to SOEs in the M&A field and is used to further explain the advantages of SOEs either as acquirers or targets. The theory suggests that resources that are valuable, rare, difficult to imitate, and nonsubstitutable best position a company for long-term success (Barney,1996). For Chinese SOEs, the acceptance of government intervention is accompanied by the receiving of many critical resources from the government, such resources including financial, policy and diplomatic support (Deng, 2009; Luo & Tung, 2007) that are difficult to obtain for non-SOE companies and help SOEs gain a significant advantage in a competitive market (Morck, Yeung, & Zhao, 2008; Rui & Yip, 2008). These important resource supports from the Chinese government for SOEs are described in detail below.

1.3.1.1 Financial Support

Emerging market countries generally use financial capital control mechanisms to influence cross-border M&A activities of domestic firms, especially SOEs (Guo, 2014). As the largest emerging market, China has been known as the world's factory for the past 30 years and has acquired sizeable foreign exchange reserves through low labour costs and significant exports. Luo, Xue and Han (2010) disclose that the government is trying to save foreign exchange in exchange for the ability to support more OFDI, including cross-border M&A transactions. The Chinese government, which has a large amount of foreign exchange, has introduced financial support policies to encourage domestic enterprises to acquire advanced technology, management skills and natural resources through a large number of cross-border M&As to gain a competitive advantage in the international market (Deng, 2009; Luo & Tung, 2007; Morck, Yeung, & Zhao, 2008; Rui & Yip, 2008). In emerging markets, because of their special relationship with the government (Okhmatovskiy, 2010), SOEs will receive strong financial support from the government for their cross-border M&As.

1.3.1.2 Policy Support

Governments in emerging market countries have many policies to support OFDI activities. Like the 'Go aboard' policy issued by the Chinese government, the policy provides many different types of support for investment by going out companies, especially SOEs (Xie, Huang, & Li, 2017). Policy support includes long-term/temporary loans from state-owned banks, interest subsidies, special funding for foreign trade development and foreign aid projects, export credits, simplified foreign exchange procedures, etc. (Globerman & Shapiro, 2009; Luo, Xue, & Han, 2010). These supports have effectively helped companies with large state-owned stakes to trade out of the country more efficiently, with lower barriers and more confidence. Indeed, while support policies in emerging markets are targeted at all types of firms, in practice, firms with more enormous state stakes tend to receive more government support, especially in financing (Li, Li, & Wang, 2014). Similarly, Musacchio and Flores-Macias (2009) point to state-owned banks as a channel for providing cheap loans to politically connected firms.

In addition to the unique financial policies mentioned above, SOEs as resources often receive additional government policy support, such as tax incentives, favourable insurance terms, and foreign industrial guidance assistance, which are unavailable to non-SOEs. Policy support for non-SOEs is only available through customs inspections and overseas protection. These supports are essentially negligible compared to SOEs (Ahlstrom, Chen, & Yeh, 2010). Thus, it can be seen that these support policies are actually issued in favour of SOEs' cross-border M&As. Compared to non-SOEs, such support is arguably fragile.

1.3.1.3 Diplomatic Support

In terms of diplomatic support, domestic governments can use their diplomatic relations with the host government to help SOEs in cross-border M&As. The number of bilateral political relations, trade volumes and bilateral trade agreements will facilitate investment by domestic firms in the host country (Voeten, 2000, 2004), and the establishment of these relationships and the signing of agreements play a very important role. When governments establish and sign bilateral agreements, care will likely be taken to provide favourable conditions for SOEs (Li, Li, & Wang, 2018). For example, in emerging countries, particularly China, the Chinese government often provides subsidised credits to host countries through the 'One Belt, One Road' policy, which will be used for infrastructure in the host country but will need to be built by Chinese SOEs. It can also support

SOEs to operate in host countries in sectors where the terms of bilateral trade treaties are negotiated in favour of SOEs. These SOE advantages may not be available to non-SOEs (Cuervo-Cazurra, *et.al* , 2014).

1.3.2 Advantages of SOEs as the Acquirer Firm

When a SOE acts as the acquirer to engage in a cross-border M&A, it can offer high prices, which are very attractive to any target company, and they are likely to come out on top in competitive bids in foreign markets (Deng, 2009; Luo & Tung, 2007; Morck, Yeung, & Zhao, 2008). In terms of policy support, more efficient financing, government approvals and lower tax rates are highly likely to give SOEs a head start on international markets as M&A players, which is difficult for other non-SOEs to obtain (Ahlstrom, Chen, & Yeh, 2010; Li, Li, & Wang, 2014). From the perspective of diplomatic support, domestic governments can use their diplomatic relations with host governments to assist SOEs in cross-border M&As. In addition, negotiated provisions in bilateral trade treaties can include support for the industries favoured by SOEs to operate in the host country. With this support, SOEs have a more significant advantage in being competitive when going out to trade (Li, Li & Wang, 2018).

1.3.3 Advantages of SOEs as the Target Firm

To rapidly improve the international reputation and competitiveness of companies and to bring the market in line with international standards, the Chinese government has implemented the 'National Champion Strategy' to promote the development of leading SOEs by providing financial support, policy support, and diplomatic support (Deng, 2009; Morck, Yeung, & Zhao, 2008; Rui & Yip, 2008). As a result, foreign companies that acquire these SOEs as targets can undoubtedly follow the acquiring SOEs in enjoying the strong support from the Chinese government. On the other hand, SOEs usually have a high market share, high visibility and a good reputation, and acquiring these companies can help foreign companies expand into the Chinese market quickly, gain market recognition and integrate rapidly into such market (Li, Li & Wang, 2018; Luo & Tung, 2007).

1.4 Moderating variables and legitimacy concerns

Through the above analyses of the strengths and weaknesses of Chinese SOEs in cross-border M&As, the study finds that SOEs as either acquirers or targets can raise legitimacy concerns of

host/home country regulatory agencies and contribute negatively to the outcome of cross-border M&As. Moreover, we further consider the introduction of three factors (the company's externally hired PC advisors, the company's internally held institutional investors, and the national level infrastructure of high-speed rail construction) as moderating variables to investigate whether and how these three factors positively moderate the legitimacy concerns of Chinese SOEs in cross-border M&As? In the following sections, each of these three moderating variables is presented.

1.4.1 Politically Connected Financial Advisors and Legitimacy Concerns

Financial advisors have consistently proven to play a highly active and vital role in the field of M&A. By way of example, financial advisors are considered to have an 'information advantage' in that they can help acquirers process and evaluate market information and provide technical and tactical assistance throughout the acquisition process (Beatty & Ritter, 1986; Chang, *et,al*, 2016). Moreover, financial advisors generally have the extensive industrial experience to help companies identify potential synergies of target companies and build extensive networks in specific industries (Graham, *et.al*, 2017). Financial advisors are also willing to be appointed in complex deals to achieve favourable acquisition outcomes based on their skills and expertise (Song, Wei, & Zhou, 2013).

At the same time, in both developing and developed countries, political relationships can benefit companies' business activities in many ways (Fisman, 2001; Khwaja & Mian, 2005; Adhikari, Derashid, & Zhang, 2006; Faccio, 2006; Claessens, Feijen, & Laeven, 2008; and Schweizer, Walker, & Zhang, 2016). However, in government-led economies, the impact of potential political connections is generally more evident due to government intervention, a relatively poor institutional environment, a more concentrated ownership structure, and a poorer degree of available information (La Porta, *et al*, 1998). It is assumed that an acquirer company with a potential political connection with local government officials and regulators is more likely to obtain lower financing costs, more business opportunities, preferential tax treatment, preferential tax treatment, superior access to the regulated industry, and lower financing cost, which allows the gain a significant competitive advantage (Feng, Johansson, & Zhang, 2015).

While political connections can bring many benefits to firms entering a host country to conduct

business, it is not easy for foreign acquirers unfamiliar with the Chinese institutional environment to establish significant political connections with the local government in the short term. As a result, they are likely to hire external firms with political connections to overcome political uncertainty, hostile attitudes, inefficient approval processes, insecure property rights and overt government discrimination (Mcnally, Guo & Hu 2007). Therefore, this thesis studies the external political connections -- politically connected financial advisors (PC advisors). Employing financial advisers who maintain active political relationships with local governments can, on the one hand, provide benefits to the acquirer by relying on their experience and expertise in providing information about the target company, handling complex transactions and selecting suitable targets. On the other hand, they can use their political connections to establish effective communication channels with government regulators, thereby promoting transparency, reducing transaction friction and significantly increasing legitimacy. When foreign acquirers enter the Chinese market and conduct politically sensitive mergers and acquisitions, such as those targeting SOEs, these acquisitions are likely to raise legitimacy concerns from the Chinese government and thus negatively impact the outcome of these transactions. And at this point, this study examines whether foreign acquirers hiring external political contacts - PC advisors - can use the unique political connections of such financial advisors with the local government to overcome legitimacy concerns' impact on the outcome of their M&As.

1.4.2 Institutional Investor and Legitimacy Concerns

The critical role of institutional investors is growing rapidly worldwide and flourishes in developed economies (Andriosopoulos & Yang, 2015; Khorana, Servaes & Tufano, 2005). In recent years, as emerging markets actively integrate into financial globalization, they have further removed restrictions on international investment and opened their markets to international investors (Huang & Zhu, 2015). This has led to an enormous surge of global institutional investors entering and investing in these markets and impacting them (Meyer, & Nguyen, 2005). One such example is the Chinese market. As the recipient of the world's second-largest investment inflow, China has continuously opened up its domestic market to international investors.

Further, institutional investors are more inclined to invest in SOEs while investing in emerging markets (Ferreira & Matos, 2008; Khorana, Servaes, & Tufano, 2005). Du and Boeteng (2015) and

Luo, Xue, and Han (2010) explain that because of the special political relationship between SOEs and their governments, these companies are easier to be strongly supported by government policies and are thus in a domestic market monopoly position, which tends to bring stable returns and less market risk to investors. Ferreira, Massa, and Matos (2010) posit that as significant company shareholders, professional money managers generally play a key role in supervising corporate management and influencing corporate strategic decisions by using their company voting right. Similarly, Andriosopoulos and Yang (2015), Liu, *et al* (2014), and Hartzell and Starks, (2003) also illustrate that institutional investors fill information gaps, and build bridges between acquirers and target companies, promoting company investment.

Moreover, institutional investors can be divided by nationality into foreign and domestic institutional investors, which have different influences on cross-border M&As. It is argued that foreign institutional investors typically play a more significant role than their domestic counterparts in influencing corporate strategic decision-making (Ferreira & Matos, 2008; Gillan & Starks, 2003). Firth, Lin, and Zou (2010) and Huang and Zhu (2015) support this point and suggest that foreign institutional investors are often considered the 'outsider' because they are less susceptible to local political pressure, thus performing arm's-length monitoring and participation in management decision-making. At the same time, Gillan and Starks (2003) argue that foreign institutional investors belong to the pressure-insensitive group because they have fewer business relations with the firms in which they invest. Thus, foreign institutional investors can potentially fairly monitor and actively influence the strategic decision-making of firm managers according to their preferences (Bekaert & Harvey, 2000; Gupta & Yuan, 2009). In particular, the decision to engage in a M&A is major corporate decision-making which relates to the interests of different groups of shareholders (Gaspar, Massa & Matos, 2005; Tihanyi, *et al*, 2003). Shareholders can influence corporate decisions by indicating their preferences according to their share-holdings, with larger share-holding usually having a greater voice (Hartzell & Starks, 2003; Hoskisson, Hitt, Johnson & Grossmanl, 2002).

In China, with the Qualified Foreign Institutional Investor (QFIIs) quota system launched in 2002 by the China Securities Regulatory Commission (CSRC), foreign institutional investors approved by the CSRC are allowed to enter China's domestic A-share market. However, under the QFIIs scheme, these institutional investors face many policy restrictions, such as investment horizons,

projects, and sizes. Following 'Foreign Exchange Administrative Provisions for Domestic Securities Investments by Qualified Foreign Institutional Investors' (China Securities Regulatory Commission, 2009), each government approval cannot exceed $1 billion. A single foreign investor share-holding in a listed company is not allowed to exceed 10% of the company's total issued shares. In comparison, all foreign investors' share-holdings in the A shares of a listed company are not allowed to exceed 30% of its total issued shares, and these restrictions severely limit the share-holdings of foreign institutional investors in the companies they invest in and reduce their voice.

Therefore, based on the different roles and government restrictions of foreign and domestic institutional investors, this chapter considers whether and how these two types of institutional investors overcome the legitimacy concerns faced by SOEs in cross-border M&As when investing as shareholders in SOEs, influencing the outcomes of cross-border M&As.

1.4.3 High-speed Railway and Legitimacy Concerns

The Covid-19 crisis has significantly suppressed global economic activity. In 2020 alone, the average global GDP showed a 4.5% contraction (OECD, 2020). Many governments have stepped in to cushion the impact on households and businesses. These governments have introduced many economic stimulus measures, with much of the spending aimed at ensuring that domestic companies will still be able to survive and develop. As a safe, convenient and efficient mode of transportation, the HSR can significantly boost the opening city's economic activity and become an essential part of the infrastructure stimulation package. In turn, in the recovery of economic activity, foreign direct investment (cross-border mergers and acquisitions) has been an attractive target for many governments' stimulus packages in the post-epidemic era, as it is often seen as the engine of economic recovery (Wilkins, Gilchrist, & Phillimore, 2020). Cross-border M&A not only brings external capital, technology and management experience to the target company, further contributing to the company's development, but also drives the development of the local economy (Aybar, & Ficici, 2009). However, unlike local investors, foreign M&A investors are often concentrated in large metropolitan areas, where market investment fragmentation due to distance prevents them from accessing projects in cities without HSR (Schamp, Rentmeister, & Lo, 2004). Because of unfamiliarity with the culture, geography and transportation in relatively small or remote cities without HSR, foreign investors are seldom available or willing to travel to these cities to find

suitable investment opportunities for fear of increasing their opportunity costs. However, the development of infrastructure - the opening of HSR - has somewhat changed the investment landscape for foreign acquirers. The HSR, because of its comfort, efficiency and broad accessibility, has significantly reduced the time and cost of travel for investors, broken down the market investment fragmentation caused by distance, and serves as an investment bridge for foreign investors, increasing the opportunities for foreign M&A to find suitable target companies in cities with HSR. On the other hand, the reduction in travel time and lower costs for foreign investors as a result of the construction of high-speed rail will significantly increase the frequency of communication between foreign investors and target companies, local governments and further promote transparency of transaction information, which is likely to reduce the negative impact of legality concerns on the outcome of cross-border M&As.

1.4.4 Complementary to Legitimacy Concerns

This paper focuses on the impact of legitimacy concerns in cross-border M&As arising from the semi-political nature of SOEs and explores how the above three factors moderate the impact of legitimacy concerns. To better explore the effectiveness of the above three moderating variables in legitimacy concerns, this thesis further supplements the source of legitimacy concerns - the politically sensitive industry. Politically sensitive industries, e.g., defense, health care services, petroleum and natural gas, pharmaceuticals, telecommunications, and transportation, are closely related to national security as well as the competitiveness and discourse power in the international market (Herron, *et.al*, 1999; Toth, 2008). Julio and Yook (2012) suggest that when foreign acquirers target companies in politically sensitive industries, it is more likely to provoke the sensitivity of host country regulators (Julio & Yook, 2012). As a result, acquisitions in politically sensitive industries are much of a greater likelihood of encountering legitimacy challenges and obstruction by political forces (Zhang, Zhou & Ebber, 2011; Li, Li & Wang, 2018), leading to legitimacy concerns from host-country regulatory agencies.

1.5 Structure

The rest of this thesis is organized as follows. Chapter 2 examines politically connected financial advisors and legitimacy concerns when SOEs are the M&A target. Chapter 3 explores institutional

investors (foreign institutional ownership/domestic institutional ownership) and legitimacy concerns when SOEs as the M&A acquirer. Chapter 4 investigates the construction of high-speed railways and legitimacy concerns when SOEs as the M&A target. Chapter 5 is the concluding remarks.

1.6 Data collections

This thesis focuses on the impact of SOEs' legitimacy concerns in cross-border M&As, but as it involves different moderating variables, despite the fact that the period for which M&A data are collected are from 2005 to 2020 (e.g., PC advisors, Institutional investors, and High-speed railways construction), different data sets are employed in different empirical chapters. In Chapter 2 included a total of 2,393 inbound acquisition transactions by foreign acquirers in China, in Chapter 3 and Chapter 4 collected a sample of 2,203 and 8,740 acquisition deals, including both domestic and foreign acquisitions.

1.7 Contributions

This thesis contributes to the research on the M&A field in various aspects, both in theoretical and empirical views. The contributions of each chapter are summarized as follows:

The contributions of chapter 2 on politically connected financial advisors and legitimacy concerns include: (1) a new type of financial advisors–politically connected financial advisors–by linking financial advisors with political connections, to explore how this particular type of financial advisor affects cross-border acquisition outcomes (i.e., acquisition completion and acquisition duration) in the Chinese market. Existing empirical studies have covered how different types of financial advisors will affect acquisition completion and duration, but little attention has been paid to PC advisors. For example, many studies (e.g., Bao & Edmans, 2011; Bi & Wang, 2018; Golubov, Petmezas, & Travlos, 2012; Hunter & Jagtiani, 2003; Ismail, 2010; Kale, *et al*, 2003) found that top-tier financial advisors can increase the likelihood of acquisition completion and reduce the acquisition duration. Moreover, Song, Wei, and Zhou (2013) classified financial advisors into two categories: boutique and full-service financial advisors and revealed that boutique financial advisors promote acquisition completion but prolong acquisition duration. In contrast, Agrawal, *et.al* (2011)

suggested that general financial advisors reduced the likelihood of acquisition completion and prolonged the duration of acquisition completion for acquirers. Despite this progress, PC advisors' influence on the cross-border acquisition completion and duration remains unclear, especially how PC advisors can play a role in the conduct of M&A transactions by foreign acquirers in the Chinese market, where business activities and political factors are closely linked.. Our study takes an important step to fill this gap in the cross-border acquisition literature, facilitating managerial decision-making in emerging countries. (2) this study also provides new insights into the cross-border investment literature by investigating the influence of PC advisors on legitimacy concerns associated with acquisition outcomes. There are few studies in the current M&A literature that cover the relationship in a government-led economy. Admittedly, a great deal of research has been concentrated on two topical issues in the M&A field–political connections and legitimacy concerns, examining how each affects acquisition outcomes, respectively. Still, few experiments have been carried out to explore the relationship between the two of them. For example, Li, Xia, and Lin (2017) found that legitimacy concerns could be an important factor negatively affecting acquisition outcomes for foreign acquirers in the US market. Similarly, legitimacy concerns are a key factor that needs to be effectively resolved to reduce the institutional pressure from the host country and allow for subsequent commercial activities (Ding, Li & Zhang, 2017). In contrast to the negative impact of legitimacy concerns on M&As, political connections can actively help companies overcome some obstacles and obtain advantages of policy support during the acquisition process (Bi & Wang, 2018; Feng, Johansson, & Zhang,2015). Building on these insights, this chapter examines whether PC advisors can exploit their political connections to overcome possible legitimacy concerns in cross-border acquisitions by foreign companies in the Chinese market. (3) our chapter also contributes to analyzing how legitimacy concerns affect the choice between PC advisors and non-PC advisors for foreign acquiring firms in a government-led market. Foreign acquirers are more likely to employ PC advisors to address legitimacy concerns when purchasing targets are state-owned or in a politically sensitive industry. This finding verifies the positive role of PC advisors in addressing Chinese regulatory agencies' legitimacy concerns and provides foreign investors with a reference in their selection of financial advisors when they encounter possible legitimacy concerns.

The contributions of chapter 3 on institutional investors (foreign institutional ownership/domestic

institutional ownership) and legitimacy concerns include: (1) it contributes to the resource dependence theory and its application to the M&A field, especially where it explains the relationship between SOE acquirers and cross-border acquisition outcomes (i.e., acquisition incidence and acquisition completion) by analyzing the internal and external problems of cross-border M&As that SOE acquirers typically face—M&A decision-making interference and legitimacy concerns. Although the resource dependence theory has been frequently adopted in research into M&As within mature economies (Casciaro & Piskorski, 2005; Drees, & Heugens, 2013; Nienhüser, 2008), it is rarely considered a way of understanding cross-border M&As by SOE acquirers within a government-led economy. Extending this theory by linking M&A decision-making and legitimacy concerns helps to deepen our understanding of the relationship between the semi-political nature of SOE acquirers and cross-border M&A outcomes.

(2) the study further contributes to the moderating role of foreign v.s. domestic institutional ownership in M&A decision-making of SOE acquirers. Previous studies (Andriosopoulos & Yang, 2015; Ferreira, Massa & Matos, 2010) have mainly focused on public-listed companies from the traditional Western free market. They suggest that both foreign and domestic institutional ownership can have a significant influence on M&A decision-making. However, in the context of a government-led economy, foreign institutional ownership has no significant moderating impact on the M&A decision-making of SOE acquirers due to share-holding restrictions on foreign institutional investments imposed by the China Securities Regulatory Commission (CSRC), their share-holdings are generally much smaller than government share-holdings and their domestic counterparts. While domestic institutional ownership can influence the M&A decision-making of SOE acquirers, in contrast to the preference for domestic institutional investors in Western free markets, Chinese institutional investors prefer domestic M&A investments. The findings further complement investor-specific characteristics: country of origin (foreign v.s. domestic institutional ownership) in the M&A decision-making of SOE acquirers under a government-led economy. (3) this study also contributes to the Signalling theory by developing the theory to address legitimacy concerns in cross-border M&As. Our study highlights that foreign institutional ownership act as a signal sender to enhance SOE acquirers' information flow and send credible signals to the outsider world, or as a positive signal itself to provide a positive legitimacy-enhancing spillover effect to the SOE acquirer they invest in, thus promoting corporate legitimacy in cross-border M&As. By

comparison, most domestic institutional investors are susceptible to local political pressure or frequently seek to bolster their private interests with the management of the SOE acquirer they invest in. As such, these investors are less likely to act as a signal sender or a positive signal itself to mitigate legitimacy concerns in cross-border M&As by SOE acquirers. To the best of our knowledge, our study is one of the first to investigate the moderating role of foreign v.s. domestic institutional ownership on legitimacy concerns that SOE acquirers frequently face in their cross-border acquisitions. The findings enrich the role of institutional investors on legitimacy concerns of cross-border M&As by SOE acquirers.

The contributions of chapter 4 on the construction of high-speed railways and legitimacy concerns include: (1) this study provides new insights into the cross-border investment literature by focusing on the impact of the opening of HSR on cross-border acquisition outcomes. Previous studies have focused on the impact of HSR network expansion on the domestic corporate decision -- cross-region acquisitions (Jin, Yang, & Zhang, 2021), but little is known about the impact of the opening of HSR on cross-border acquisitions by foreign acquirers. Unlike domestic acquirers, foreign acquirers not only have different investment objectives, investment strategies, and investment preferences but also have very different government investment policies and regulatory approval compared to domestic acquirers (Patnaik, & Shah, 2013; Chen, *et al*, 2009; Gaur, Ma, & Ding, 2018), This leads to heterogeneity in the M&A behaviour between foreign and domestic acquirers. Our study, therefore, takes an important step forward in filling this gap in the literature on the impact of the opening of HSR on cross-border acquisitions. (2) our study contributes to the literature investigating the regional economic impacts of transportation infrastructure. The HSR serves as a 'foreign investment bridge' to increase the probability of cross-border M&As in less-developed and western-regional cities following the opening of HSR, further enhancing the balance of regional economic development. On the other hand, the opening of HSR has broken down trade barriers to foreign investment in these cities, increasing the acquisition completion and reducing the acquisition duration, and greatly enhancing the economic activity in these cities. (3) our study to investigate the impact of transport infrastructure on legitimacy concerns is based on target company characteristics. It has been well documented that legitimacy concerns raised by host-country regulatory agencies create uncertainties for foreign acquirers (Li, Xia, & Lin, 2017). Information asymmetry with the acquirer, the target company, and the government is an important

cause of legitimacy concerns. A variety of mechanisms has been identified to alleviate information asymmetries between M&A parties, thus further alleviating legitimacy concerns, including the use of stock swaps (Officer, Poulsen, & Stegemoller, 2009), performance-linked compensation contracts (Reuer et al, 2004), risk-sharing contracts (Jansen, 2020), shared auditors (Dhaliwal, *et al*, 2016) and high-quality accounting information (Marquardt & Zur, 2015; McNichols & Stubben, 2015; Martin & Shalev, 2017). Our study highlights the role of HSR in reducing information asymmetry in M&As from the legitimacy perspective, and uses target company characteristics-state-owned enterprises (SOEs) or a target in an infrastructure industry as the legitimacy threshold and find that the opening of HSR increases the probability of cross-border M&As in SOEs and a target in the infrastructure industry, further analyses show that HSR increases the acquisition completion and reduces the acquisition duration, suggesting the opening of HSR helps foreign acquirers to mitigate legitimacy concerns raised by host-country regulatory agencies.

Chapter 2: Politically Connected Financial Advisors and Legitimacy Concerns of SOEs

The chapter introduces the benefits and drawbacks of hiring politically connected financial advisors (PC advisors) for acquirers in M&A transactions. We try to study whether the hiring of PC advisors by foreign acquirers in the Chinese market for SOEs or other politically sensitive M&A deals can positively influence the M&A completion rate and completion duration compared to not hiring PC advisors. Analysing 2,393 inbound M&A deals in China, our findings suggest that the appointment of PC advisors by foreign acquirers significantly increases the likelihood of acquisition completion, but such acquisitions are time-consuming compared to those without PC advisors. From a legitimacy perspective, the employment of PC advisors facilitates acquisition completion and shortens acquisition duration when the target company is a SOE or in a politically sensitive industry. Consistent with our proposed the external political connection trade-off theory, PC advisors can help acquirers mitigate their legitimacy concerns, but this comes at the cost of higher advisory fees than non-PC advisors.

2.1 Introduction

The rapid development of the Chinese economy has been attracting significant global investments since the 1980s, making China one of the most popular investment destinations for global investors (UNCTAD, 2020). In response to the fast-growing global investment in the Chinese market, financial advisors are actively involved in investment transactions and have played an essential role in helping companies with M&A transactions (Bi & Wang, 2018). However, in contrast to the traditional free economy market, China maintains a distinctive government-led economy in which local governments play a non-trivial role by intervening in transactions out of concerns for customer interests, political interests, national interests, and market stability (Du, Boateng & Newton, 2016; Xia, *et al*, 2014; Zhang, Zhou & Ebbers, 2011). Corresponding to the crucial role of the local government in the Chinese market, maintaining political connections with the Chinese government is considered one of the most important determinants of successful M&A transactions (Bi & Wang, 2018; Cull, Li, Sun & Xu, 2015; Mcnally, Guo & Hu, 2007; Wong & Tjosvold, 2010).

Under this background, the role played by financial advisors in the traditional free economy market and reported in previous literature may not be applicable, and the influence of such advisors in M&A transactions may be uncertain due to government control and intervention (Bao & Edmans, 2011; Bi & Wang, 2018; Golubov, Petmezas & Travlos, 2012; Song, Wei & Zhou, 2012). Thus, potential research gaps emerge, including questions such as whether politically connected financial advisors (PC advisors) are more desirable in a government-led economy, and what benefits and disadvantages can hiring PC advisors bring in inbound M&A transactions in China.

As an external source of political connection, politically connected financial advisors (PC advisors), because of their rich political resources and extensive political relations with the local government, are regarded as a 'helping hand' approach of government–business relationships to shaping acquisition outcomes in China (Bi & Wang, 2018; Meyer, *et al*, 2017). We argue that PC advisors may be more applicable to the Chinese M&As market for the following reasons. First, in the context of the government-dominated economy, setting up an external political connections makes it easier for acquirer companies to obtain policy supports including preferential tax treatment, lower financing cost and superior access to the industry with administrative regulations (Che & Qian, 1998; Meyer, *et al*, 2014). Second, in the Chinese M&As market where there is a high communication barrier between the acquirer company and the local government, an external of political connections tend to provide a more crucial advantage for acquirers, that is the establishment of an effective communication channel with local government regulators, which is tremendously helpful to mitigate information asymmetry issues in cross-border M&As (Che & Qian, 1998; Li, Xia & Lin, 2017). Bi and Wang (2018) and Li, Li and Wang (2018) further explained that information asymmetry is commonly found in cross-border acquisitions, and this issue often brings difficulties to foreign acquirers throughout procedure of gaining the legitimacy of M&A transactions due to aggravation of government's concerns. In a context of information asymmetry, it is challenging for regulatory institutions to identify the true purpose of the acquisition, thus frequently leading to legitimacy concerns on these acquisitions (Globerman & Shapiro, 2009). However, PC advisors' unique advantage of helping foreign acquirers to build liaison bridges with local authorities becomes essentially valuable for the improvement of transparency and mitigation of adverse effects from legitimacy concerns (Du, Boateng & Newton, 2016; Kelly & Ljungqvist, 2012). In the existing literature, the above conjecture about the role of PC advisors is not verified.

This study will make an attempt to resolving the issue by evaluating PC advisors' influence on the acquisition outcomes (i.e., acquisition completion and acquisition duration), as well as studying whether PC financial advisors can take advantage of their political connections to mitigate negative effects caused by legitimate concerns in a government-led economy.

Our study aims to address these issues above by advancing a legitimacy perspective rooted in institutional theory (DiMaggio & Powell, 1991). Institutional theory focuses on the roles of social, political, and economic systems within which companies operate and gain their legitimacy (Li, Li & Wang, 2018). According to institutional theory, if a company's actions are in line with the specified regulations, it is subject to less external evaluations. In contrast, if a company's actions deviate from the normal rules of the 'game', legitimacy concerns may arise and subsequently lead to a 'theorization' process (Henisz & Zelner, 2005). Once an acquisition is subject to the 'theorization' process, this means that the acquisition process is time consuming and its outcome is uncertain (King & Kugler, 2000; Li, Xia & Lin, 2017), thus legitimacy concerns exert a negative influence on acquisition outcomes. For a finer-grained understanding of the proposed relationships, we further propose local targets' characteristics (i.e., the state-owned enterprise and the politically sensitive industry) as contingency conditions. These characteristics tend to influence the threshold level of legitimacy, and then PC advisors are further used for exploring its relationships with legitimacy concerns associated with acquisition outcomes. This chapter uses the acquisition information of foreign acquirers in the China between 2005 to 2020 to examine these ideas.

Examining PC advisors' influence on acquisition outcomes in a government-led economy enables us to contribute to the cross-border M&A literature in the following aspects. First, this chapter considers a new type of financial advisors – politically connected financial advisors – by linking financial advisors with political connections, to explore how this particular type of financial advisor affects cross-border acquisition outcomes (i.e., acquisition completion and acquisition duration) in the Chinese market. Existing empirical studies have covered how different types of financial advisors will affect the acquisition completion and duration, but little attention has been paid to PC advisors. For example, many studies (e.g., Bao & Edmans, 2011; Bi & Wang, 2018; Golubov, Petmezas, & Travlos, 2012; Hunter & Jagtiani, 2003; Ismail, 2010; Kale, *et al*, 2003) found that top-tier financial advisors can increase the likelihood of acquisition completion and reduce the acquisition duration. Moreover, Song, Wei, and Zhou (2013) classified financial advisors into two

categories: boutique and full-service financial advisors, and revealed that boutique financial advisors promote acquisition completion but prolong acquisition duration. In contrast, Agrawal, *et al* (2011) suggested that general financial advisors reduced the likelihood of acquisition completion and prolonged the duration of acquisition completion for acquirers.Despite this progress, PC advisors' influence on the cross-border acquisition completion and duration remains unclear, especially how PC advisors can play a role in the conduct of M&A transactions by foreign acquirers in the Chinese market, where business activities and political factors are closely linked.. Our study takes an important step to fill this gap in the cross-border acquisition literature, to facilitate managerial decision-making in emerging countries.

Second, the chapter further provides new insights into the cross-border investment literature by investigating the influence of PC advisors on legitimacy concerns associated with acquisition outcomes. To the best of our knowledge, no studies have been carried out so far to investigate the relationship in a government-led economy. Admittedly, a great deal of research has been concentrated on two topical issues in the M&A field – political connections and legitimacy concerns, examining how each affects acquisition outcomes respectively, but few experiments have been carried out to explore the relationship between the two of them. For example, Li, Xia, and Lin (2017) found that legitimacy concerns could be an important factor negatively affecting acquisition outcomes for foreign acquirers in the US market. Similarly, legitimacy concerns are a key factor that needs to be effectively resolved to reduce the institutional pressure from the host country and allow for subsequent commercial activities (Ding, Li & Zhang, 2017). In contrast to the negative impact of legitimacy concerns on M&As, political connections can actively help companies overcome some of the obstacles and obtain advantages of policy support during the acquisition process (Bi & Wang, 2018; Feng, Johansson, & Zhang,2015). Building on these insights, this chapter considers examining whether PC advisors can exploit their political connections to overcome possible legitimacy concerns in cross-border acquisitions by foreign companies in the Chinese market.

Third, the chapter also contributes to analyzing how legitimacy concerns affect the choice between PC advisors and non-PC advisors for foreign acquiring firms in a government-led market. We find that foreign acquirers are more likely to employ PC advisors to address legitimacy concerns when purchasing targets are state-owned or in a politically sensitive industry. This finding verifies the

positive role of PC advisors in addressing Chinese regulatory agencies' legitimacy concerns and provides foreign investors with a reference in their selection of financial advisors when they encounter possible legitimacy concerns.

Four, this chapter supports the external political connection trade-off theory and makes the following contributions to the existing literature.To the best of our knowledge, this chapter is the first to deliver a theoretical framework and empirical analysis of how external political connections moderating legitimacy concerns and what the related costs of these connections are.

2.2 Theory and Hypothesis Development

2.2.1 A legitimacy Perspective on China's M&A Market

Underlying our research is institutional theory from the perspective of legitimacy concerns (DiMaggio & Powell, 1991; Li, Xia & Lin, 2017). The institutions mentioned in the institutional theory include three constructs: rule force, normal force, and cognition force, as well as both informal (e.g., ideas, attitude) and formal forces (e.g., policies, regulations) (Scott, 1995; Zaheer, 1995). In recognition of the importance of institutions in the M&A market, institutions designed by host-country regulatory agencies have significant capability to facilitate or restrict foreign investors' inbound business transactions, and consequently affect the outcomes (Beland & Lecours, 2005; Dikova, *et al*, 2010). The legitimacy of M&A transactions in our study is closely related to institutions in institutional theory, mainly because legitimacy can be regarded as the behaviour of an entity conforming to the standards, values, and beliefs that are desirable, appropriate, or acceptable within a particular system of institutional frameworks (Suchman, 1995). If an acquirer's behaviour is deemed to be legitimate or acceptable devised by the local regulatory agencies, then its transaction is less likely to be challenged. Otherwise, legitimacy concerns are raised to cause a 'theorization process', and then negatively affects acquisition outcomes (Greenwood, Suddaby & Hinings, 2002). Moreover, Dobbin and Dowd (1997) and Hoffman (1999) found that although shareholders of the target company and the public can evaluate the legitimacy of an M&A deal, the final decision on the 'theorization' process is in the hands of the host-country regulators. These studies sufficiently demonstrate how much impact regulatory review agencies have on M&A transactions. To illustrate, regulatory agencies can not only establish institutions to measure whether

a company's strategic actions are either legitimate or not (Green, 2004; Strang & Meyer, 1993), but also have the enforcement power to terminate or restrict transactions that are deemed undesirable or inappropriate (Meyer, *et al*, 2014; Zhang, Zhou, & Ebbers, 2011). Therefore, as a social judgment of acceptability, appropriateness, and desirability, gaining legitimacy is crucial for foreign investors to obtain acquisition approval and achieve subsequent acquisition success.

Different countries' institutional systems tend to have different national rules and regulations, political ideologies, and social organizations, resulting in local governments with various levels of legitimacy sensitivity (Khan & Law, 2018). In the case of China, the regulatory agencies are generally considered to be more sensitive and vigilant to cross-border M&As by foreign acquirers (Li, Li, & Wang, 2018), and cross- border M&A transactions in such market are more likely to encounter legitimacy challenges due to following three reasons. First, as a communist country, the Chinese market is typically an adverse political sentiment and rulings on foreign investment compared to traditional free-economy markets, this makes it more conservative in the face of foreign acquisitions (Khan & Law, 2018). Li, Li, and Wang (2018) explained that China maintains a unique market mechanism whereby the government controls the market through market shares, SOEs, and regulations to meet its economic and political goals. If the government's market control is challenged or perceived that some foreign acquisitions are politically motivated, foreign acquirers are likely to face an indefinite review process or outright rejection. (Globerman & Shapiro, 2009; Li, Xia & Lin, 2017; Tingley, *et al*, 2015; Toth, 2008). Second, compared with local entities, foreign acquirers tend to be more inclined and subservient to the pursuit of company-specific interests rather than host-country's national economic interests (Zhang, Zhou & Ebbers, 2011). They are also perceived to have different philosophies on sustainability, labor, and industrial policy, which do not always align with the national goals and interests of the host country (Kim, 2007). Therefore, in a regulated market, foreign acquirers are more likely to conflict with public goals or market control rights favored by the Chinese government, thus causing legitimacy concerns. Third, economic nationalism is an issue that foreign investors need to seriously consider when conducting business activities to gain legitimacy (Cantwell, *et.al*, 2010; Economy & Lieberthal, 2007; Hanon, 1996; Zaheer, 1995). In the case of the Chinese market, the second-largest foreign direct investment recipient, the the dynamic nature of economic nationalism is tending towards protectionism in its M&A market (Zhang & He, 2014). The aggressive form of Chinese economic nationalism could

impose great impacts over the outcome of cross-border M&As when the foreign acquisitions are deemed as monopoly acquisitions that bring negative effects on market stability. (Paine, 2010; Vanhonacker, 1997). Therefore, foreign investors need to address such issues in order to gain legitimacy and achieve a favorable acquisition outcome.

2.2.2 The Political Connections as a Source to act on Legitimacy Concerns in Regulated M&A Markets

Political connections can be beneficial to companies' business activities in many ways, both in developing and developed countries (Adhikari, Derashid & Zhang, 2006; Claessens, Feijen & Laeven, 2008; Faccio, 2006; Fisman, 2001; Khwaja & Mian, 2005; Schweizer, Walker & Zhang, 2016). However, in the context of government-led economy, the effects of potential political connections are generally prone to be more pronounced because of government interference, relatively inferior institutional environments, more concentrated ownership structures, and poor degrees of available information (La Porta, *et al*, 1998). As a result, setting up a political network connection with regulatory institutions has become a common practice and an essential factor of enterprises' survival and growth in Chinese market (Mcnally, Guo & Hu, 2007; Wong & Tjosvold, 2010). It is assumed that an acquirer company has a potential political connection with local government officials and regulators is more likely to obtain lower financing costs, more business opportunities, preferential tax treatment, and lower financing cost, which allows to gain a significant competitive advantage (Feng, Johansson, & Zhang, 2015).

On the other hand, from the legitimacy perspective, in general, 'taken for granted' is by far the most subtle and powerful source of legitimacy, and a firm's 'taken for granted' actions are less affected by external evaluations. In contrast, corporate behaviour that deviates from 'taken for granted' practices is deemed illegitimate, leading to the direct rejection of M&A transactions by host-country regulatory agencies (Suchman, 1995; Henisz & Zellner, 2005). Although some sensitive cross-border M&A transactions may cause legitimate concerns, such M&A transactions are usually in the range of the taken-for-granted and the completely illegitimate (Li, Xia & Lin), this allows political connections to exert their influence (King & Kugler, 2000; Li, Xia & Lin, 2017; Munir, 2005; Strang & Meyer, 1993). Therefore, effectively liaison opportunities are provided by political connections with local governments can be regarded as a crucial helping means of improving

acquirer companies' transparency, reducing frictions, and thus enhancing their legitimacy in M&A transactions (Bi & Wang, 2018).

2.2.3 Politically Connected Financial Advisors and Acquisition Outcomes

Although political connections can bring many advantages to foreign acquirers to conduct business activities, it is not easy for them to establish an effective political connection with the local government in the short term (Bi & Wanng, 2018). Therefore, they are likely to employ external forms of political connections to overcome obstacles brought by political uncertainty, hostile attitude, inefficient approval process, insecure property rights, and overt government discrimination (Mcnally, Guo & Hu, 2007). In previous studies, financial advisors have consistently proven to be an extremely active and vital role in the field of M&A. By way of example, financial advisors are considered to have a 'market information advantage' over foreign acquirers. By utilizing this advantage, financial advisors provide technical and tactical assistance to the acquirer regarding evaluation of market information (Beatty & Ritter, 1986; Chang, *et.al*, 2016). Moreover, financial advisors generally have the extensive industrial experience to help companies identifying potential synergies of target companies and build extensive networks in specific industries (Graham, *et.al*, 2017). Besides, financial advisors are proved useful in helping acquirers select suitable acquisition targets, carry out due diligence, and negotiate favourable terms (Song, Wei & Zhou, 2013). However, for PC advisors we studied, in addition to offering the above advantages to acquirers as other types of financial advisers do, more importantly, they can utilize political resources to liaison effectively with government regulators and thus addressing specific government concerns in a targeted manner as well as promoting corporate legitimacy. On the other hand, since PC advisors are frequently appointed throughout complex or politically sensitive M&A transactions, it may take more time and efforts to complete the deal. As Bi and Wang (2018) illustrated that financial advisors tend to put majority of their efforts on doing due diligence, negotiating favourable terms, and collecting data to solve tricky issues in a complicated M&A transaction. Therefore, we offer the following hypotheses:

Hypothesis 1a: *The likelihood of completing a cross-border acquisition is higher when foreign acquirers appoint PC advisors than non-PC advisors.*

Hypothesis 1b: *The time-lapse between the announcement and completion of a cross-border*

acquisition is longer when foreign acquirers appoint PC advisors than non-PC advisors.

2.3 Bringing Contingency Conditions into Considerations

Cross-border M&A transactions conducted by foreign acquirers do not in themselves cause legitimate concerns (Henisz & Zelner, 2005). However, a range of conditions of target companies' characteristics may alter the legitimacy threshold and provoke the host country regulators' sensitive nerves, thus affecting the acquisition outcome. For example, acquirers with extensive alliance and acquisition experience in the host country are more likely to promote their acquisition completion and reduce the acquisition completion duration. In contrast, the acquisition target is a publicly listed company or has more R&D alliances, it tends to increase regulatory barriers in the host country, thereby decreasing the likelihood of acquisition completion while experiencing a longer deal completion duration (Li, Xia, & Lin, 2017). Similarly, when a foreign acquirer brought capital and technology to the local target, the M&A deal was more likely to be completed (Zhang & He, 2014). Moreover, when the bidder is a SOE, it tends to be less accessible and takes more time to complete its acquisition (Zhang, Zhou, & Ebber, 2011).

Building on these insights, it is argued that target firm characteristics (the state-owned enterprise and the politically sensitive industry) may act as contingency conditions that may negatively affect the legitimacy threshold. Taking the perspective from PC advisors, we explore how target companies' characteristics affect the variation of legitimacy threshold and further investigate PC advisors' impact over legitimacy concerns throughout cross-border M&As.

2.3.1 Targeting Firms of State-owned Enterprises

In order to quickly improve the international reputation and competitiveness of domestic companies and bring the market in line with international standards, the Chinese government has implemented the 'national champion strategy' to promote the privatization and reconstruction of leading state-owned enterprises (SOEs) (Amighni, Rabeillotti, & Sanfilippo, 2013). However, this does not mean that opening up is unreserved, as the mainstay of the government-led economy, SOEs are usually prevalent in the public utilities and infrastructure industries that the government attaches great importance to, thus China's politicians continue to emphasize the key role of SOEs in the

national economy (Narayanan, 2006). Consequently, Chinese regulatory agencies may be hostile to the acquisition of SOEs due to fear of losing control over the national economy, consequently leading to a high-level legitimacy concern over the proposed M&A transactions (Zhang & He, 2014). Privatization in China does not mean the abandonment of protectionism, the barriers for foreign companies to acquire SOEs are higher than the acquisition of other targets (Lin, 2008; Zhang, Zhou & Ebber, 2011). However, the SOE acquisition's lower success rate does not represent that regulatory institutions will reject such acquisitions outright. This chapter expects that PC advisors will, to a certain extent, make use of their political sources to dialogue with the Chinese government to identify the specific reasons for their legitimacy concerns, so as to minimize the negative impact of legitimate concerns on the outcome of such acquisitions. The minimization of negative influence is achieved by demonstrating their objective is to pursue the company's development and economic interests, rather than political motivation, or by proving what advantages will be brought to SOEs through M&A, such as capital, management experience and employment. Moreover, the chapter also expects that foreign investors may be aware of the sensitivity involved in acquiring SOEs and thus are likely to employ PC advisors to overcome the adverse effects of legitimate concerns on the results of M&As. These arguments lead to the following hypotheses:

Hypothesis 2a: *Foreign acquirers hiring PC advisors are more likely to reduce the negative impact of acquiring a SOE on the completion likelihood of cross-border acquisition than non-PC advisors.*

Hypothesis 2b: *Foreign acquirers hiring PC advisors are more likely to shorten the time lapse between the announcement and the completion of a cross-border acquisition than non-PC advisors when the target company is a SOE.*

Hypothesis 2c: *The likelihood of foreign acquirers hiring PC advisors is higher than non-PC advisors to reduce the negative influence of acquiring a SOE on the completion likelihood of cross-border acquisition*

2.3.2 Targeting Firms in Politically Sensitive Industries

When foreign firms target politically sensitive industries, it is highly likely to provoke the host country regulators' sensitive nerves (Julio & Yook, 2012). Politically sensitive industries, e.g.,

defense, health care services, petroleum and natural gas, pharmaceuticals, telecommunications, and transportation, are closely related to national security as well as the competitiveness and discourse power in the international market (Herron *et.al*, 1999; Toth, 2008). As a consequence, acquisitions in politically sensitive industries are more likely to face legitimacy challenges and obstruction by political forces (Zhang, Zhou & Ebber, 2011; Li, Li & Wang, 2018). Again, this does not mean that acquisitions in politically sensitive industries are bound to be directly rejected or terminated by local regulatory agencies. Therefore, it also provides foreign acquirers with an opportunity to promote their legitimacy during the host government's review process. For example, useful methods could be taken to enhance legitimacy by preparing adequate company's financial information and developing plans to prove that they are harmless to national security, or by demonstrating what benefits the M&A can bring to the host country, achieving a mutually inclusive win-win cooperation with the local government. Therefore, it is expected that PC advisors, due to their political connections, are likely make it possible for the local government to clearly understand the harmlessness of the acquisition to national security through effective communication. Simultaneously, such financial advisors also provide foreign investors with policy guidance, internal information leakage, and appropriate target company selection under different institutional backgrounds. Additionally, the chapter also expects foreign investors to be aware of concerns regarding acquisitions in politically sensitive industries and are likely to employ PC advisors to help them overcome the adverse effects of legitimate concerns on the outcomes of their M&As. These ideas lead to the formulation of the following hypotheses:

Hypothesis 3a: *Foreign acquirers hiring PC advisors are more likely to reduce the negative impact on the completion likelihood of acquiring a target company in the politically sensitive industry than non-PC advisors.*

Hypothesis 3b: *Foreign acquirers hiring PC advisors are more likely to shorten the time lapse between the announcement and completion of a cross-border acquisition than non-PC advisors when the target company is in the politically sensitive industry.*

Hypothesis 3c: *The likelihood of hiring PC advisors to reduce the duration of acquiring a target firm in the politically sensitive industry is higher than the non-PC advisors.*

2.4 Data and Methodology

The chapter derived a sample of cross-border acquisition deals in China between 2005 and 2020 from the Securities Data Corporation (SDC) database that has been widely used in prior M&A literature (Erel, Liao, & Weisbach, 2012; Li, Xia & Lin, 2017; Tao, *et al*, 2017). Also, data on PC advisors and firm's characteristics were supplemented according to CSMAR (i.e., China Stock Market & Accounting Research Database) and the firms' official websites. A detailed description of our sample, which includes a total of 2393 acquisition transactions with 1846 foreign acquirers from 53 different acquiring countries or regions. At the same time, Tables 2.1 are inserted to represent sample variable summary statistics, and sample distribution by SIC industry classification, respectively, which provide a clear understanding of our sample.

Table 2.1: Sample variable summary statistics and sample distribution by SIC industry classification.

Variable	***N***	***M***	***SD***	***P25***	***P50***	***P75***
Bilateral Trade Relationship(in billions)	2,393	23.314	12.956	11.266	28.347	34.134
Host-country GDP (in trillions)	2,393	135.939	16.459	22.863	29.147	34.170
Host-country GDP Growth (%)	2,393	3.284	2.765	2.176	2.891	4.449
Acquirer state-owned enterprise	2,393	0.017	0.082	0.000	0.000	1.000
Politically connected acquirer	2,393	0.089	0.013	0.000	0.000	0.000
Friendly attitude	2,393	0.880	0.325	1.000	1.000	1.000
Stock payment	2,393	0.097	0.297	0.000	0.000	1.000
Deal value (in millions)	2,393	80.482	2.405	3.209	12.875	53.581
Cross-industry acquisition	2,393	0.746	0.435	0.000	1.000	1.000
Percentage sought (%)	2,393	60.979	35.84	25.000	60.000	100.000
Target public status	2,393	0.115	0.319	0.000	0.000	1.000
Target subsidiary	2,393	0.567	0.496	0.000	1.000	1.000
Target size (in millions)	2,393	3.304	2.291	6.756	29.235	121.787
Target state-owned enterprise	2,393	0.061	0.241	0.000	0.000	1.000
Politically sensitive industry	2,393	0.151	0.358	0.000	0.000	1.000
PC advisor	2,393	0.139	0.347	0.000	0.000	0.000
Financial advisor fee (in millions)	2,393	0.261	1.197	0.190	0.360	1.310

	All samples		PC advisor samples	
SIC Industry Classification	***N***	***%***	***N***	***%***
Manufacturing	844	35%	133	40%
Real Estate	572	24%	74	22%
Services	409	17%	36	11%
Transportation, Communications, Electric, Gas and Sanitary service	230	10%	42	13%
Wholesale Trade	103	4%	9	3%
Retail Trade	75	3%	13	4%
Mining	74	3%	13	4%
Agriculture, Forestry and Fishing	33	1%	6	2%
Construction	31	1%	3	1%
Public Administration	21	1%	2	1%
Total	2393	100%	332	100%

2.4.1 Dependent Variables

Our first dependent variable was acquisition completion, which took 1 if the acquisition was

successfully completed after the public announcement of cross-border M&As by the foreign acquirer, and 0 otherwise (Nguyen, Phan & Simpson, 2019). The second dependent variable of interest was acquisition duration. We followed previous studies (Ferris & Houston, 2015; Li, Xia & Lin, 2017), and measured the indicator as the number of days for the difference between the acquisition announcement date and the completion date. Based on specific rules and laws of the regulatory agency, we further created Figure 2.1 to describe the M&A life-cycle in China and the stage to which acquisition duration indicator belongs

According to Figure 2.1, there are three important stages which foreign investors must undertake to finalize the M&A. In the first stage of pre-announcement, foreign investors need to take three steps by identifying suitable targets, doing due diligence & hiring financial advisors, and reaching an agreement & making a final offer, along with the signing of two key agreements (LOI and SPA) between the parties (Boyle & Winter, 2009). In the second phase of the announcement and judgment process, the target firm shall publish an announcement in Chinese nationwide newspaper not later than 15 days before the foreign acquirer submits the application documents to the examination and approval agency (Ministry of Commerce of the People's Republic of China, 2006).

Table 2.2: Descriptive statistics and correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Acquisition completion	1														
(2) PC advisor	0.096	1													
(3) Bilateral trade relationship	-0.028	0.019	1												
(4) Host-country GDP	0.020	0.011	0.614	1											
(5) Host-country GDP growth	-0.037	-0.015	0.090	-0.032	1										
(6) PC acquirer	0.017	0.012	-0.031	-0.011	0.053	1									
(7) Friendly attitude	0.038	-0.012	0.050	0.062	-0.175	-0.033	1								
(8) Stock payment	-0.008	0.064	0.019	0.122	-0.023	-0.026	0.021	1							
(9) Deal value	0.016	0.296	0.044	0.033	-0.073	-0.016	0.045	0.055	1						
(10) Cross-industry acquisition	-0.007	-0.027	-0.001	-0.089	-0.007	-0.047	0.010	0.001	-0.011	1					
(11) Percentage sought	0.050	0.015	0.032	0.018	-0.031	-0.042	0.251	0.204	0.079	-0.052	1				
(12) Target public status	0.036	0.234	-0.062	0.020	-0.028	0.019	-0.052	-0.105	0.246	0.102	-0.323	1			
(13) Target subsidiary	-0.153	-0.064	0.018	-0.104	0.062	0.010	0.016	-0.057	-0.050	-0.035	0.185	-0.413	1		
(14) Target state- owned Enterprise	-0.063	0.130	0.011	-0.001	0.023	0.021	0.061	-0.039	0.160	-0.034	-0.057	0.009	0.054	1	
(15) Political sensitive industry	-0.063	0.200	0.020	0.097	-0.018	0.064	-0.031	0.142	0.081	-0.107	0.047	-0.012	-0.041	0.080	1

(*Note:* N =2,393. This table reports the correlation matrix for all the variables)

Then the Chinese government starts to get involved in the transactions and approach the M&A of both parties. Through a judgment process in reviewing the cross-border M&A transaction, the

government has the final decision to give approval or denial result. If the M&A transaction receives government approval, it enters the final stage of post-merger integration in where the M&A parties begin communicating and implementing the subsequent integration. For our acquisition duration indicator, concentrating on the announcement & judgment process stage represents the government's entire involvement and approval process.

2.4.2 Independent and Moderating Variables

Target state-owned enterprise (SOE) was captured if their immediate or ultimate owner belonged to any administrative level of government (Li, Li, & Wang, 2018). To determine the immediate or ultimate owner, it is sometimes necessary to track through the entire ownership structure and calculate the proportion of ownership directly and indirectly owned in a generally pyramidal structure (Claessens, Djankov & Lang, 2000). The key independent variable, the state-owned enterprise, was collected primarily from the Securities Data Corporation (SDC) database and supplemented by the CSMAR database. A target company was coded as the SOE if its state-owned shares were the largest shareholder (Berkman, Cole, & Fu, 2010); or if all state-owned shares exceeded 50% of all shares (Li, Xia & Lin, 2017); or if the company official information indicated that the ultimate controller of the enterprise was the government (Lin & Bo, 2012).

Politically Sensitive industry was defined by Herron (1999)，Li, Li and Wang (2018), Zhang, Zhou, and Ebbers (2011), and Julio and Yook (2012) as metals & mining, semiconductors, healthcare, telecommunications, transportation & infrastructure, pharmaceuticals, aerospace & defense, oil & gas, and banks & insurance. When acquisitions involve these industries, they are likely to face obstacles and resistance from the host government, negatively affecting the M&As' results. Therefore, a dummy variable was introduced, it was equal to 1 if the target company was in a politically sensitive industry and 0 otherwise.

Politically connected advisor was a dummy variable, coded as 1 if an acquirer appointed the PC advisor in its transaction and 0 otherwise. We defined that a PC advisor if at least one of the top management team members of a specific securities company has political connections (Bi & Wang, 2018). Our definition of a political connection was that a top management team member of a financial advisor company is a current or a former (i) a representative in the People's Congress (PC), (ii) the Chinese People's Political Consultative Conference (CPPCC), (iii) an officer in local or

central government, or an officer in the military (Bi & Wang, 2018; Liu, Tang, & Tian, 2013). And the politically connected member was appointed to the top management team of the financial advisor company prior to the announcement of M&As. Regarding the data, the CVs of top management team members were collected from company annual reports and official websites.

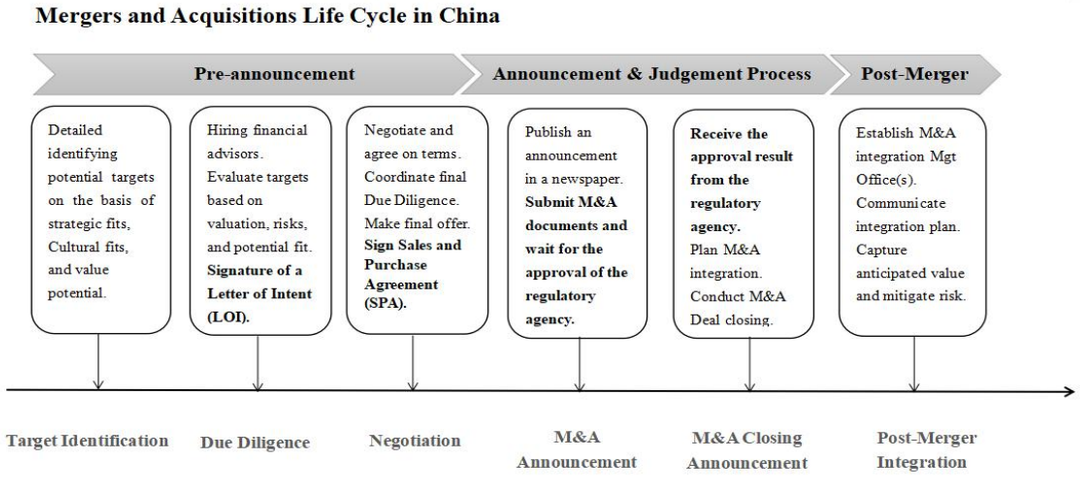


Figure 2.1: Mergers and Acquisitions Life Cycle in China.

2.4.3 Control Variables

We also used several control variables, which are described in the previous leading literature (Li, Li & Wang, 2018; Li, Xia & Lin, 2017). Control variables improve the internal validity of a research study by restricting the influence of confounding and other unrelated variables. This assists you in establishing correlations or causal relationships between the variables of interest. The reason for including control variables in the multiple regression is that once the control variables are held constant, the independent variables we are interested in are no longer correlated with the error term (Box, Hunter & Hunter, 1978).

Bilateral country relationship attributes: **Bilateral trade relationship** was measured as the log sum of total import and export values between a home country and China in the year prior to the focal deal announcement; **Home-country GDP** was constructed as the home economy's Gross Domestic Product (GDP) in the year prior to the focal deal announcement.; **Home-country GDP growth** was captured as the home country's geometric annual growth rate in GDP between the year of the deal announcement and the previous year.

Deal attributes: **Friendly attitude** was denoted as a dummy variable, coded as 1 if the SDC database classified the deal as friendly and 0 otherwise (Li, Li, & Wang, 2018). A positive and

friendly attitude from the host country may effectively help the acquirer to complete a transaction; **Stock payment** was defined as a dummy variable indicating whether an acquirer was paid entirely in share in a transaction. The dummy variable took 1 if the entire payment method for an M&A transaction was through stock payment and 0 otherwise. Stock acquisition methods may make it more difficult for acquirers to complete transactions (Aguilera, *et al*, 2006); **Deal value** was captured as the natural logarithm of a deal's total value. The greater the transaction value, the more likely it attracts the host government and society's attention and vigilance, thus increasing the resistance to the completion of an M&A (Ferreira, Massa & Matos, 2010); **Cross-Industry acquisition** was classified as cross-industry M&As based on whether the two-digit SIC codes of acquirers and targets were the same or not. When the two-digit SIC codes of acquirers and targets were identical, it was coded as 1, and 0 otherwise (Sambharya, 1996). **PC acquirer** was defined as a dummy variable, coded as 1 if a board member or CEO is a current or former home-country government official, and 0 otherwise (Bi &Wang, 2018). **Percentage sought** was constructed as the fraction of ownership that an acquirer had initially sought. Seeking a greater stake may generate more resistance from the host country government (Ferreira, Massa & Matos, 2010).

Target attributes: **Public target status** took 1 if the target was a publicly listed company and 0 otherwise; **Target subsidiary** was coded as 1 if the target was a subsidiary company and 0 otherwise.

2.4.4 Methodology

Logistic models are used commonly for classification and predictive analysis. Logistic regression estimates the probability of an event occurring given a dataset of independent variables, and as the outcome is a probability, the dependent variable is restricted to be between 0 and 1. In logistic regression, a Logit transformation is applied to the odds, i.e. the probability of success divided by the probability of failure. To examine how PC advisors can affect the likelihood of acquisition completion, we carry out the following logistic regressions, where acquisition completion is a binary variable that equals 1 if foreign acquirers complete a cross-border deal, and 0 otherwise; PC advisors are measured if an acquirer appointed the PC advisor in its transaction and 0 otherwise; and including control variables and fixed effect.

$$Logit\ (Success_{i,t}) = \alpha + \beta_1 \mathrm{PCadv}_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum Country + \varepsilon_{i,t} \quad (1)$$

The OLS method can be used to estimate the unknown parameters by minimizing the sum of squared residuals. In other words, the OLS method finds the best-fit line for the data by minimizing the sum of squared errors or residuals between the actual and predicted values. In the model of our second regression, the dependent variable is the acquisition duration. According to Li, Xia, & Lin (2018),OLS models are suitable for models where the number of days of M&A is the dependent variable. To examine how PC advisors can affect the duration of acquisition completion, we carry out the following OLS regressions, where acquisition duration is measured the indicator as the number of days for the difference between the acquisition announcement date and the completion date; PC advisors are measured if an acquirer appointed the PC advisor in its transaction and 0 otherwise; and including control variables and fixed effect.

$$OLS\ (Duration_{i,t}) = \alpha + \beta_1 \mathrm{PCadv}_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum Country + \varepsilon_{i,t} \quad (2)$$

2.5 Empirical Analysis

Table 2.2 reports the summary statistics and correlation matrix for all the variables used to examine the potential multicollinearity issues in this research. According to Zhang, Zhou, and Ebber (2010), when the correlation of the variables is lower than the commonly used cut-off threshold of 0.7, no multicollinearity problem needs to be considered. As shown in Table 2.2, all correlations of variables we studied are below 0.7. In addition, Table 2.3 performs the variance inflation factor (VIF) test, the maximum variance inflation factor (VIF) value of our variables is 1.68, which is much less than 10, further indicating that there is no multicollinearity concern in this study.

2.5.1 Results of Acquisition Completion

Table 2.4 shows the results of logit models predicting the possibility of cross-border acquisition

completion. Model 1 is the baseline model that includes independent and control variables. Model 2

Table 2.3: Results of the VIF test.

	VIF	1/VIF
Acquisition completion	1.32	0.758
Bilateral trade relationship	1.68	0.594
Host-country GDP	1.73	0.580
Host-country GDP growth rate	1.07	0.938
PC acquirer	1.02	0.985
Friendly attitude	1.11	0.900
Stock payment	1.11	0.903
Deal value	1.21	0.829
Cross-industry acquisition	1.04	0.960
Percentage sought	1.28	0.782
Target public status	1.52	0.660
Target subsidairy status	1.27	0.789
Target state-owned enterprise (SOEs)	1.06	0.946
Political sensitive industry	1.08	0.924
PC advisor	1.18	0.846

(*Note:* This table represents the variance inflation factor (VIF) test for the independent, moderating and control variables)

adds the main effect to the baseline model. Models 3-4 are employed to examine the interaction effects for Hypothesis 2a and 3a. Model 5 represents the full model that includes all variables and interaction terms. In model 1, we find that acquiring a SOE as or an enterprise in the politically sensitive industry is less likely to proceed (coefficient=-0.362, p=0.080; coefficient=-0.326, p=0.026), which is consistent with our assumption that these two independent research variables have negative impacts on acquisition completion. The PC advisor variable is added in Model 2 to test Hypothesis 1a, and the analysis results indicate that the estimated coefficient for PC advisors is 0.858 with a p-value= 0.000. These findings support acquiring a SOE and an enterprise in the politically sensitive industry on the likelihood of acquisition completion, which we expect with H2a and H3a. Through empirical analysis, for the SOE and the politically sensitive industry variable, the interactions of PC advisors with them both have a significant and positive coefficient (coefficient=1.045, p=0.034; coefficient=-0.800, p=0.023) as reported by Model 3 and Model 4. However, because of the nonlinear nature of the logit model, the marginal effect of an interaction effect cannot be assessed simply by looking at the sign, magnitude, or statistical significance of the coefficients on the interaction term (Ai & Norton, 2003; Hoetker, 2007). With this in mind, we also consider the interaction plots shown in Figures 2.2, 2.3, 2. 4, and 2.5 to better understand the economic significance. The vertical axis in Figure 2.2 shows the magnitude of the interaction effect and indicates the significance of the effect of each observation. The horizontal axis shows the predicted probability of the model and take into account the effects of all covariates.

Figure 2.2 reports that the strongest interaction effects take place at the lower end of the medium prediction level of the likelihood of acquisition completion (approximately 0.3 to 0.6), while the effect is less explicit for very low and very high degrees of the predicted probability of acquisition completion. Figure 2.3 shows that the interaction effect is positive and significant in all cases, confirming Hypothesis 2a. Furthermore, according to Figure 2.4, the strongest interaction effects also occur at the lower end of the medium prediction level of the likelihood of acquisition completion (approximately 0.3 to 0.7). Likewise, the interaction effect remains positive and significant in all cases in Figure 2.5, thus Hypothesis 3a is supported. In comparison, the effect of the interaction term PC advisors and the SOE is stronger than PC advisors and the politically sensitive industry when their interaction effect is at its strongest (2.7> 2.2). The empirical outcomes are consistent with our assumption that PC advisors can alleviate the adverse effect of acquiring a SOE and an enterprise in the politically sensitive industry on acquisition outcome, thus increasing the likelihood of acquisition completion.

Most of our control variables have the expected coefficients. For example, we find that the negative coefficient for stock payment (coefficient=-0.424, p=0.014) (in line with the findings of Bi & Wang, 2018) and the positive coefficient (coefficient=0.005, p=0.002) for bilateral trade relationship (confirming the findings of John, Lin & Qi, 2016).

2.5.2 Results of Acquisition Duration

Table 2.5 shows the results of OLS models for acquisition duration. Consistent with the above estimation approach, we test Model 1 to Model 5. In addition, we include the inverse mills' ratio for the acquisition duration estimation to control for the potential self-selection bias. Model 1 in Table 2.5 shows that acquiring a SOE or an enterprise in the politically sensitive industry requires more time to complete a deal (coefficient= 61.304, p=0.020; coefficient= 44.746, p=0.073), since these acquisitions may arouse the vigilance of Chinese governments and legitimacy concerns, thus extending the duration of completing the acquisition deal. The PC advisor variable is added in Model 2 to test Hypothesis 1b, the analysis results reveal that the coefficient estimate of PC advisors is significant and positive (coefficient = 26.870, p = 0.083). These findings support Hypothesis 1b.

Results from Model 3 in Table 2.5 show that the estimated coefficient of interaction term of PC

Table 2.4: Results of logit models predicting acquisition completion.

Logistic Regression

Variables	(1)	(2)	(3)	(4)	(5)
(i) Bilateral trade attributes					
Bilateral trade relationship	0.312*	0.303*	0.303*	0.302*	0.302*
	(0.164)	(0.165)	(0.166)	(0.166)	(0.166)
(ii) Acquirer attributes					
Host-country GDP	-0.121	-0.115	-0.108	-0.109	-0.103
	(0.093)	(0.093)	(0.093)	(0.093)	(0.093)
Host-country GDP growth rate	0.056	0.047	0.048	0.048	0.050
	(0.045)	(0.045)	(0.045)	(0.045)	(0.045)
PC acquirer	0.417	0.494	0.470	0.525	0.504
	(0.631)	(0.644)	(0.652)	(0.652)	(0.660)
(iii) Deal attributes					
Friendly attitude	0.131	0.135	0.119	0.147	0.130
	(0.159)	(0.160)	(0.160)	(0.160)	(0.161)
Stock payment	-0.424**	-0.481***	-0.492***	-0.470***	-0.481***
	(0.173)	(0.174)	(0.174)	(0.175)	(0.175)
Deal value	0.016	-0.012	-0.011	-0.015	-0.014
	(0.025)	(0.026)	(0.026)	(0.026)	(0.026)
Cross-industry acquisition	-0.073	-0.073	-0.072	-0.094	-0.091
	(0.117)	(0.115)	(0.118)	(0.119)	(0.119)
Percentage sought	0.005***	0.004***	0.004***	0.004***	0.004***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
(iii) Target attributes					
Target public status	-0.300	-0.483	-0.464	-0.476	-0.460
	(0.193)	(0.197)	(0.197)	(0.197)	(0.197)
Target subsidiary status	-0.850***	-0.878***	-0.872***	-0.890***	-0.884***
	(0.115)	(0.116)	(0.116)	(0.116)	(0.116)
Target state-owned enterprise	-0.362**	-0.475**	-0.741***	-0.492***	-0.730***
	(0.207)	(0.211)	(0.247)	(0.212)	(0.247)
Political sensitive industry	-0.326**	-0.470***	-0.485***	-0.642***	-0.641***
	(0.146)	(0.150)	(0.150)	(0.168)	(0.168)
PC advisor		0.858***	0.736***	0.637***	0.548***
		(0.165)	(0.172)	(0.186)	(0.191)
PC advisor × Target State--owned Enterprise			1.045**		0.941*
			(0.494)		(0.496)
PC advisor × Political Sensitive Industry				0.800**	0.726**
				(0.351)	(0.353)
N	2,328	2,328	2,328	2,328	2,328
Year FE	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Pseudo/adj R 2	0.107	0.117	0.118	0.120	0.12
Constant	--2.919	--2.633	-2.816	-2.743	-2.907
	(3.220)	(3.240)	(3.253)	(3.247)	(3.258)

(*Note:* N =2,328. This table reports the estimate of a logit model of the likelihood of success of a cross-border deal where the dependent variable is a dummy variable that equals one if a cross-border M&A bid is successful (or completed). Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.)

Table 2.5: Results of OLS models predicting acquisition duration.

OLS Regression

Variables	(1)	(2)	(3)	(4)	(5)
(i) Bilateral trade attributes					
Bilateral trade relationship	1.264 (20.342)	2.101 (20.285)	1.240 (20.284)	3.543 (20.275)	2.651 (20.240)
(ii) Acquirer attributes					
Host-country GDP	2.870 (13.000)	4.902 (13.043)	3.433 (13.022)	7.469 (13.029)	5.938 (13.020)
Host-country GDP growth rate	5.033 (5.452)	5.402 (5.452)	5.169 (5.439)	6.161 (5.441)	5.888 (5.432)
PC acquirer	259.935*** (60.451)	261.159*** (60.411)	261.708*** (60.262)	259.708*** (60.226)	260.323*** (60.114)
(iii) Deal attributes					
Friendly attitude	13.469 (17.222)	14.032 (17.212)	15.974 (17.184)	12.591 (17.166)	14.447 (17.150)
Stock payment	8.868 (20.625)	9.590 (20.614)	10.973 (20.569)	11.778 (20.562)	12.824 (20.528)
Deal value	6.402 (6.242)	6.903 (6.244)	6.779 (6.228)	9.281 (6.272)	8.967 (6.262)
Cross-industry acquisition	-1.115 (12.593)	-0.826 (12.585)	-3.566 (12.593)	1.931 (12.578)	-0.751 (12.602)
Percentage sought	-0.007 (0.185)	-0.001 (0.185)	0.003 (0.184)	0.019 (0.184)	0.021 (0.184)
(iii) Target attributes					
Target public status	24.608 (29.852)	23.835 (29.834)	20.962 (29.778)	31.119 (29.836)	27.929 (29.808)
Target subsidiary status	38.644*** (12.136)	38.250*** (12.127)	36.768*** (12.109)	41.137*** (12.126)	39.566*** (12.120)
Target state-owned enterprise	61.304** (26.274)	58.022** (26.322)	115.566** (33.454)	63.961** (26.312)	114.801*** (33.372)
Political sensitive industry	44.746* (24.938)	43.017* (24.939)	43.739* (24.879)	82.069** (27.925)	79.356** (27.894)
PC advisor		26.870* (15.489)	38.319** (15.992)	52.640*** (17.574)	60.642*** (17.838)
PC advisor × Target State--owned Enterprise			-131.478*** (47.364)		-117.325** (47.516)
PC advisor × Political Sensitive Industry				-101.976*** (33.205)	-93.210*** (33.332)
Inverse Mill's ratio	-12.354 (30.832)	-4.497 (31.140)	-5.240 (31.065)	5.1895 (31.204)	3.693 (31.151)
N	1,459	1,459	1,459	1,459	1,459
Year FE	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Pseudo/adj R 2	0.151	0.152	0.156	0.158	0.161
Constant	--33.420 (71.498)	-34.812 (74.059)	-83.520 (72.945)	-82.037 (74.290)	23.612 (73.703)

(*Note:* N =1,459. This table reports the estimate of an OLS model of the duration of engaging in a cross-border M&A where the dependent variable is cross-border acquisition duration. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.)

advisors and the SOE is positive and significant (coefficient=-131.478, p=0.006). Similarly, estimation results of Model 4 suggest a positive and significant coefficient for the interaction term of the PC advisor and the politically sensitive industry (coefficient=-101.976, p=0.002).

Again, to better evaluate the interaction terms, it is crucial that we are not limited by their sign, magnitude, or the statistical significance of the coefficients, thus we additionally plot the predictions of the marginal effects of the interaction terms shown in Figures 2.6 and 2.7. Regarding Figure 2.6, when no PC advisors are hired, the marginal predicted value of acquisition completion duration on non-SOE acquisitions is 87.6 days, while the marginal predicted value of acquisition completion duration on SOE acquisitions is 251.2 days. In comparison, when PC advisors are hired, the marginal prediction of acquisition time spent on acquiring non-SOE transactions increases significantly to 161.1 days, which is consistent with Hypothesis 1b, while the marginal prediction of acquisition time spent on acquiring SOE deals decreases significantly to 176.3 days, implying that PC advisors tend to alleviate the negative effect of acquiring target SOEs on acquisition completion duration, thus speeding up the acquisition process, confirming Hypothesis 2b. In Figure 2.7, in the same way, when no PC advisors are employed, the marginal predicted value of time consumed for non-politically sensitive industry acquisitions is 77.2 days, while the marginal forecast of time consumed for politically sensitive industry acquisitions is 173.6 days. In contrast, when PC advisors are employed, the marginal forecast for time consumed in non-politically sensitive sectors increases significantly to 169.7 days, while the marginal forecast for time consumed on acquisitions in politically sensitive sectors decreases to 167.3 days. This indicates that PC advisors are likely to narrow the period of time between the announcement and completion of a cross-border acquisition when acquiring a target company in the politically sensitive industry. These findings are strongly consistent with Hypothesis 3b.

For the noteworthy control variable, the PC acquirer tends to prolong the completion duration (consistent with Li, Xia & Lin, 2017), potentially possibly due to the host government's concern that these M&A transactions are politically motivated. Table 2.6 presents a Univariate test of financial advisory fees through the presence of PC advisors and non-PC advisors in M&A deals. This chapter finds that the average financial advisory fee of hiring PC advisors (1.651 million dollars) would be twice as much as hiring non-PC advisors (0.858 million dollars), and in terms of median, hiring PC advisors (0.670 million dollars) would be three times as much as hiring non-PC

advisors (0.215 million dollars), with both statistically significant effects. Such findings suggest that hiring PC advisors costs higher advisory fees than hiring non-PC advisors for acquirer firms, which is consistent with Hypothesis 1c. Also, we find that two independent variables are statistically significant in two subgroups, stating that foreign acquirers purchasing a SOE or an enterprise in the politically sensitive industry are more willing to hire PC advisors than non-PC advisors (mean=0.142/0.068, p=0.066; mean=0.310/0.159, p=0.004) in the Chinese market. These empirical results also validate our earlier findings that PC advisors can help acquirers overcome the local governments' legitimacy concerns. Consequently, foreign acquirers realize the advantage of PC advisors and hire them to resolve corresponding concerns, thus achieving a favorable acquisition outcome.

2.6 Robustness Check

The objective of this section is to address endogeneity concerns in our empirical research following a three-pronged approach: (i) Year, firm, industry, and home-country fixed effect (i.e., to solve the omitted variable issue) for both the two questions we studied, the likelihood of acquisition completion and the duration of acquisition completion. (ii) One more concern is addressed by adding the advisor's reputation in our regression model (i.e., to control for the effect of top-tier advisors on the PC advisors we studied) for the likelihood of acquisition completion. (iii) To control for potential self-selection bias, we have conducted Heckman (1979) two-stage regression procedure for the duration of acquisition completion.

First, hiring a PC advisor tends to be an endogenous decision linked to other company characteristics that may affect cross-border acquisition outcomes. This practice may raise the omitted variable bias (Bi & Wang, 2018; Fich, Trana, & Walklinga, 2013). The chapter addresses such concerns by adding year, industry, and home-country fixed effects to each multivariate regression. The results reported in Tables 5, 6, 8 and 9 show that our critical variables and interaction terms remain significant when fixed effects are included in our empirical analyses. Second, when explaining the relationship between PC advisors and the possibility of acquisition completion, another concern that needs to be considered and this is that the advisors' reputation plays a crucial role in the acquisition outcome (Golubov, Petmezas, & Travlos, 2012). As a result,

the favorable likelihood of acquisition completion driven by PC advisors may also depend on the advisors' reputation in the field (Hunter & Jagtiani, 2003). Therefore, we control for the influence of advisors' reputations in our regression model, defining top-tier advisors as those who are ranked in the top 20% in terms of deal value or in the top 20% in terms of numbers of the deals through cross-border M&A in China (Bi & Wang, 2018). When we re-run the two proxies of an advisor's reputation to our baseline regression as presented in Table 2.7, the coefficient of PC advisors remains significant and positive. Third, we conduct a Heckman two-stage procedure to address the potential sample selection bias in estimating acquisition duration in Table 2.8. In the first stage, the choice between a PC advisor and a non-PC advisor is analysisd, and the second-stage iteration corrects the selection bias (Heckman, 1979). The instrument variable included should affect the choice between a PC advisor and a non-PC advisor, but not on the acquisition duration (Li & Prabhala, 2007). We construct the variable 'scope-PC' to serve as an identification restriction consistent with Golubov, Petmezas, and Travlos (2012). The 'scope-PC' was defined as the acquirer hiring a PC advisor in a cross-border M&As in the five years before the deal in China. The scope variable took the value of 1 if the acquirer appointed a PC advisor five years prior to the deal in China and 0 otherwise. Through empirical analyses, we find that F statistic in the first stage reaches 10.31, which exceeds the rule-of-thumb value of 9.08, and the results for the Cragg-Donald and Anderson canon likelihood ratio (LR) statistics overwhelmingly reject the null of weak instruments, thus we can say that our instrument is strong (Bascle, 2008). Moreover, we employ Pagan and Hall test (Pagan & Hall, 1983) to examine the exogeneity of the instrument and find the result (p=0.427) fail to reject the null, indicating that no support for the presence of heteroskedasticity. Following the regression outcomes in the first stage, we calculate the inverse mill's ratio and include it in each multivariate regression in Table 2.6, all our key variables and interaction terms remain significant.

2.7 Discussion and Conclusion

This chapter empirically examines the benefits and drawbacks of hiring PC advisors through inbound acquisition in the Chinese market. After controlling for the advisor's reputation, our findings suggest that the acquirer companies appoint PC advisors to increase their completion likelihood of cross-border M&As significantly. Simultaneously, controlling for the endogenous

choice of advisors, we find that a longer completion duration is experienced when PC advisors are appointed. A possible reason for this is that PC advisors are chosen for a more politically sensitive acquisition deals, and thus they need to spend more time establishing the communication channel, providing more targeted information, negotiating deal terms with local governments to complete such M&A transactions. Furthermore, from a legitimacy perspective, we find that the appointment of PC advisors can moderate the negative influence of legitimacy concerns raised by acquiring a SOE and an enterprise in the politically sensitive industry on acquisition completion and duration.the Thus, unique value of this study, as one of the studies on cross-border M&A, is to study the relationship between external political connections and legitimacy concerns in the context of a government-dominated economy.

Table 2.6: Univariate tests of financial advisory fee through the presence of PC advisors and non-PC advisors.

	PC advisor			Non-PC advisor			Test of difference	Test of difference
Variables	Mean	Median	Std.Dev	Mean	Median	Std.Dev	in means	in medians
Financial advisor fee (in millions)	1.651	0.670	2.501	0.858	0.215	2.521	(0.009)***	(0.000)***
Bilateral Trade Relationship (in billions)	24.565	28.652	12.910	23.601	27.852	14.444	(0.544)	(0.592)
Host-country GDP (in trillions)	143.473	29.147	80.248	233.309	30.937	39.265	(0.057)*	(0.109)
Host-country GDP Growth	3.178	3.002	3.178	2.850	2.762	3.204	(0.318)	(0.754)
Acquirer state-owned enterprise	0.009	0.000	0.095	0.011	0.000	0.106	(0.842)	(0.842)
Friendly attitude	0.870	1.000	0.336	0.886	1.000	0.319	(0.691)	(0.486)
Stock payment	0.145	0.000	0.019	0.182	0.000	0.041	(0.389)	(0.387)
Deal value (in millions)	262.817	66.590	73.880	110.150	28.825	17.879	(0.040)**	(0.004)**
Cross-industry acquisition	0.717	1.000	0.451	0.750	1.000	0.435	(0.538)	(0.676)
Percentage sought	62.337	60.000	34.904	58.776	51.690	36.594	(0.400)	(0.479)
Target public status	0.301	0.000	0.459	0.227	0.000	0.421	(0.173)	(0.172)
Target subsidiary status	0.488	0.000	0.501	0.466	0.000	0.502	(0.714)	(0.713)
Target state-owned enterprise	0.142	0.000	0.349	0.068	0.000	0.253	(0.066)*	(0.065)*
Politically sensitive industry	0.310	0.000	0.463	0.159	0.000	0.368	(0.004)***	(0.005)***

(*Note:* * Statistical significance at the 10% levels. ** Statistical significance at the 5% level. *** Statistical significance at the 1% level.)

Theoretical contributions:

This chapter supports external political connection trade-off theory, which refers to the oppositional situation whereby hiring politically connected financial advisors are better positioned (than their unconnected counterparts) to overcome legitimacy concerns in a cross-border M&A, but the deals

often come at the cost of a higher advisory fee. If a foreign acquirer is more concerned about legitimacy-building to achieve more favorable M&A results, hiring PC advisors would help alleviate legitimacy concerns and achieve M&A goals, but there is a higher fee for PC advisors than non-PC advisors.To test the external political connection trade-off theory, i.e. that hiring PC advisors are more likely to complete a cross-border M&A transaction and reduce a duration of cross-border M&A transaction when they face legitimacy concerns than their unconnected counterparts, but at the cost of a higher advisory fee.

Empirical contributions:

Our findings suggest that the appointment of PC advisors by foreign acquirers significantly increases the likelihood of acquisition completion, but such acquisitions are time-consuming compared to those without PC advisors. From a legitimacy perspective, the employment of PC advisors facilitates acquisition completion and shortens acquisition duration when the target company is a SOE or in a politically sensitive industry. This chapter contributes to the M&A literature by expanding on the relationship between external political connections and SOE legitimacy concerns, exploring the role of external political connections in the Chinese M&A market from both a perspective of advantages and disadvantages..

Table 2.7: Addressing Endogeneity: Advisor's reputation and advisor's political connections.

Variables	(1)	(2)
PC advisor	0..802*** (0.168)	0.797*** (0.170)
Advisor's reputation by market shares	0.598 (0.410)	
Advisor's reputation by no.of deals		0.499 (0.382)
(i) Bilateral trade controls	Y	Y
(ii) Acquirer controls	Y	Y
(iii) Deal controls	Y	Y
(iii) Target controls	Y	Y
N	2,328	2,328
Year FE	Y	Y
Industry FE	Y	Y
Country FE	Y	Y
Pseudo/adj R 2	0.117	0.117
Constant	-2.488 (3.234)	-2.520 (3.231)

(*Note:* Standard errors are shown in parentheses, * Statistical significance at the 10% levels. ** Statistical significance at the 5% level. *** Statistical significance at the 1% level.)

Table 2.8: Effect of PC advisors on acquisition duration: Two-Stage Least Squares Regression.

Variables	(1)	(2)
(i) Bilateral trade attributes	Y	Y
(ii) Acquirer attributes	Y	Y
(iii) Deal attributes	Y	Y
(iii) Target attributes	Y	Y
PC advisor		27.137** (12.373)
Scope_PC	1.446*** (0.203)	
First stage F-statistic	10.31***	
Anderson canon correlation LR		11.022***
Cragg-Donald statistic		11.060
Pagan-Hall general statistic (p value)		0.427
N	2,328	1,459
Year FE	Y	Y
Industry FE	Y	Y
Country FE	Y	Y
Pseudo/adj R 2	0.305	0.271
Constant	-16.201 (6.443)	20.397 (58.869)

(*Note:* Standard errors are shown in parentheses, * Statistical significance at the 10% levels. ** Statistical significance at the 5% level. *** Statistical significance at the 1% level.)

Managerial implications:

Our findings also provide guidelines for the management teams of foreign acquirers who may be considering the acquisition of companies in a government-led market like China, by validating the strengths and corresponding weaknesses that hiring external political connections have on M&A transactions.

Figure 2.2: Interaction effect (Target State--owned Enterprise x PC advisor) as a function of predicted the likelihood of acquisition completion.

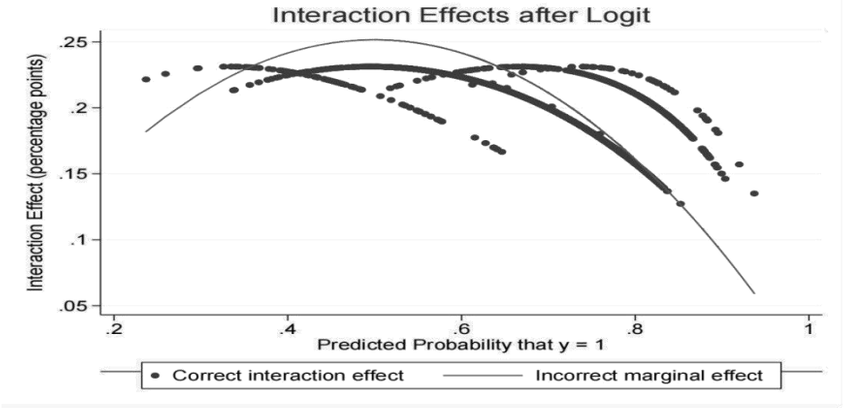


Figure 2.3: Significance of interaction effect (Target State--owned Enterprise x PC advisor) as a function of predicted predicted the likelihood of acquisition completion.

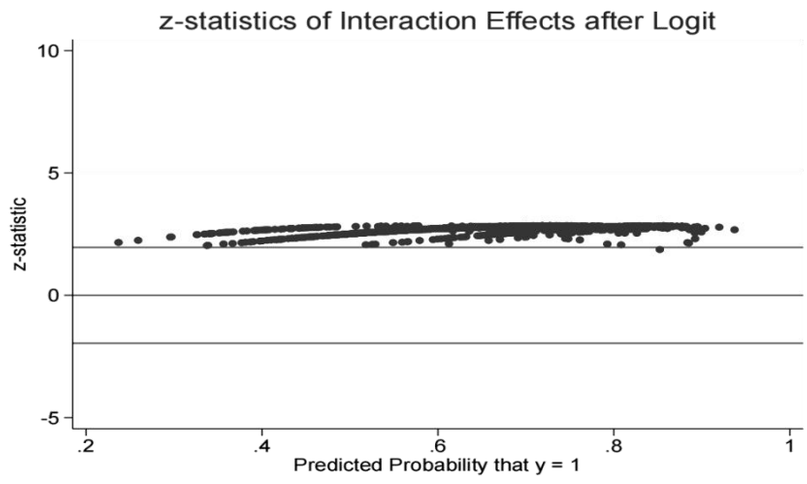


Figure 2.4: Interaction effect (Politically sensitive industry x PC advisor) as a function of predicted the likelihood of acquisition completion.

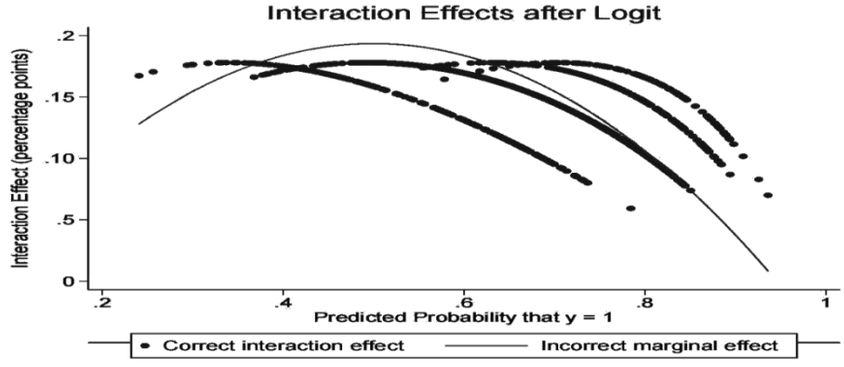


Figure 2.5: Significance of interaction effect (Politically sensitive industry x PC advisor) as a function of predicted predicted the likelihood of acquisition completion.

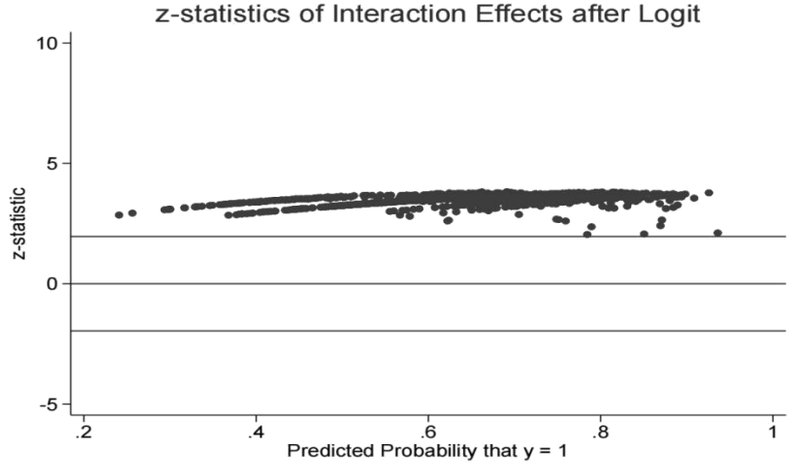


Figure 2.6: Marginal effect of interaction term (Target State--owned Enterprise x PC advisor) as a function of predicted the acquisition duration.

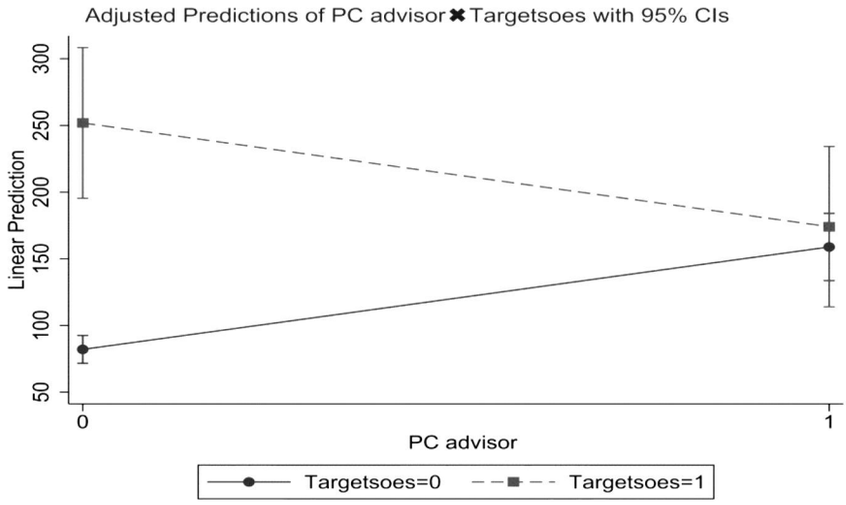
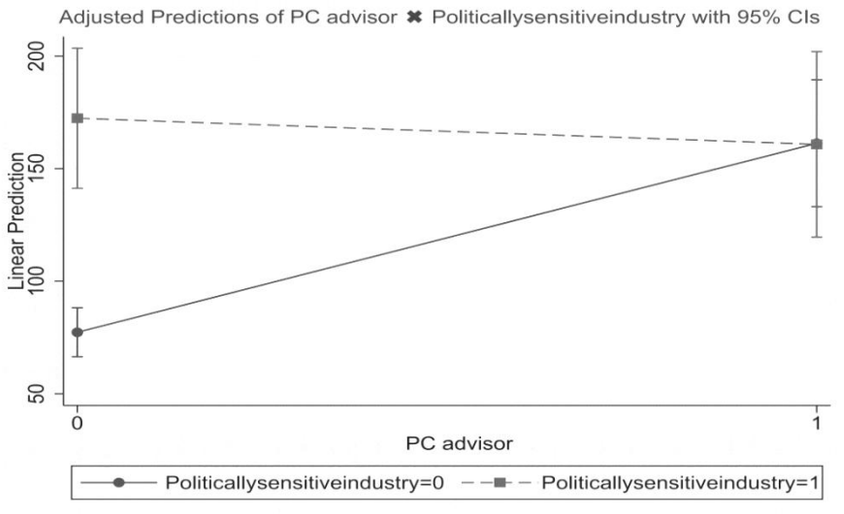


Figure 2.7: Marginal effect of interaction term (Politically sensitive industry x PC advisor) as a function of predicted the acquisition duration.



Chapter 3: Institutional Investors and Legitimacy Concerns of SOEs

State-owned enterprises (SOEs) as semi-political nature are often subject to government interference in their M&A decision-making, as well as raising legitimacy concerns in cross-border acquisitions. This chapter investigates the moderating effect of institutional ownership on SOEs through outbound acquisition outcomes (i.e., acquisition probability and acquisition completion). Based on a sample of 2,203 acquisition deals by Chinese acquirers between 2005 and 2020, we find that SOE acquirers have a higher probability of outbound acquisition and a lower likelihood of acquisition completion than non-SOE acquirers. In terms of M&A decision-making, we find that foreign institutional ownership among SOE acquirers fails to moderate the intensity of outbound acquisitions according to their investment preferences, while domestic institutional ownership substantially influences SOE acquirers' M&A decision-making, they prefer domestic M&As. From the legitimacy perspective, we further find that foreign institutional ownership among SOE acquirers tends to mitigate the negative impact of legitimacy concerns on acquisition completion, but domestic institutional investors do not have the same effect. Our study complements the role of institutional investors on SOEs under a government-led economy in the M&A field.

3.1 Introduction

The important role of institutional investors is growing rapidly worldwide and flourishes in the developed economies (Andriosopoulos & Yang, 2015; Khorana, Servaes & Tufano, 2005). In recent years, as emerging markets actively integrate into financial globalization, they have further removed previous restrictions on international investment and opened their markets to international investors (Huang & Zhu, 2015). This has led to an enormous surge of international institutional investors entering and investing in these markets and making an impact in them (Meyer, & Nguyen, 2005). One such example is the Chinese market. As the recipient of the world's second-largest investment inflow, China has been continuously opening up its domestic market to international investors. In

particular, the Chinese government launched the 'Go Global' strategy which aims at encouraging state-owned enterprises (SOEs) to quickly integrate with international markets to improve their international reputation and competitiveness through a series of company reforms (Amighni, Rabeillotti & Sanfilippo, 2013). In this way, an increasing volume of foreign institutional investors have the opportunity to invest and participate in reconstruction, privatization, corporate governance, as well as cross-border mergers and acquisitions (M&As) of leading SOEs with the same voting rights as domestic investors (Huang & Zhu, 2015; Liao, Liu & Wang, 2014). Nonetheless, this does not mean that economic opening-up is unreserved. As the mainstay of the government-led economy, SOEs are often regarded as a local government asset and are closely related to national security, economic stability, as well as to the competitiveness and discourse power of the international market (Li, Li & Wang, 2018). Thus, Chinese politicians continue to emphasize the critical role of SOEs in the national economy (Narayanan, 2006). In this context, M&A decision-making of SOEs is likely to be interfered with by their government in order to fulfil many governmental roles (Bai, Li, Tao, & Wang, 2000; Cui & Jiang, 2012), and this interference may also lead to these companies being prone to be under the suspicion of the host government, which in turn raises legitimacy concerns in their cross-border M&As. Therefore, we leave the following questions open: Do institutional investors still have as much of a significant influence when investing in, semi-political SOEs that may be subject to government interference, as they do in non-SOEs? and, how can the moderating role be played by foreign *vs* domestic institutional ownership in SOEs' cross-border acquisition outcomes (i.e., acquisition probability and acquisition completion)? Previous empirical literature has paid notable attention to the role of institutional investors in public-listed firms from the Western free market. These studies indicate that both foreign and domestic institutional ownership play a facilitating role in increasing the likelihood of an M&A to be a large, cross-border deal, opting for full control for the public-listed company (Ambrose & Megginson, 1992; Andriosopoulos & Yang, 2015; Chen, Harford, & Li, 2007; Ferreira, Massa & Matos, 2010; Stulz, Walkling & Song, 1990). There is little empirical evidence regarding the role that foreign institutional ownership and its domestic counterpart play in cross-border M&As by SOE acquirers in a government-led economy. In particularly, this study examines the moderating role of institutional ownership on the internal and external problems—M&A decision-making interference and legitimacy concerns, which SOE acquirers often face in cross-border M&As. These issues are

important because we complement the role of institutional investors on semi-political SOEs in the M&A field.

Our study aims to address these questions according to resource dependence theory (Aldrich & Pfeffer, 1976; Pfeffer & Salancik, 1978) and Signalling theory (Spence, 1973). First, we employ resource dependence theory to explain the relationship between SOE acquirers and cross-border M&A outcomes. As noted by Pfeffer and Salancik (1978) resource dependence theory is concerned with how organizational behaviour is affected by the external resources utilized by the organization. In our study, SOEs heavily rely on vital resources, such as physical resources, information, and social legitimacy provided by their governments to gain an advantage in a highly competitive market (Hillman, Withers, & Collins, 2009). At the same time, SOEs need to be subject to government intervention to help them in achieving political, economic and administrative goals (Bradley, *et al*, 2011; Li, Li & Wang, 2018). It is argued that where there is a large element of government interference, M&A decision-making by SOE acquirers is likely to follow government policy rather than the preferences of other shareholders, and this interference also tends to raise legitimacy concerns from the host-country government in their cross-border M&As, thus further negatively affecting their acquisition completion.

Furthermore, we extend Signalling theory (Spence, 1973) to alleviate legitimacy concerns in cross-border M&As. Signalling theory consists of three main parts, the signal sender, the signal receiver, and the signal itself. The sender of the signal is generally a company insider who controls the company's internal information, such as personal information, product information, and organizational information (Kirmani & Rao, 2000; Ross, 1977; Spence, 1973). This theory is based on the assumption that information is not available to all parties at the same time, and is essentially related to reducing information asymmetry between different parties (Spence, 2002). And the term for legitimacy concerns, Henisz and Zelner (2005), Li, Xia and Lin (2017), and Suchman(1995) explain that 'Taken-for-grantedness' refers to the most subtle and powerful source of legitimacy identified to date. Firm actions that are taken-for-granted are less likely to be influenced by external evaluations. By contrast, firm actions that shift away from taken-for-granted practices will result in legitimacy concerns. In the SOEs we studied, they often suffer from severe 'opaqueness', and this lack of transparency may be a deliberate tactic on the part of the SOE or the government that controls it, because they wish to prevent secrets from being leaked, or they wish to maintain

political flexibility. Managers may also simply want to minimize public scrutiny in order to enjoy an easier life (La Porta, Lopezde-Silanes, & Shleifer, 2002; Li, Li & Wang, 2018; Shleifer & Vishny, 1994). This 'opaqueness' tends to cause information asymmetry problems, which makes it difficult to clearly assess the motivations of the SOE acquirer and any potential benefits that the acquisition may bring to the host country, thus the host-country regulatory agency often raise legitimacy concerns in their cross-border M&As. In this regard, we argue that foreign institutional ownership among SOE acquirers is more likely to as a signal sender or a positive signal itself, to mitigate the negative influence of legitimacy concerns on acquisition completion. There are several reasons for this. First, foreign institutional investors are typically less susceptible to local political pressure and have a lower degree of business relations with the firms they invest in, they are more likely to stand at arm's-length and to play an effective monitoring role to promote corporate governance, reform efficiency, and operating performance, thereby helping companies construct perceived legitimacy (Firth, Lin, & Zou, 2010; Gillan & Starks, 2003; Huang & Zhu, 2015). Second, foreign institutional investors generally enjoy informational advantages over domestic investors (Croci, Gonec & Ozkan, 2012; Fernandes, *et al*, 2013). As a result, foreign institutional investors tend to help to efficiently fill the information gap between cross-border acquirers and targets, potentially promoting transaction transparency (Andriosopoulos & Yang, 2015; Ferreira & Matos, 2008; Gillan & Starks, 2003). When SOEs suffer from 'opaqueness' in their cross-border M&A transactions, foreign investors as their shareholders are likely to act as a signal sender, revealing company information and acquisition objectives to alleviate the suspicions of the host-country government, further improving their corporate legitimacy. Third, foreign institutional investors are classified as more skilled, experienced and reputable than their local counterparts, as such investors approved by the Chinese government to invest in the Chinese market have so far been exclusively large internationally recognized funds and investment banks such as UBS, Morgan Stanley, Nomura Holdings, Goldman Sachs, Citigroup, HSBC and Deutsche Bank. These prestigious institutional investors usually enjoy a high level of legitimacy and are internationally recognized, their participation can be regarded as a positive signal itself to the outside world, exerting a positive legitimacy-enhancing spillover effect on SOE acquirers improve their legitimacy (Andriosopoulos & Yang, 2015; Cornelissen & Clarke, 2010; Gupta & Yuan, 2009; Huang & Zhu, 2015; Kostova & Zaheer, 1999). In comparison, most domestic institutional investors are significantly inferior to

foreign institutional investors in terms of specialized skills, international experience, reputation and legitimacy position. Gillan and Starks (2003), Huang and Zhu (2015), and Kim and Yi (2015) explain that local institutional investors frequently have private interests with the management of the companies they invest in and may deliberately not reveal information with the aim of maximizing their interests. Also, such investors are vulnerable to political pressure, as many of them are also in thrall to the Chinese government (Ferreira & Matos, 2008; Huang & Zhu, 2015). Consequently, local investors are less likely than their foreign counterparts to act as a signal sender or as a positive signal to help SOE acquirers alleviate legitimacy concerns in cross-border M&As. We study the differences in these aspects between foreign institutional investors and their domestic counterparts as relates to problems of M&A decision-making interference and legitimacy concerns in SOE acquirers, our aim is to better understand how institutional ownership functions in SOEs under a government-led economy.

The findings from this study make several contributions to the current literature. First, it contributes to the resource dependence theory and its application to the M&A field, especially where it explains the relationship between SOE acquirers and cross-border acquisition outcomes (i.e., acquisition incidence and acquisition completion) by analyzing the internal and external problems of cross-border M&As that SOE acquirers typically face—M&A decision-making interference and legitimacy concerns. Although the resource dependence theory has been frequently adopted in research into M&As within mature economies (Casciaro & Piskorski, 2005; Drees, & Heugens, 2013; Nienhüser, 2008), it is rarely considered as a way of understanding cross-border M&As by SOE acquirers within a government-led economy. Extending this theory by linking M&A decision-making and legitimacy concerns helps to deepen our understanding of the relationship between the semi-political nature of SOE acquirers and cross-border M&A outcomes.

Second, we further contribute to the moderating role of foreign *v.s.* domestic institutional ownership in M&A decision-making of SOE acquirers. Previous studies (Andriosopoulos & Yang, 2015; Ferreira, Massa & Matos, 2010) have been based mainly on public-listed companies from traditional Western free market. They suggest that both foreign and domestic institutional ownership can have a significant influence on M&A decision-making. However, in the context of a government-led economy, we find that foreign institutional ownership has no significant moderating impact on M&A decision-making of SOE acquirers due to share-holding restrictions on foreign

institutional investments imposed by the China Securities Regulatory Commission (CSRC), their shareholdings are generally much smaller than government share-holdings and their domestic counterparts. While domestic institutional ownership can influence M&A decision-making of SOE acquirers, in contrast to the preference for domestic institutional investors in Western free markets, Chinese institutional investors prefer domestic M&A investments. The findings further complement the role of investor-specific characteristics: country of origin (foreign *v.s.* domestic institutional ownership) in M&A decision-making of SOE acquirers under a government-led economy.

Third, this chapter also contributes to Signalling theory by developing the theory to address legitimacy concerns in cross-border M&As. Our study highlights that foreign institutional ownership act as a a signal sender to enhance SOE acquirers' information flow and send credible signals to the outsider world, or as a positive signal itself to provide a positive legitimacy-enhancing spillover effect to the SOE acquirer they invest in, thus promoting corporate legitimacy in cross-border M&As. By comparison, most domestic institutional investors are susceptible to local political pressure or frequently seek to bolster their private interests with the management of the SOE acquirer they invest in. As such, these investors are less likely to act as a signal sender or a positive signal itself to mitigate legitimacy concerns in cross-border M&As by SOE acquirers. To the best of our knowledge, our study is one of the first to investigate the moderating role of foreign *v.s.* domestic institutional ownership has on legitimacy concerns that SOE acquirers frequently face in their cross-border acquisitions. The findings enrich the role of institutional investors on legitimacy concerns of cross-border M&As by SOE acquirers.

The rest of the chapter is organized as follows. Section 2 provides a theory and hypothesis development. Section 3 presents the data and methodology. Section 4 offers an empirical analysis and findings. Section 5 indicates the robustness check. Section 6 concludes the chapter.

3.2 Theory and Hypothesis Development

3.2.1 SOE Acquirers and Cross-border M&A Outcomes

SOEs often have the image of being semi-political organizations with non-economic purposes (Bai, *et al*, 2000) and under-performing with serious agency problems (La Porta, Lopezde-Silanes, & Shleifer, 2002; Shleifer & Vishny, 1994). These negative perceptions and labels from the outside are

inseparable from their over-dependence on the government for vital resources, and their attendant acceptance of government interference (Li, Li & Wang, 2018). In many emerging economies, such as China, is characterized with active government involvement in SOEs' management and business activities through ownership and regulation (Child & Rodrigues, 2005; Li, Li & Wang, 2018). With such government interference, SOEs are often perceived as sacrificing their autonomy to achieve political objectives, national economic objectives and social objectives, even if these requirements from the government may be detrimental to such company's benefits and development. For example, in order to reduce social pressure and maintain social stability, the government will interfere with SOEs through ownership to reduce unemployment by increasing the recruitment of employees, rather than aiming to maximize corporate profits (Boycko, Shleifer, & Vishny, 1996; Dewenter & Malatesta, 2001; Megginson, Nash, & van Randenborgh, 1994).In addition, we expect that strategic decisions of SOEs also interfered by their government, thus according to 'Go Global' initiated in the Chinese government, SOEs actively respond to this policy to increase the probability of cross-border mergers and acquisitions.

In terms of M&A deals, the government still plays a significant role in M&A decision-making of SOEs. In 1999, the Chinese government launched the 'Go Global' policy to strongly encourage domestic enterprises to invest overseas and participate in the internationalization process, thereby accessing advanced technology, management experience and market expansion from abroad and further improving the company's international competitiveness (Bellabona & Spigarelli, 2007; Zhang, Zhou & Ebbers, 2011). At the same time, in order to effectively implement this policy, the Chinese government has also provided a good deal of support to responding companies in the form tax rebates, foreign exchange assistance and financial subsidies (Peng, Wang, & Jiang, 2008). As an asset of the government, SOE acquirers are likely to actively follow the national policy and become a role model to actively engage in overseas M&As to achieve the national strategy, even if cross-border M&As have many unknown risks or are inconsistent with the company's development interests (Schweizer, Walker & Zhang, 2019). Compared to SOE acquirers, non-SOE acquirers often have to weigh the risks and benefits of cross-border M&As, as these transactions significantly affect shareholder value and there is also a balance of shareholder investment preferences (Du & Boateng, 2015). These arguments lead to our first hypothesis:

Hypothesis 1(a): *The probability of engaging a cross-border acquisition in a host-country is*

higher for Chinese SOE acquirers than for non-SOE acquirers.

Gaining legitimacy in the host country is a critical determinant regarding the likelihood of success for a company's cross-border M&As (Li, Li & Wang, 2018). Legitimacy is defined as a 'generalized perception' that the behaviour of an entity conforms to the standards, values, and beliefs that are desirable, appropriate, or acceptable within a particular system of institutional frameworks (Suchman, 1995). However, SOE acquirers are not always favored or considered appropriate by the host-country government and stakeholder (Cuervo-Cazurra, Inkpen, Musacchio & Ramaswamy, 2014; Globerman & Shapiro, 2009; Meyer, *et al*., 2014; Zhang, Zhou & Ebbers, 2011). Cui and Jiang (2012), Globerman and Shapiro, (2009), Li, Li, and Wang, (2018) suggest that SOE acquirers are often considered as agents of their home governments, these acquirers are very likely to pursue political rather than commercial purposes. This practice makes SOE acquirers less efficient than compared to non-SOE acquirers, further negatively affecting their operating performance (Du & Boateng, 2015; Megginson, Nash, & van Randenborgh, 1994). In addition to the concerns around the poor performance, and the possible political objective may raise political concerns, national security concerns, economic concerns and suspicions of the host-country government (Li, Li & Wang, 2018). For example, SOE acquirers are more inclined to acquire strategic assets of natural resources, product differentiation, patent-protected technology, and superior management skills through cross-border M&As (Barney, 1991; Vermeulen & Barkema, 2001). This is because SOE acquirers from emerging markets, such as China are seen as latecomers and suffering from a lack of resources, who are likely to use cross-border M&As to strategically achieve specific objectives, such as acquiring strategic capabilities to offset their competitive disadvantages and improve their international influence (Deng, 2009; Du & Boateng, 2015 Rui & Yip, 2008). However, such M&A purposes are unacceptable to the host-country government, thus raising legitimacy concerns on the M&As of these companies and making it difficult for their cross-border M&As to be completed. In particular, SOE acquirers coming from the Chinese market engaging in cross-border M&As have aggravated legitimacy concerns, resulting from China's communist history has led to adverse political sentiment and adverse rulings resource dependence theory by regulatory agencies in many host countries (Li, Li & Wang, 2018). These differences in political ideology are likely to arouse suspicion of the host government (Bai, *et.al*, 2000; Cui & Jiang, 2012; Cogman, Gao & Leung, 2017; Li, Li & Wang, 2018). In this context, Chinese SOE acquirers tend to frequently raise

legitimacy concerns and this negatively affects their likelihood of acquisition completion.

Cross-border mergers and acquisitions by SOE acquirers have been labelled with political purpose, inefficient management and poor performance (Li, Xia & Lin, 2017; Zhang, Zhou & Ebbers, 2011). These negative impressions and labels from the outside may greatly affect the completion of cross-border M&As of such companies. Although when SOE companies act as acquirers, whose acquisitions are considered less acceptable, inappropriate or undesirable, this does not necessarily mean that these M&A transactions are totally illegitimate and unacceptable (Green, 2004), these companies may be between illegal and taken-for- granted (Henisz & Zelner, 2005) Therefore, a trade-off between the advantages and disadvantages brought by mergers and acquisitions by these SOE acquirers are considered a 'controversial' practice. Generally, illegal behaviour leads to immediate rejection, while taken-for-granted actions will be accepted quickly (Li, Xia & Lin, 2017; Green, 2004). Therefore, the regulatory agency as an important government agency is conducted, it is mainly responsible for reviewing qualifications, motivations and abilities of foreign companies at the same time weigh the pros and cons according to the theoretical process to decide whether to approve to these foreign companies to invest in their own country (Dobbin & Dowd, 1997; Hoffman, 1999). Li, Xia and Lin (2017) also illustrate that these regulatory agencies are extremely important in the acquisition 'theoretical process', because they can form and reproduce common meanings and understandings. Meanwhile, Greenwood, Suddaby & Hinings (2002); Green (2004); Strang & Meyer (1993) also note that the host-country government’s regulatory agencies often have the ultimate authority to decide whether to approve an acquisition proposal based on their theorization process that either legitimates or de-legitimates a company’s strategic behaviour (Green, 2004; Strang & Meyer, 1993).

For target company shareholders and managers, who may be concerned about the large amount of funding and possible technical support provided by foreign SOE acquirers through cross-border mergers and acquisitions, so as to maximize the company's interests or to use the acquisition deal to get rid of the company's plight, even if the overseas acquirer has a political background or political purpose, these target companies are also likely to accept these acquisitions. However, for government’s regulatory agencies in host countries, they must to weigh the benefits and risks brought by foreign SOE acquirers through mergers and acquisitions, thus these governmental agencies not only consider the business benefits brought by SOEs to the target company, but more

importantly, pay attention to the possible risks by these acquirer companies, as in some cases these SOE acquirers are frequently regarded as a political actor, rather than pure profit seeker through cross-border M&As, thereby threatening national security and market order (Globerman & Shapiro, 2009). Consequently, while reviewing cross-border mergers and acquisitions by foreign SOE acquirers, the host government's regulatory agency is very cautious and strict requirements, and can even be said to be sensitive. The sensitive response of such regulatory agencies is not difficult to understand, as compared with the benefits of capital and technology brought by foreign SOE acquirers, the concerns of national security and stable market order of host country is more important. As a result, a lot of cross-border M&As by SOE acquirers have been blocked during the review process, and the completion rate of overseas mergers and acquisitions of SOEs is lower than other types of companies. There is plenty of anecdotal evidence for this. Chinalco, the largest state-owned operator of alumina and primary aluminium in China, in its acquisition of Rio Tinto, the world's third largest diversified mineral resources company, generated considerable political debate and attracted scrutiny and political interference from the UK government, and ultimately the deal failed. In the China National Offshore Oil Company's announcement of its $18.5 billion offer to buy veteran U.S. oil company Unocal Petroleum, by far the largest single investment by an SOE acquirer in a cross-border M&A, was backed by strong government financial and political support. However, it was these supports that added to the troubles of the acquisition, raising concerns from the US government about political purposes. Sometimes, it's just the 'color of money' that makes a deal fail.

There are several reasons why the host country's review agency is so cautious and sensitive to the SOEs from emerging market as the acquirer. Firstly, compared with other types of companies, special political background of SOEs from China generally are regarded by host country as legitimacy concerns, which is one of the most serious problem faced by SOEs when they conduct cross-border mergers and acquisitions (Li, Li & Wang, 2018; Li, Xia & Lin, 2017; Huang *et.al*, 2017; Zhang, Zhou, & Ebbers 2011). At the same time, their political background is also the most sensitive point of host government regulatory agencies, as the possible political acquisition motivation brought by foreign SOE acquirers may disrupt normal and orderly market rules, raising the host-country public vigilance. In the term of theory, resource dependence theory highlights the dependence of companies with external actors (for example, individuals, companies, and

governments) and the impact of these external actors on corporate behaviour (Pfeffer & Salancik, 1978). Extending this theory to the relationship between SOEs and the government in the Chinese market, SOEs heavily rely on vital resources, such as physical resources, information, and social legitimacy provided by their governments to gain an advantage in a highly competitive market (Hillman, Withers & Collins, 2009) on the other hand, the government also rely on SOEs to achieve political, economic and administrative goals, so the government heavily interferes in the trading activities and strategic decisions-making of SOEs (Bradley, Wiklund & Shepherd, 2011; Lioukas, Bourantas & Papadakis, 1993) This interdependent political relationship between SOEs and the government, has become a major source of legitimacy concerns of government agencies in the host country.

Secondly, in any cross-border mergers and acquisitions transaction, a certain degree of information opaqueness is inevitable (Cohen & Dean, 2005), but the nature of SOEs aggravates the information opaqueness problem and thus leading to serious information asymmetry and agency problems, which making SOEs gaining legitimacy harder (Li, Li & Wang, 2018) The government's interference and control over the trading activities of SOEs has resulted in these companies rarely leaking their company information to the outside, and even the published information is likely to be less fully credible (Rogers & Ruppersberger, 2012) Meanwhile, Wang, *et. al* (2008) also agree this point and indicate that SOEs do not to disclose company information to outsider and to maintain opaqueness are clear policy requirements, especially in China. Therefore, SOEs are generally severely opaque compared to other types of companies (Li, Li & Wang, 2018) The possible reason of SOEs maintain the opaque company information is that the government prevents them from publishing company information to the outside world, thereby preventing the leakage of secret information, ensuring national security and maintaining policy flexibility (Li, Li & Wang, 2018), such as using SOEs as important tools for transactions activities with political goals, not purely for the purpose of maximizing firm profit, to achieve the government's own political goals (Bai *et.al*, 2000). For SOEs, the managers of these companies also may not be willing to publish company information to the outside world, thereby minimizing public supervision to enjoy private benefits and easier lives. Therefore, for the SOE acquirer with semi-political nature and at same time with serious disclosed information problem, the host government and the target company have very little information about the foreign SOE acquirer, as a result of the host country's regulatory agency are

more likely to question the political purpose of cross-border mergers and acquisitions by these enterprises.

Additionally, the information opaqueness of the SOE acquirer also cause severe information asymmetry and agency problem (La Porta, Lopezde-Silanes, & Shleifer, 2002; Shleifer & Vishny, 1994). Holmstrom (1979) and Jensen & Meckling (1976) illustrate that the information asymmetry problem caused by lack of information makes the target company unable to determine whether the acquirer is a good company or a bad company. Even if the acquirer is a good company, host country government agencies and target companies may end M & A transactions because of information asymmetry and fear that it will have a negative impact on national security and economic security. Bornstein and D'Agostino (1992), Moreland and Beach (1992), and Zajonc (1968) support that people's nature is to resist unfamiliar, vague, and unknown risks, even if the counterpart is friendly. Lack of information by SOEs can also lead to serious agency problem (Holmstrom,1979; Jensen & Meckling,1976). Conflicts between small and large shareholders (principal-principal problems) and the conflicts between shareholders and managers (principal-agent problems) mainly raise the agency problem, especially in SOEs, which deliberately did not disclose company information to outside exacerbating this problem. This is because that small shareholders are more likely at a particular disadvantage relative to larger shareholders and relative to managers when an SOE is involved, thus it is even more difficult for these small shareholders to supervise SOEs to protect their own interests. For large shareholders and managers, and even the government, they will harm the interests of small shareholders for their own interests, and even damage the development of the company (Y. Chen & Young, 2010; Dharwadkar, *et al*, 2000; Jensen & Meckling, 1976; Li & Qian, 2013).

Thirdly, SOEs have insufficient market orientation compared to other types of companies (Zhang, *et al*, 2017 and Li, *et. al*, 2017). Pearce, Dibble, & Klein (2009) agree with the point and explain that because SOEs are extremely vulnerable to government interference, as a result, these companies have been reduced in decision-making autonomy. Moreover, for managers in the SOE acquirer, who do not need to pay too much attention to the development and survival of the company, they only need to conduct transaction activities according to the requirements of their government. Therefore, the manager of the SOE acquirer mainly serve the government’s needs, rather than only the consumer’s needs and the market’s needs (Child & Tse, 2001). Simultaneously, Schweizer, *et al*

(2019) imply that many of the managers of Chinese SOEs are directly appointed by the government, at same time, these managers usually have a political background and previously worked in government departments for a long time. Consequently, on the one hand, they mainly serve as their government's need rather than market need. On the other hand, their managers do not have extensive corporate management experience and thereby they are unlikely to have a good internal coordination ability and timely efficient response in the ever-changing and fiercely competitive foreign markets, which will cause the company to be at a competitive disadvantage when conducting overseas mergers and acquisitions. In summary, foreign market that is completely different from the Chinese market and as well as highly competitive. Additionally, market orientation of a company are the keys to a company's survival and success (Lu, *et al*, 2014). Child & Rodrigues (2005) suggest that market orientation enables companies to respond to the market in a timely and efficiently, deliver superior value to meet market needs, thus obtaining advantage on the competitive host-country market. For company management efficiency and professionalism, testing the coordination ability of managers and employees, shareholder and advisory agency, parent company and overseas subsidiaries, in order to gain information advantage in the host country market where there is severe information asymmetry, and seize the fleeting business opportunity, thus the management efficiency and professionalism is also crucial to the success of the company. However, for SOEs that lack market orientation, they are likely to be unable to capture business opportunities in the host country market and fail to have an information advantage on target companies in a timely and effective manner, thus these firms are at a disadvantage in the international market competition, leading to a reduction in the completion rate of cross-border mergers and acquisitions.

Fourthly, as mentioned above, because of the special dependence of SOEs on the government, they have to accept government intervention in them, so that the company's autonomy in decision-making is reduced, which causes the above-mentioned series of problems, and reduces the possibility of completion of cross-border mergers and acquisitions by SOEs. However, some scholars argue that the special dependence relationship between SOEs on their governments is a double-edged sword for the completion of cross-border mergers and acquisitions by SOEs, although these political interference bring SOEs with legitimacy concerns and the low management efficiency problem, they also have received a lot of resources and policy support from the

government, which may promote the completion of cross-border mergers and acquisitions by SOEs (Luo, Xue, & Han, 2010; Liang, Ren, & Sun, 2015; Pan, *et al*, 2014) On the one hand, because SOEs are government assets, they can more easily obtain comprehensive support when they conduct cross-border mergers and acquisitions in accordance with the requirements of their governments. These supports such as financial support, preferential treatment, and backing in adverse circumstance, which gives SOEs a huge advantage when they engage in foreign trading activities, especially during the bidding phase of cross-border M&A (Luo, Xue, & Han, 2010; Okhmatovskiy, 2010) For non-SOEs, such support is difficult to obtain, so when they face SOEs with strong government support as competitors, they are often at a disadvantage. As a result, we argue that SOEs have the support of the government's resources to gain an advantage in the competition of cross-border mergers and acquisitions, thereby helping the the completion of such companies' cross-border mergers and acquisitions. On the other hand, these types resource supported by governments also may have a negative impact on the completion of cross-border mergers and acquisitions by SOEs. Hoskisson *et al* (2000), Peng (2003), and Zhang (2017) argue that these special resources provided to SOEs will be considered by host-country regulatory agency as the legitimacy concerns, as SOEs with these huge advantages lead to unfair competition in cross-border mergers and acquisitions, which endangers the normal market order and market development and threatens the economic security and stability of of the host country. Therefore, under the influence of host country regulatory agency, the support of Chinese governments to SOEs will be regarded as legitimacy concerns, so that SOEs' overseas mergers and acquisitions are likely to be blocked, reducing the completion of SOEs overseas M&As.

Similarly, we predict that the state-owned ownership also affect the possibility of his cross-border mergers and acquisitions. Andriosopoulos and Yang (2015) present that the choice of cross-border M & A or domestic M & A is considered as a company's strategic decision, which seriously affects the company development. Therefore, different shareholder groups of the company will use their voting rights to influence the company's strategic decision according to their own interests and preferences (Thomsen & Pedersen, 2000; Tihanyi, *et al*, 2003). However, for the SOEs we studied, according to the resource dependence theory, such companies rely heavily on the resources provided by their government, and at the same time they must accept the interference of corporate strategy decisions provided by the government. The‘Go Aboard’ policy was an effort initiated in

1999 by the Chinese government, which has greatly encouraged domestic enterprises to go overseas for mergers and acquisitions, thereby obtaining advanced technology abroad, management expertise and distribution network have been regarded as important means to enhance the company's international competitiveness (Zhang, Zhou & Ebbers, 2011). And SOEs actively respond to this policy, as the main force of Chinese companies' cross-border mergers and acquisitions (Du & Boateng, 2015) On the one hand, SOEs with a political background usually present a monopoly position in their industry, and the market space and development space are limited compared to the international market, thereby aggressive overseas mergers and acquisitions can expand the company's market and increase its international popularity. On the other hand, with the rapid development of China's economy, the requirements for natural energy and high technology are getting higher and higher, so the government is likely to use SOEs to help them access these important resources. As government asset, SOEs are are unlikely to refuse the government's request and more likely to actively respond to national policies to conduct cross-border mergers and acquisitions, even if cross-border mergers and acquisitions have many risks or are not in line with the company's development interests. Moreover, in line with this strategy, the Chinese government provides such firms with many supports, such as value-added taxes and favorable financing (Xiao & Sun, 2005). In particular, most of the preferential policies given by the government are used in SOEs (Schweizer, Walker, and Zhang, 2019), thus the Chinese SOE acquirer is more likely to conduct cross-border M&A than other types of companies.

Therefore, in summary, although SOEs have received government support to give them a certain advantage in international mergers and acquisitions, they have special political background, ambiguous acquisition motivations, serious information asymmetry problems and agency problems, unfair advantages and a lower market orientation, which may greatly stimulate host country regulatory agencies' concerns about national and economic security, thus decreasing the completion rate of cross-border mergers and acquisitions of SOEs. These arguments lead to our second hypothesis:

Hypothesis 1(b): *The likelihood of completing a cross-border acquisition in a host-country is lower for Chinese SOE acquirers than for non-SOE acquirers.*

3.2.2 The Moderating Role of Institutional Ownership

3.2.2.1 Institutional Ownership and M&A Decision-making in SOE Acquirers

It is argued that foreign institutional investors typically play a greater role than their domestic counterparts in influencing corporate strategic decision-making (Ferreira & Matos 2008; Gillan & Starks 2003). Firth, Lin, and Zou (2010) and Huang and Zhu (2015) support this point and suggest that foreign institutional investors are often considered the 'outsider' because they are less susceptible to local political pressure, thus performing arm's-length monitoring and participation in management decision-making. At the same time, Gillan and Starks (2003) argue that foreign institutional investors belong to the pressure-insensitive group because they have fewer business relations with the firms in which they invest. Thus, foreign institutional investors can potentially fairly monitor and actively influence the strategic decision-making of firm managers according to their own preferences (Bekaert & Harvey, 2000; Gupta & Yuan, 2009). In particular, the decision to engage in a M&A is a major corporate decision-making which relates to the interests of different groups of shareholders (Gaspar, Massa & Matos, 2005; Tihanyi, Johnson, Hoskisson & Hitt, 2003), shareholders can influence corporate decisions by indicating their preferences according to their share-holdings, with larger share-holding usually having a greater voice (Hartzell and Starks, 2003; Hoskisson, *et al*, 2002). However, in the case of the semi-political SOE acquirers, on the one hand, the government holds a large stake or has the ultimate control of the company, foreign institutional investors who invest in SOE acquirers have limited influence over M&A decision-making of such companies due to government interference and control, and it is also difficult other shareholders, especially those with smaller share-holdings, to influence M&A decision-making of SOE acquirers. On the other hand, with the Qualified Foreign Institutional Investor (QFIIs) quota system launched in 2002 by the China Securities Regulatory Commission (CSRC), foreign institutional investors approved by the CSRC are allowed to enter the China's domestic A-share market. However, under the QFIIs scheme, these institutional investors face many policy restrictions, such as investment horizons, investment projects and investment sizes. In accordance with 'Foreign Exchange Administrative Provisions for Domestic Securities Investments by Qualified Foreign Institutional Investors' (China Securities Regulatory Commission, 2009), each government approval cannot

exceed $1 billion, and a single foreign investor share-holding in a listed company is not allowed to exceed 10% of the company's total issued shares, while all foreign investors' share-holdings in the A shares of a listed company are not allowed to exceed 30% of its total issued shares, these restrictions severely limit the share-holdings of foreign institutional investors in the companies they invest in and reduce their voice. This is especially true in government-controlled SOE acquirers with large market capitalizations, where the general shareholdings of foreign institutional investors are much smaller than state shareholdings, and thus the voice of the former in M&A decision-making is negligible. In the case of domestic institutional investors there is no government limit on the amount they can invest, so they usually have a higher share-holding compared to their foreign peers, resulting in their exerting a stronger influence on these companies (Ferreira and Matos, 2008; Huang and Zhu, 2015). Therefore, these arguments lead to these hypotheses:

Hypothesis 2(a): *The foreign institutional ownership in a SOE acquirer fails to moderate the relationship between the SOE acquirer and the likelihood of a cross-border acquisition according its investment preferences (per Hypothesis 1a).*

Hypothesis 2(b): *The domestic institutional ownership in a SOE acquirer can moderate the relationship between the SOE acquirer and the likelihood of a cross-border acquisition according its investment preferences (per Hypothesis 1a).*

3.2.2.2 Institutional Ownership and M&A Legitimacy Concerns in SOE Acquirers

In terms of legitimacy concerns faced by SOE acquirers in cross-border M&As, the chapter extends signalling theory (Spence, 1973) to consider institutional investors as a signal sender or a positive signal itself to mitigate the negative impact of legitimacy concerns on the likelihood of cross-border acquisition completion. This chapter argue that foreign institutional investors are likely to be applicable to this theory extend it to legitimacy concerns, arguing that foreign institutional investors perform a signalling function to help SOE acquirers address legitimacy issues in cross-border M&A, while their domestic counterparts do not have the same role. The primary reasons for this are: (i) Unlike domestic investors, as 'outsiders', foreign institutional investors are less prone to political pressure and have fewer private affiliations with companies, thus they are more likely to perform arm's-length monitoring and contribute to companies in terms of corporate governance, reform

efficiency, market orientation, as well as perceived legitimacy (Firth, Lin, & Zou, 2010; Gillan & Starks, 2003; Huang & Zhu, 2015). (ii) Foreign institutional investors are generally more sophisticated in processing information and enjoy strategic information advantages. This means that such investors can effectively fill the information gap between acquirers and targets in cross-border M&As, thus alleviating the information asymmetry problem in cross-border M&As (Chen *et.al*, 2009; Ferreira & Matos, 2008; Gillan & Starks, 2003). (iii) Foreign institutional investors are categorized as more skilled, experienced and reputable, as the Qualified Foreign Institutional Investors (QFIIs) that have been approved by the Chinese government so far are exclusively large, internationally recognized funds and investment banks, such as UBS, Morgan Stanley, Nomura Holdings, Goldman Sachs, Citigroup, HSBC, and Deutsche Bank. The participation of these prestigious institutional investors to the company can provide alternative financing resources, advanced corporate management and international trading experience, risk diversification and, more importantly, significantly enhance the company's profile as recognized by QFIIs (Andriosopoulos & Yang, 2015; Gupta & Yuan, 2009; Huang & Zhu, 2015; Li, Nguyen, Pham & Wei, 2011). In comparison, most of domestic institutional investors are significantly inferior to foreign institutional investors in terms of specialized skills, international experience, and worldwide reputation. Moreover, prior studies (Covai & Moskowitz 2001; Grinblatt & Keloharju 2001; Gillan & Starks, 2003; Huang & Zhu, 2015) point out that local institutional investors frequently have private interests with the management of the companies they invest in and may not disclose information about the company to maximize their benefits. Also, such investors are vulnerable to political pressure, as many of them are held by the Chinese government (Huang & Zhu, 2015).

Based on these arguments, we expect that foreign institutional investors are likely to act as a signal sender to proactively reveal SOE acquirers' company information to outsiders and fill the information gap to reduce suspicion caused by host-country governments. On the other hand, they act as a positive signal itself, and companies with their shareholdings will not only substantially improve their corporate governance, market orientation, and reform efficiency, but there will also exert positive legitimacy-enhancing spillover effects on the companies that they invest in, therefore helping them to build legitimacy in cross-border M&As. However, because domestic institutional investors often have private interests within the management of the company and many of them are also controlled and interfered with by the local government, their shareholdings are unlikely to be

recognized by the host-country government and thus have no significant moderating impact on legitimacy concerns in cross-border M&As.

Hypothesis 3(a): *The foreign institutional ownership in a SOE acquirer can mitigate the negative relationship between the SOE acquirer and the likelihood of a cross-border acquisition completion (per Hypothesis 1b).*

Hypothesis 3(b): *The domestic institutional ownership in a SOE acquirer fails to mitigate the negative relationship between the SOE acquirer and likelihood of a cross-border acquisition completion (per Hypothesis 1b).*

3.2.3 Contingency Conditions Consideration

The legitimacy concerns faced by SOEs in cross-border M&As is also closely related to the acquisition behaviours and the characteristics of target companies, which may alter the relationship between state ownership and the outcome of cross-border M&As (Kostova & Zaheer, 1999; Li *et al* 2017; Luo & Peng,1999). In term of the behaviour in acquisitions, Li *et al* (2017) indicate that although there are many disadvantages in SOEs, it does not mean that their M&A transactions will be directly rejected. Therefore, the behaviours and actions of SOEs in M&As will be very critical for the final decision of the host-country regulatory agency. For example, if SOEs bring target firms with capital and advanced technology, the deal is more likely to be completed (Zhang & He, 2014). And, the previous host-country experience helps SOEs to overcome the regulatory barriers and increasing the legitimacy in host country (Delios & Beamish, 2001; Dikova, *et al*,2010). In contrast, if the acquired industry is a strategically important industry, such as the natural resource industry or the high-tech industry, especially the acquirer is a SOE from an emerging market, this behaviour will cause the host country to be sensitive and vigilant during the acquisition, so these transactions are unlikely to be completed (Zhang & He, 2014). In addition, Zhang (2011) based on institutional theory to test whether the host institutional environment affect outcomes of cross-border M&As by SOEs and support that these acquisition behaviours happen in a higher institutional environment are less like to be completed.

Moreover, Li, *et al* (2017) also argue that some target firm characteristics also raise the legitimacy threshold and put high requirements for management efficiency on the acquirer, and they found that the deals acquiring target firms with more R&D are more likely to be rejected, because target firms

with R&D alliances generally be active innovators as well as to possess critical technologies and technical know-how (Ahuja, 2000; Baum, Calabrese & Silverman, 2000). Therefore, the host government is concerned about the leakage of convertible technology, which makes it unlikely that it will approve the acquisition. Meanwhile, targeting public status firms are prone to be rejected, this is because that public companies have a certain level of visibility and influence in the host country, acquiring such companies means high-profile behaviour and under the 'spotlight' (Draper & Paudyal, 2006). Thus the acquisition of such companies not only requires SOEs to overcome their legitimacy barriers, but also requires them to have rich skills and market orientation to deal with hostile nationalism and social opinion (Slangen, 2006; Kang & Kim, 2010; Dikova & Rao Sahib, 2013).

According to the above point of view, the acquisition behaviour and the target company characteristics will greatly affect the completion of cross-border M&As by SOEs, aggravating or reducing the negative relationship between state ownership and the completion of cross-border M&As. Building on these insights, we conduct behaviours in acquisitions (cross industry acquisition, stock payment acquisition and high-leveraged acquisition) and target firm characteristics (private status target firm) may serve as contingency conditions in the relationship between state ownership and its acquisition completion.

3.2.3.1 Cross-industry Acquisition Behaviour

Cross-industry acquisitions are increasingly being used in M&A transactions. Kling, *et al* (2014) express that cross-industry acquisitions diversify the acquirers' product range, and this is a key step in building organizational structures, and gaining experience to become a global company. Similarly, this type of acquisition behaviour is prone to effectively help acquirers to establish diversification, expand diversified international markets and improve corporate risk resistance (Sailesh & Ibrahim, 2019). However, cross-industry acquisition behaviour is usually sensitive and attracts special attention from the host regulatory agency (Gret & Frank, 2002). Because this kind of acquisition behaviour is different from the traditional same industry acquisition, it may have some additional acquisition purpose and bring some unknown risks to the target company, so it increases the acquirers' legitimacy threshold to a certain extent (Li, *et al*, 2018). Specifically, for SOEs as acquirers we studied, the cross-industry acquisition behaviour by such companies is generally

considered to put a negative effect on the host country's national security and target company performance for several reasons. Firstly, cross-industry acquisition behaviour is usually regarded as motivated acquisition, at the same time, the acquirer is a SOE with a political background while adopting a vague corporate information policy, thus this acquisition behaviour is likely to be considered as a possible acquisition with a political purpose, especially if the target industry is in sensitive industries such as high technology and natural resources, which undoubtedly exacerbates the national security concerns of the host-country government regulatory agency (Zhang, Zhou & Ebber, 2011), thus the host-country may resist the cross-industry acquisition by foreign SOE acquirers. Secondly, the cross-industry acquisition is considered a high-risk deal. The reason is that when acquirers enter an unfamiliar industry, they may not have sufficient management experience and measures to deal with unpredictable risks, and are therefore vulnerable to possible risks. For the target company, these risks will likely worsen their company's performance and even affect the company's survival, and thus tend to reject such cross-border mergers and acquisitions.

In summary, this chapter expects the cross-industry acquisition behaviour by SOEs may carry high risks and possible political acquisitions to target firms, thus this practice makes the SOE acquirer face more serious challenges for their acquisition completion. These ideas lead to the formulation of the following hypotheses:

Hypothesis 4: *The cross-industry acquisition behaviour engaged by SOE acquirers may deteriorate their negative relationship with the completion of cross-border mergers and acquisitions.*

3.2.3.2 Stock Payment Acquisition behaviour

The stock payment acquisition behaviour by the SOE acquirer may also raise the threshold of legitimacy concerns. Martin (1996), Yook et al (1999), and Faccio & Masulis (2005) suggest that the company's control rights include financial control rights and operating control rights, which will be very important for the company's major shareholders to protect their interests or realize their private interests. The acquisition of stock payment will dilute the control of the company by the major shareholders. At the same time, the use of stock payment to dilute their stocks is likely to cause the control of large shareholders to be unstable, vulnerable to attacks, threats, and even usurp (Faccio & Masulis, 2000). Based on this view of share-based payments extends to our study of

SOEs, which differ from other types of companies in that such companies are controlled by their governments and are reluctant to dilute their shares easily and reduce their control over the company (Yang, *et al*, 2019; Liu & Lu, 2007). In this context, therefore, if these SOE acquirers make stock-paying acquisitions with an ambiguous corporate information policy, the practice is open to question from the outside as they are likely to not have the sufficient cash flow or strong financing capacity. For the target company, the acquirer's insufficient cash flow and restricted financing meant that they were vulnerable to unknown future risks. Therefore, with an opaque company information policy, SOEs may be questioned by the acquirer's companies about their poor cash liquidity and low risk tolerance when it comes to using shares to pay for acquisitions.

Moreover, different payment methods tend to convey to the market signals of future corporate value expectations. The cash payment method is often used in the period when the main merger stock is undervalued. After the merger, the value of the stock of the merger company will tend to rise (Myers & Maijluf, 1984; Cornu & Isakov, 2000). On the contrary, the stock payment method sends a signal that the stock value of the acquirer is overvalued, and the value of the stock will tend to decline after the merger (Linn & Switzer, 2001; Shleifer & Vishny, 2003; and Rhodes-Kropf and Viswanathan, 2004). For SOE acquirers we studied, their non-disclosure information policy resulted in the outside world not being able to accurately analyse their true value, so the target company may have to bear a 'moral hazard' in the case of the stock payment acquisition (Li, Li & Wang, 2018; Holmstrom, 1979; Jensen & Meckling, 1976). Hence, depending on the 'moral hazard' perspective, it is very likely for the SOE acquirer to use the stock payment when their stock price is overvalued, thus damaging the target firm’s interest, and raising legitimacy concerns.

Meanwhile, a stock payment is usually not the preferred payment method for the target company, because the stocks they receive cannot be turned into cash immediately, helping their companies to overcome the current difficulties they face or investing in the market to obtain returns (Faccioand Masulis, 2005). Besides, the stock payment also has a negative impact on the long-term return of both acquirers and targets (Agrawal, 2000). For these reasons, we offer:

Hypothesis 5： *The stock payment acquisition engaged by SOE acquirers may exacerbate their negative relationship with the completion of cross-border mergers and acquisitions.*

3.2.3.3 High-leveraged Acquisition behaviour

The leverage level of the acquirer company significantly affects the company's investment decisions (Uysal, *et al*, 2009; Hu & Yang, 2016; Modigliani & Miller, 1958). To a certain extent, the acquirer with a high-leveraged status still actively acquires the company overseas, this practice may raise legitimacy concerns from host-country governments for several reasons. Firstly, the high-leverage level of acquirers means that these firms have high debt ratios and limited external financing capabilities, which makes it difficult for these companies to go overseas to conduct M&A transactions efficiently, because these acquirers tend to be vulnerable in the face of unknown risk in the post-merger company integration phase (Uysal, 2011). Similarly, Hu and Yang (2016) also illustrate that when acquirers in a high-leverage level, they are difficult to borrow further from external sources, their financing frictions limit the ability to achieve aggressive bids or hostile takeovers, and with the restrictions on highly leveraged acquirers issuing more debt, it could not only affect the likelihood and completion of M&As, but also reduce the cash component and the proportion of acquisitions, as well as harming the company's returns and future growth.

The high-leveraged acquisition behaviour by the SOE acquirer may raise the threshold of legitimacy concerns. High leverage means that companies have more uncertainty and hold higher levels of debt (Agliardi, Amel-Zadeh, & Koussis, 2016; Thomas, 2002). Compared to private companies, SOEs are often perceived as having lower profits and higher leverage (Dewenter, & Malatesta, 2001), as well as having more social responsibilities, such as employment rates, economic goals, and political goals (Megginson, Nash, & Van Randenborgh, 1994). These social responsibilities cost SOEs more time and effort, while to meet these social responsibilities, they are likely to hold more debt and increase the leverage of the company. As a result, acquirers with a highly leveraged position are less likely to undertake cross-border M&As, and instead, these companies are more likely to be targeted (Thomas, 2002). If these firms with high-leveraged levels still aggressively choose to bid on target firms overseas, this practice is regarded as high risk and not acceptable to the host government and target company. Extending this perspective to SOE acquirers in emerging countries who have high leverage and still take the risk of aggressively acquiring target companies overseas, has raised concerns about the potential loss of revenue for the target companies due to a lack of sufficient cash flow and financing capacity to effectively deal with unknown future risks, and more importantly the aim of a possible political acquisition, where the host country regulator may question whether there is government support and interference behind

these foreign SOE acquirers, raising legitimacy concerns. Hence, we propose the following hypotheses:

Hypothesis 6： *The high-leveraged acquisition engaged by SOE acquirers may exacerbate their negative relationship with the completion of cross-border mergers and acquisitions.*

3.2.3.4 Private Target Acquisition behaviour

A major obstacle to the acquisition of private target companies compared to the acquisition of public companies is the lack of market orientation of the acquiring company itself, which can be particularly problematic in cross-border M&As, leading to a high degree of uncertainty in the acquisition outcomes (Reuer & Ragozzino, 2007). Adequate market orientation implies that the company has the management expertise and efficiency that are key to its success in the marketplace. Therefore, the acquisition of a private target company places high demands on the management expertise and efficiency of the acquirer to mitigate information asymmetries in M&A transactions, as corporate information about the private target company is not publicly available. An acquirer with strong management expertise means that the company's management often has extensive experience in acquisitions, measures in place to deal with risks and, more importantly, professional information-gathering skills on overseas targets (Jo & Kim, 2019). Simultaneously, a higher level of management efficiency can help the acquirer to coordinate the relationship between managers and employees, parent company and overseas subsidiaries, shareholders and consultants, and to respond to changes in the host market in an efficient and timely manner (Martin & Shalev, 2017). Such a corporate management advantage is therefore crucial for the acquirer to be able to gain an acquisition advantage in the highly competitive market of the host country and to complete cross-border acquisitions more easily. This chapter will rely on the specificity of private target companies to explain why the acquisition of this type of company requires a high degree of management expertise and efficiency from the acquirer. Firstly, unlike public companies, private companies do not need to disclose their company information on the market in a timely manner, thus these targets are less transparent and visible to acquirers than public targets, and more difficult to value and locate as exchange partners (Deeds, De carolis & Coombs, 1999). Similarly, Reuer and Ragozzino (2007) show that the lack of information about private companies limits the depth of the acquirer's search and increases the risk of not being able to properly assess the assets of the private

target company. On the other hand, private companies are also intentionally reluctant to voluntarily publish information about their companies in order to gain managerial flexibility and ensure the security of company information (Draper & Paudyal, 2006). Thus, very little information about private targets raises information asymmetry, which makes it difficult for acquirers to obtain accurate financial information about the target company, resulting in an inability to calculate an accurate value of the target company and a disadvantageous position in bidding, such as overbidding or underbidding (Fuller, Netter & Stegemoller, 2002). Furthermore, Draper and Paudyal (2006) argue that ownership of private firms is generally concentrated within a family or a small group. As a result, the family or small group has an absolute voice in the strategic decisions of the company, and when important events occur in the company, such as an acquisition, these families and small groups may have significant bargaining power, so that the deal may not be completed until the acquisition price satisfies them. And in public companies, there are a large number of different shareholders with different interest preferences. As a consequence, companies are unable to truly maximise their corporate interests in M&As (Draper & Paudyal, 2006). Therefore, private companies with strong bargaining power make it necessary for the acquirer to achieve efficient and professional corporate governance, collect timely disclosures from the target company and develop a professional negotiation plan to deal with them. However, for the SOE acquirers we studied, most of their managers were from government departments and they mainly served government instructions rather than market needs. At the same time, they are likely to lack professional and efficient management experience, which makes it more difficult to effectively gather information about the target company and to negotiate professionally with the target company's managers to establish an information advantage when facing a private target company with serious information asymmetry. As a result, acquisitions by private companies exacerbate the negative relationship between SOEs and cross-border acquisition completion.

Hypothesis 7： *The private target acquisition engaged by SOE acquirers may exacerbate their negative relationship with the completion of cross-border mergers and acquisitions.*

3.2.4 The Role of the Institutional Ownership in Cross-border M&As

Institutional investors play an extremely important role in CEO compensation, corporate strategic decisions, corporate policies and external investment transactions, especially M&A transactions

(Andriosopoulos & Yang, 2015; Croci, Gonec, & Ozkan, 2012; Fernandes, *et al*, 2013; Chen, *et al*, 2007; Ferreira, Massa, & Matos, 2010). According to the 'outsider theory', institutional investors, as external actors to the firm, are less likely to have much private interest in the firm to effectively monitor the firm's internal management and external trading activities for its enhancement (Stulz, 2005; Short & Keasey, 1999). Foreign institutional investors, however, are believed to play an active role in external monitoring when large controlling shareholders may seek exclusive benefits through their influence on management, which may lead to difficulties in the enforcement or outright confiscation (Huang & Zhu, 2015). Almazan, *et al* (2005) also note that higher institutional ownership is positively associated with greater control over executive compensation, implying that institutional investors have the ability and means to exert pressure on company managers to promote the company. Similarly, the fair monitoring role played by institutional investors in a firm can benefit minority shareholders and overcome the free-rider problem (Andriosopoulos & Yang, 2015; Maug, 1998; Johnson & Greening, 1999; Huang & Zhu, 2015). Institutional investors as 'outsiders' also bring many benefits to the companies they invest in when companies engage in outbound investment transactions, especially cross-border M&As. Gillan and Starks (2003) and Ferreira, Massa, and Matos (2010) imply that the presence of institutional investors can fill information gaps, and thus when the companies they invest in engage in cross-border M&As reduce information asymmetries and bargaining costs between bidders and target firms. Furthermore, these types of investors can improve the performance of acquirers and facilitate financial consolidation. Ferreira, Massa, and Matos (2010) also argue that institutional investors tend to build bridges between international companies and their presence among the shareholders of companies facilitates cross-border M&As.

Based on the above characteristics of institutional investors, applied to our research subject, SOEs, controlled and intervened in by their governments, managers appointed directly by the government are likely to be vulnerable to government pressure and less likely to be influenced by external forces. Our study will therefore further test whether many of the positive roles played by institutional ownership (QFIIs and DIIs) in non-SOEs in mature markets can also be used effectively in SOEs with a particular political context in emerging markets. The more institutional ownership there is in a company, the more obvious its role is likely to be in an M&A transaction.

This section also introduces a set of acquisition behaviours that may affect the level of legitimacy

thresholds (cross-industry acquisitions, stock-payment acquisitions, and high-leveraged acquisitions), as well as those that may affect the level of target information asymmetry (target private status), thereby altering the relationship between SOEs and the likelihood of an acquisition deal being completed. Furthermore, this chapter conducts institutional investor to test whether institutional ownership in SOEs can mitigate the negative impact of these acquisitions on the relationship between SOEs and the likelihood of the acquisition deal being completed. (Using a three-way interaction term, the interaction term is multiplied by three variables: institutional ownership, acquisition behaviour and the nature of the SOE.)

In support of the hypothesis below, we expect the two-way interaction term to be negative and significant, implying that legitimacy concerns affect SOEs' acquisition completion. At the same time, we expect the three-way interaction term to be positive and significant, implying that institutional ownership can help SOEs improve their legitimacy.

3.2.4.1 Institutional Ownership and Cross-industry Acquisition Behaviour by SOEs

While an increasing number of acquirers are making cross-industry acquisitions based on strategic corporate development, portfolio diversification and product range, such acquisitions are also considered sensitive by host country regulators and target companies (Gerhard, *et al*, 2014). For the SOE acquirers, we studied, their often political backgrounds and ambiguous corporate information policies led them to undertake sensitive cross-industry acquisitions where outsiders questioned their high-risk and political acquisition targets, thus increasing legitimacy concerns in the host country and hence the challenges of acquisition completion.

However, when SOE acquirers own foreign institutional ownership, we predict that it is more likely to effectively help them overcome legitimacy concerns brought about by cross-industry mergers and acquisitions. The reasons are as follows; Firstly, institutional investors play a critical role in the CEO compensation, the company's strategic decisions, and company policy (Andriosopoulos & Yang, 2015; Croci, Gonec, & Ozkan, 2012; Fernandes, *et al*, 2013; Chen, *et al*, 2007; Ferreira, Massa, & Matos, 2010). Therefore, foreign institutional investors can influence the company's management decisions and have easier access to internal information of the SOE acquirer. As a result, according to 'signal theory', these investors are likely to disclose high-quality information to

outsider. Because foreign institutional investors have an international reputation and influence, and such institutional investors are generally considered not to have private interests in the management of the companies they invest in, the company information they release to the outside world is largely recognized and believed (Stulz, 2005; Short & Keasey, 1999). it is an excellent way to dispel the doubts by host regulatory institutions about the possible political acquisition motive caused by the SOE acquirer with opaqueness company information.

On the other hand, foreign institutional investors with rich experience in international acquisitions are likely to help SOE acquirers to mitigate the high risks brought by cross-industry acquisitions. Unlike the same industry acquisition, the cross-industry acquisition intends to place high technical and management requirements on acquirers. For SOE acquirers who may have monopolistic competitive advantages and rich experience in their own industries, and for unfamiliar industries, for SOE acquirers who already have an inefficient management problem, they are also more likely to lack management experience, technical support and risk response strategy in another industry. However, we predict that foreign institutional investors will compensate for this disadvantage for the SOE acquirers they invest in because they can reach the QFIIs qualification set by China are the world's top investment institutions. Their investment projects involve various industries all over the world. As a result, they have been cultivated a wealth of management experience in different industries and risk management countermeasures. These rich global company management experience, risk management countermeasures, and accumulated technical support in various industries will undoubtedly help SOE acquirers establish an advantage in entering an unfamiliar industry, and give the outside world confidence to deal with unknown risks well and fierce competition.

In contrast, we expect that domestic institutional investors may not have the same influence as foreign institutional investors in alleviating legitimacy concerns caused by cross-industry acquisitions for several reasons. Firstly, domestic institutional investors are often considered to have a private interest in the management they invest in, so such investors are unlikely to disclose the SOE acquirer company information to outside to maintain flexibility in private interests (Huang & Zhu, 2015; Andriosopoulos & Yang, 2015). Moreover, domestic institutional investors do not have investment projects spread all over the world and rich management experience and risk response strategies like foreign institutional investors in various industries, thereby domestic institutional

investors may not provide acquirers with technical support, management experience, and risk coping strategies to build a competitive advantage in an unfamiliar industry. Therefore, we predict the domestic institutional ownership in a SOE acquirer cannot alleviate the target company's concerns about the negative impact of cross-industry acquisitions on the company's development.

Hypothesis 4a: *The foreign institutional ownership in a SOE acquirer may mitigate the deterioration of the acquisition completion outcome caused by cross-industry acquisitions.*

Hypothesis 4b: *The domestic institutional ownership in a SOE acquirer may not mitigate the deterioration of the acquisition completion outcome caused by cross-industry acquisitions.*

3.2.4.2 Institutional Ownership and Stock Payment Acquisition Behaviour by SOEs

Globally, stock payment acquisitions are increasingly used and popular in M&A transactions. Wansley, Lane, and Yang (1983), Harris, Franks, and Mayer (1987), and Huang and Walking (1987) suggest that stock payments will help defer taxes and low tax benefits for shareholders of the target company, while Martin (1996) states that stock payments may bring positive benefits to both the acquirer and the target company. However, stock-payment acquisitions also pose several risks to the target company, particularly for acquirers of SOEs with ambiguous corporate information policies that I study. Firstly, government-controlled state-controlled acquirers are much less likely to dilute their shares to use the stock payment for acquisitions, and when these companies use the stock payment acquisition, which can be challenged for not having sufficient cash and strong financing capacity. As a result, post-merger resilience is very fragile. In addition, the practice of stock-payment acquisitions usually leads to a 'moral hazard' caused by opaque information on the part of the SOE acquirer, as such an acquirer, being the superior party in terms of information, is likely to compromise the interests of the other party to gain more incredible benefits for itself (Myers & Maijluf, 1984). The above concerns are mainly caused by SOEs' policy of information ambiguity, which may also raise the threshold for legitimacy concerns in cross-border M&As.

The chapter predicts that foreign institutional investors have the potential to help SOEs alleviate the legitimacy concerns associated with stock payment acquisitions if they act as shareholders of the SOE acquirer for several reasons. First, because foreign institutional investors can influence company management and participate in strategic decisions, they typically have professional access

to inside information about the companies in which they invest. At the same time, unlike domestic institutional investors, QFIIs have fewer private interests and company management, so they are likely to disclose internal company information to outsiders. This practice helps the target company understand the financial situation of the SOE acquirer and better analyse the accurate stock price, thus reducing the legitimacy concerns arising from 'moral hazard'. On the other hand, as one of the world's top investment institutions, QFIIs have ample cash flow and strong financing capabilities, which can effectively address the target company's concerns about the lack of internal cash flow of the SOE and give it confidence in its post-merger risk-resilience.

In contrast, we expect domestic institutional investors may not be as effective as QFIIs in mitigating the negative impact of share-based payment acquisitions. This is because domestic institutional investors generally consider that they have a private interest in management while investing, so they are reluctant to disclose information to outsiders to maintain the flexibility of their interests. On the other hand, domestic institutional investors are at an information disadvantage compared to QFIIs, so they may not have professional access to inside information and therefore are likely to be unable to expose information to the outside world either, alleviating 'moral hazard' concerns. Finally, domestic institutional investors do not have the international reach and strong financing capabilities of QFIIs, so they are unlikely to give the target company the confidence that an SOE acquirer will have strong financial backing if it encounters risks following a cross-border M&A.

Hypothesis 5a: *The foreign institutional ownership in a SOE acquirer may mitigate the deterioration of the acquisition completion outcome caused by stock payment acquisitions.*

Hypothesis 5b: *The domestic institutional ownership in a SOE acquirer may not mitigate the deterioration of the acquisition completion outcome caused by stock payment acquisitions.*

3.2.4.3 Institutional Ownership and the High-leveraged Acquisition behaviour by SOEs

Firms with higher levels of leverage are generally less likely to acquire foreign targets (Hu & Yang, 2016). This is mainly because high leverage implies high debt ratios, insufficient cash flow and more limited financing capacity. If highly leveraged acquirers remain aggressive bidders in cross-border M&As, they are likely to plunge themselves into financial crisis, thus increasing concerns that the target firm is weak against risk. Although highly leveraged acquirers are also

considered to make value-enhancing acquisitions abroad, and highly leveraged acquisitions are more likely to bring positive short- and long-term benefits to the target firm (Uysal, 2009; Hu & Yang, 2016),the unknown risks associated with such acquisitions are also not negligible when the target firm is acquired. For the SOEs in our study, when they have high leverage and are still actively going overseas to acquire firms, this practice makes it easier for the host government and the target firm to question whether the purpose behind their acquisition is a political one. At the same time, as the SOE with ambiguous information is the acquirer, the target company is unable to ascertain the financial position of the acquiring company, thus increasing concerns about the resilience of the acquiring company after the acquisition. As a result, host country regulators often reject these takeover deals for fear that such acquisitions by Chinese SOE acquirers will harm the national security of the host country and the corporate interests of the target company.

When QFIIs are shareholders of the SOE acquirers we study, we expect that they may play a positive role in reducing the negative impact of high-leveraged acquisitions by SOE acquirers on acquisition completion. First, QFIIs typically manage large amounts of capital and have strong financing capabilities, as well as international reach and visibility. With such strong capital and financing support, it undoubtedly alleviates the target company's concerns about the weak risk-resilience of the SOE acquirer's high-leveraged acquisition. In addition, due to the concern that the SOE acquirer's high-leveraged acquisition may have a political purpose, QFIIs, based on their influence on the company's management and professional information collection channels, obtain corporate information of the invested SOEs and expose this high-quality internal information to the outside world, making the host country regulators and the target company believe that the SOE acquirer is making a high-leveraged acquisition only for the company's development needs or value enhancement acquisitions and not for political purposes, thereby mitigating external legitimacy concerns.

At the same time, we predict that domestic institutional investors do not have the same effect as QFIIs in reducing the negative impact of high-leveraged acquisitions by SOE acquirers on acquisition outcomes. This is mainly because domestic institutional investors lag far behind QFIIs in terms of financing capacity, capital under management, information advantages and international influence, and they find it difficult to provide significant financial support when SOE acquirers face financial difficulties in making high-leveraged acquisitions. On the other hand, these institutional

investors are usually perceived to have a personal interest in the management of the company and are unlikely to voluntarily disclose company information to the outside world to ensure flexibility of interest. Furthermore, even if they do take the initiative to disclose information to outsiders, the quality of the information they release can easily be questioned by the target company in the host country due to their international influence and special relationship with the national government.Therefore, these ideas conduct to the formulation of the following hypotheses:

Hypothesis 6a: *The foreign institutional ownership in a SOE acquirer may mitigate the deterioration of the acquisition completion outcome caused by the SOE with a higher leverage.*

Hypothesis 6b: *The domestic institutional ownership in a SOE acquirer may not mitigate the deterioration of the acquisition completion outcome caused by the SOE with a higher leverage.*

3.2.4.4 Institutional Ownership and the Private Target Acquisition Behaviour of SOEs

Fuller, Netter, and Stegemoller (2002) elaborate that the status of the target company (public or private) significantly impacts the outcome of M&A transactions. As Li, Xia, and Lin (2017) disclosed, when a foreign acquirer acquires a public target company, this trade activity attracts more public attention. In contrast, when an acquirer acquires a private company, this acquisition will place high demands on the company's market positioning - management efficiency and professionalism - to mitigate information asymmetries. Meanwhile, Reuer and Ragozzino (2007) point out that bidders will spend higher costs searching for information on private targets and negatively affect the bidder's performance due to information asymmetry in the target company. In addition, Makadok and Barney (2005) point out that the lack of available information will expose bidders to the risk of being unable to evaluate assets properly. Applying the above argument to the SOE acquirers in our study, such companies are considered to be government assets, and their special political relationship with the government has led to a lack of professionalism and efficiency in the management of these companies to implement effective measures to respond to changes in foreign markets and to have the expertise to gather disclosure information on private targets to establish an information advantage in competitive foreign markets.

However, Gillan and Starks (2003) and Ferreira and Matos (2008) argue that the presence of institutional investors can fill information gaps and thus reduce information asymmetries and

bargaining costs between bidders and targets in cross-border M&As. In line with this view, we expect that QFIIs may be able to compensate for the disadvantages that SOE acquirers face in this area of information asymmetry under their strong influence in terms of corporate management, acquisition expertise and experienced bargaining power. Firstly, QFIIs have strong influence and oversight over the managers of SOE acquirers, promoting managerial efficiency and professionalism, while providing professional acquisition advice and response strategies to changes and risks in foreign markets based on their extensive international acquisition experience and expertise. Secondly, QFIIs are often perceived to have well-known international influence and professional company information gathering capabilities and channels. As such, they are likely to use their information-seeking advantage to help SOE acquirers complete their acquisitions of private firms, for example, by providing the unpublished information they collect on private targets to the SOE acquirers they invest in, thereby helping SOE acquirers to better assess the value of their targets and build an information advantage in foreign markets. In contrast, Chen, *et al* (2009) and Seasholes (2004) illustrate that foreign institutional investors enjoy more of an information advantage than local institutional investors. While domestic institutional investors are generally perceived to have a private interest in company managers, they are less likely to reduce information asymmetry by monitoring managers to improve management efficiency and professionalism. On the other hand, they may also not have the expertise and experience that QFIIs have in gathering information on private companies worldwide, so they are less likely to help build an information advantage for SOEs. Nevertheless, we test whether institutional ownership of SOEs can significantly impact firm decisions, such as the M&As we study.

Consequently, these ideas conduct to the formulation of the following hypotheses:

Hypothesis 7a: *The foreign institutional ownership in a SOE acquirer may mitigate the deterioration of the acquisition completion outcome caused by the acquisition of a private target.*

Hypothesis 7b: *The domestic institutional ownership in a SOE acquirer may not mitigate the deterioration of the acquisition completion outcome caused by the acquisition of a private target.*

3.2.5 Institutional Ownership and Decision-making Strategy of SOEs

Institutional investors as shareholders of a company can significantly influence policy-making and strategic decisions of companies, especially M&A transactions (Croci, Gonec, & Ozkan 2012;

Fernandes, *et al*, 2013; Stulz, Walkling, & Song 1990; Ambrose & Megginson, 1992; Chen *et al*, 2007; Ferreira, & Matos, 2010). Hartzell and Starks (2003) also point out that institutional investors strongly influence executive compensation as they can influence company decisions through their stock holdings and respective transactions. Companies need to adjust their strategic investment proposals to cater for institutional investors (Hartzell & Starks. 2003; Tihanyi, *et al*, 2003). However, due to the increased risk and complexity of the organisation, different groups of shareholders may not have a consistent interest in the company's growth and investment strategy (Tihanyi, *et al*, 2003). Similarly, Hoskisson and Wright (2002) find that different groups of investors have different preferences for the company's growth, so their preferences also have a further bearing on managers' decisions about the firm. Huang and Zhu (2015) suggest that QFIIs have a more significant influence on state-controlled shareholders than domestic institutional investors based on corporate governance and reform. At the same time, they prove that QFIIs are likely to participate in arm's-length negotiation and be more effective in monitoring SOE managers because they are less likely to be under political pressure. In contrast, domestic institutional investors appear to engage in serious and fair negotiations only without political pressure.

Information asymmetry, cultural differences and financing capacity are clear determinants of cross-border M&A. Cross-border M&A requires more experienced and professional acquirers (Slangen, 2006; Kang & Kim, 2010; Dikova & Rao Sahib, 2013). In addition, QFIIs have a more sophisticated long-term strategic information advantage over local investors, as foreign institutional ownership is strongly and positively correlated with contemporaneous and subsequent firm performance (Grinblatt & Keloharju, 2000; Dvorak, 2005). Also, due to the QFIIs policy, it is difficult for them to withdraw funds from China in the short term. Consequently, they have been investing for a more extended period. They are more stable in their investments in Chinese firms than domestic institutional investors, which implies that QFIIs who invest for an extended period have a more significant influence on corporate management and strategic decisions.

On the other hand, according to resource dependency theory, SOEs are an extraordinary nature of a company. Unlike ordinary non-state companies, they maintain an interdependent relationship with the government. At the same time, most of the managers of SOEs are directly appointed by the government, which means that the government, which has absolute control over SOEs, is likely to influence these companies corporate governance and strategic decisions directly. In contrast to

institutional investors, unlike the non-SOEs in which they invest, their role and influence in SOEs are likely to be considerably less, and it may even be difficult for them to influence the strategic decisions of SOEs, such as the company's outbound M&A transaction activities.

This is because, based on the specificities of the Chinese market and the political context of SOEs, we expect that although institutional investors can play an active monitoring role over the managers of SOEs, it is likely that they will have difficulty influencing the strategic decisions of SOEs, such as whether to undertake cross-border or domestic M&A, as we have studied.

Hypothesis 8a: *The foreign institutional ownership in a SOE acquirer may promote its relationship with the possibility of cross-border acquisitions.*

Hypothesis 8b: *The domestic institutional ownership in a SOE acquirer may promote its relationship with the possibility of cross-border acquisitions.*

3.3 Data and Methodology

This chapter collected a sample of cross-border and domestic acquisition of Chinese publicly-listed companies over the fifteen-year period between 2005 and 2020 from the Securities Data Corporation (SDC) database that has been widely used in earlier M&A studies (Erel, Liao, & Weisbach, 2012; Li, Xia & Lin, 2017; Tao *et.al*, 2017; Muehlfeld, Sahib, & Van Witteloostuijn, 2012). Also, because we selected only deals where the acquirers were Chinese publicly-listed companies, data on institutional ownership and firm's characteristics were further supplemented according to CSMAR (i.e., the China Stock Market & Accounting Research Database) and the firms' official websites. We then calculated the percentage of foreign institutional ownership, domestic institutional ownership, institutional institutional blockholders, total institutional ownership, and foreign-to-domestic institutional ownership ratio for each acquirer company at the end of the year prior to the announcement of the deal announcement, following the previous literature of Andriosopoulos and Yang (2015) and Ferreira, Massa and Matos (2010). Moreover, because we only consider Chinese companies as acquirer companies, we need to further collect more detailed information about the acquirer company from the professional and authoritative Chinese financial database -- China Stock Market and Accounting Research (CSMAR) to supplement the acquirer data not available in the SDC database, such as the characteristics of the

acquirer, the Return on assets (ROA), Financial leverage, institutional investors' shareholdings. The final sample was selected by complying with the following conditions. (1) The acquirer companies were publicly-listed, each acquirer was listed on the Shanghai Securities Exchange and the Shenzhen Stock Exchange in China; (2) Target companies were both Chinese (Domestic M&A deals) and non-Chinese firms (Cross-border M&A deals), including listed, private, and subsidiary firms; (3) Our study excluded re-purchases, re-capitalizations, sales of minority interests, spin-offs, and transactions identified as internal, rumored and unknown transaction were ignored; These criteria yielded a final sample of 2,203 transactions for research. From our final sample, which included 904 cross-border M&A transactions (41%) in 67 different target countries or regions and 1,299 domestic M&A transactions (59%). Table 3.1 represents the sample variable summary statistics and correlation matrix for all the variables used to examine the potential multicollinearity issues in this research. According to Zhang, Zhou, and Ebber (2010), when the correlation of the variables is lower than the commonly used cut-off threshold of 0.7, no multicollinearity problem needs to be considered. As shown in Table 3.1, all correlations of variables we studied are 0.7.

Table 3.1 Descriptive statistics and correlation matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Cross-border acquisition incidence	1													
(2) Friendly attitude	-0.175	1												
(3) Deal value	0.141	-0.020	1											
(4) Stock payment	0.368	-0.100	0.079	1										
(5) Target public status	0.030	0.038	0.148	-0.143	1									
(6) Target private status	-0.342	0.074	-0.223	0.259	-0.479	1								
(7) Cross-industry acquisition	0.055	0.065	0.022	0.030	-0.145	0.128	1							
(8) Politically sensitive industry	0.035	0.023	0.082	-0.007	0.079	-0.094	-0.061	1						
(9) ROA	-0.071	-0.006	-0.106	-0.010	-0.056	0.088	-0.061	-0.082	1					
(10) Leverage	0.025	-0.004	0.092	0.038	0.016	-0.040	0.031	0.026	-0.020	1				
(11) Acquisition experience	-0.121	0.048	-0.050	-0.089	0.037	-0.016	-0.075	0.018	-0.018	0.006	1			
(12) SOE acquirer	0.247	0.166	0.232	-0.091	0.042	-0.290	0.020	0.144	-0.092	0.077	0.004	1		
(13) Foreign institutional ownership	0.036	-0.004	0.079	0.029	0.038	-0.048	-0.065	-0.003	0.023	0.007	0.055	0.092	1	
(14) Domestic institutional ownership	0.072	-0.006	0.043	0.010	0.068	-0.053	-0.043	-0.082	0.034	0.004	0.038	0.017	0.088	1
Mean	0.407	0.104	3.229	0.187	0.133	0.611	0.531	0.248	0.062	0.423	0.089	0.240	0.137	5.999
S.D	0.491	0.305	2.025	0.390	0.340	0.488	0.499	0.432	0.071	0.911	0.285	0.427	0.836	7.224
Max	1	1	9.551	1	1	1	1	1	1.295	41.939	1	1	18.7	71.099
Min	0	0	-4.605	0	0	0	0	0	-0.408	0	0	0	0	0

(*Note:* N =2203. This table reports the sample variable summary statistics, e.g., Mean , Standard Deviation, Maximum and Minimum) and correlation matrix for all the variables)

In addition, Table 3.2 performs the variance inflation factor (VIF) test. The maximum variance

inflation factor (VIF) value of our variables is 1.60, which is much less than 10, further indicating that there is no multicollinearity concern in this study. Table 3.3 depicts the sample distribution by the top 20 target countries in our sample with the highest number of cross-border M&A deals initiated by Chinese listed companies. These tables are inserted to provide a clear understanding of our sample.

Table 3.2: Results of the VIF test.

Variables	VIF	1/VIF
Friendly attitude	1.09	0.913
Deal value	1.15	0.868
Stock payment	1.10	0.907
Target public status	1.41	0.708
Target private status	1.60	0.623
Cross-industry acquisition	1.06	0.946
Politically sensitive industry	1.03	0.969
ROA	1.03	0.972
Leverage	1.01	0.986
Acquisition experience	1.02	0.978
SOE acquirer	1.25	0.798
Foreign institutional ownership	1.03	0.969
Domestic institutional ownership	1.02	0.978

(*Note:* This table represents the variance inflation factor (VIF) test for the independent, moderating and control variables)

3.3.1 Dependent Variables

The first dependent variable of interest was acquisition probability. The chapter followed previous studies (Andriosopoulos &Yang, 2015; Ferreira, Massa & Matos, 2010), and measured the indicator as taking the value of 1 for cross-border M&As conducted by Chinese acquirers and 0 otherwise. Our second dependent variable was acquisition completion, which took 1 if the acquisition was successfully completed after the public announcement of cross-border M&As by the Chinese acquirer, and 0 otherwise (Nguyen, Phan & Simpson, 2019). In our sample, approximately 53% of deals by Chinese acquirers were successfully completed and 47% of deals were failed.

3.3.2 Independent and Moderating Variables

SOE acquirer was captured if their immediate or ultimate owner belonged to any administrative level of government (Li, Li, & Wang, 2018). To determine the immediate or ultimate owner, it is

sometimes necessary to track through the entire ownership structure and calculate the proportion of ownership directly and indirectly owned in a generally pyramidal structure (Claessens, Djankov, & Lang, 2000). The key independent variable, SOE acquirer, was collected primarily from the Securities Data Corporation (SDC) database and supplemented by the CSMAR database. An acquirer company was coded as the SOE if its state-owned shares were the largest shareholder (Berkman, Cole, & Fu, 2010); or if all state-owned shares exceeded 50% of all of shares (Li, Xia & Lin, 2017); or if the company official information indicated that the ultimate controller of the enterprise was the Chinese government (Lin & Bo, 2012).

Table 3.3: Sample distribution by target countries/regions classification.

Variables	Deal number	Percentage of total cross-border samples
United States	190	21.02%
Hong Kong	136	15.04%
Germany	68	7.52%
Canada	40	4.42%
Australia	38	4.20%
Italy	37	4.09%
United Kingdom	28	3.10%
Singapore	27	2.99%
Japan	26	2.88%
France	23	2.54%
Netherlands	15	1.66%
Thailand	16	1.77%
Brazil	17	1.88%
Taiwan	15	1.66%
South Korea	18	1.99%
Malaysia	11	1.22%
Spain	10	1.11%
Isreal	10	1.11%
New Zealand	9	1.00%
Switzerland	8	0.88%

(Note: This table performs the sample distribution by top 20 home-countries/regions classification of target firms)

Foreign Institutional ownership was measured as cumulative percentage shareholdings held by non-Chinese institutional investors in the acquiring firm at the year-end prior to the deal announcement.

Domestic Institutional Ownership was measured as cumulative percentage shareholdings held by Chinese institutional investors in the acquiring firm at the year-end prior to the deal announcement.

3.3.3 Control Variables

Following the previous leading literature (Li, Li & Wang, 2018; Li, Xia & Lin, 2017), this chapter also employed several control variables to control the influence of the institutional ownership on acquisition outcomes. Giri and Das (1979) indicated that all variables that may affect the results

should be controlled for, except for the independent and dependent variables. If our study does not control for relevant variables, it may not be possible to demonstrate that they do not influence empirical outcomes.

Deal attributes: **Friendly attitude** was denoted as a dummy variable, coded as 1 if the SDC database classified the deal as friendly and 0 otherwise (Li, Li, & Wang, 2018). A positive and friendly attitude from the host country may effectively help the acquirer to complete a transaction; **Deal value** was captured as the natural logarithm of a deal's total value. The greater the transaction value, the more likely it attracts the host government and society's attention and vigilance, thus increasing the resistance to the completion of an M&A (Ferreira, Massa & Matos, 2010); **Stock payment** was defined as a dummy variable indicating whether an acquirer was paid entirely in share in a transaction. The dummy variable took 1 if the entire payment method for an M&A transaction was through stock payment and 0 otherwise. Stock acquisition methods may make it more difficult for acquirers to complete transactions (Aguilera, Williams, Conley & Rupp, 2006);

Target attributes: **Public target status** took 1 if the target was a publicly listed company and 0 otherwise; **Private target status** was coded as 1 if the target was a private company and 0 otherwise.

Industry attributes: **Cross-Industry acquisition** was classified as cross-industry M&As based on whether the two-digit SIC codes of acquirers and targets were the same or not. When the two-digit SIC codes of acquirers and targets were identical, it was coded as 1, and 0 otherwise (Sambharya, 1996); **Politically Sensitive industry** was defined by Herron, *et al* (1999), Julio and Yook (2012), Li, Li and Wang (2018), and Zhang, Zhou, and Ebbers (2011) as metals & mining, semiconductors, healthcare, telecommunications, transportation & infrastructure, pharmaceuticals, aerospace & defense, oil & gas, and banks & insurance. When acquisitions involve these industries, they are likely to face obstacles and resistance from the host government, negatively affecting the M&As' results. Therefore, a dummy variable was introduced, it was equal to 1 if the target company was in a sensitive industry and 0 otherwise.

Industry attributes: **Return on asset (ROA)** was constructed as the ratio of net income to assets in the year prior to the focal deal announcement, we mainly collected ROA data for Chinese acquirers from CSMAR database, ROA as an indicator may positively affect the acquisition outcome (Muehlfeld, Sahib & Witteloostuijn, 2012). **Leverage** was measured as the ratio of company total

debt to total assets in the year prior to the focal deal announcement.(Antoniou, Guney, & Paudyal , 2008; Lang, Ofek, & Stulz, 1996).

Acquisition experience was defined as the acquirer's attempts to acquire shares of the target company in the five years prior to the focal transaction. Thus, the acquirer's previous experience in attempting to acquire shares of the target company, whether unsuccessful or successful, was created as the value of 1, and 0 otherwise (Li, Xia & Lin, 2017; Li, Li & Wang, 2018).

3.3.4 Methodology

In statistics, probit models are a form of a statistical model that is used to predict the probability of an event occurring. Probit models are similar to logit models, but they are based on the probit function instead of the logistic function. The Probit model determines the likelihood that an item or event will fall into one of a range of categories by estimating the probability that observation with specific features will belong to a particular category. In the model of our second regression, the dependent variable is the likelihood of a cross-border M&A, a binary variable is measured the indicator as taking the value of 1 for cross-border M&As conducted by Chinese acquirers and 0 otherwise. Institutional ownership is measured as cumulative percentage shareholdings held by institutional investors in the acquiring firm at the year-end prior to the deal announcement; and

$$Logit\ (Probility_{i,t}) = \alpha + \beta_1 Institu - ownership_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \varepsilon_{i,t} \quad (1)$$

including control variables and fixed effect.

Logistic regression is employed to calculate the probability of a binary event occurring and to deal with problems of classification. To examine how institutional ownership can affect the likelihood of acquisition completion, we carry out the following logistic regressions (Li, Xia, & Lin, 2018; Bi & Wang, 2018), where acquisition completion is a binary variable that equals 1 if foreign acquirers complete a cross-border deal, and 0 otherwise; Institutional ownership is measured as cumulative percentage shareholdings held by institutional investors in the acquiring firm at the year-end prior to the deal announcement; and including control variables and fixed effect.

$$Logit\ (Success_{i,t}) = \alpha + \beta_1 Institu - ownership_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \varepsilon_{i,t} \quad (2)$$

3.4 Empirical Analysis Results

To test our hypotheses, we follow the analyses posited by Andriosopoulos and Yang (2015), Ferreira, Massa and Matos (2010), Li, Xia and Lin (2017), and use a fixed effects model to regress institutional ownership on the acquisition outcomes (i.e., cross-border acquisition probability and completion) and the interaction term between SOE acquirers and institutional ownership (moderator). Table 3.4 shows the results of probit models predicting the probability of cross-border acquisition. Model 1 is the baseline model that only includes control variables. Models 2 to 4 add the independent and moderating variables, i.e., SOE acquirer, foreign institutional ownership, and domestic institutional ownership to the baseline model, respectively. Models 5 to 6 are employed to examine the interaction effects for *Hypothesis 2a* and *Hypothesis 2b*. Model 7 represents the full model that includes all variables and interaction terms. Regarding the empirical analysis results presented in Model 1, there are several noteworthy control variables that remain consistent with previous literature (Ferreira, Massa & Matos, 2010; Hua, *et al*, 2016; Zhang & Wang, 2020). The stock payment and cross-industry acquisition increase the probability that a merger deal is cross-border, in contrast to the acquisition of a public company tends to reduce the probability of cross-border acquisition. The SOE acquirer variable is added in Model 2 to test *Hypothesis 1a*, the analysis results reveal that the coefficient estimate of SOE acquirer is significant and positive (coefficient = 0.630, $p < 0.01$), which is line with our *Hypothesis 1a* that *SOE* acquirers tend to follow the 'Go Global' policy initiated by the Chinese government and aggressively engage in cross-border M&As. Further, as reported in Models 3 to 4, we find that both foreign and domestic institutional ownership are positively associated with the intensity of cross-border M&A activity (coefficient = 0.129, $p <0.05$; coefficient = 0.023, $p < 0.01$). In terms of interaction terms, the results from Model 5 show that the estimated coefficient of interaction term of foreign institutional ownership and SOE acquirers is positive and not significant (coefficient = 0.292, $p > 0.1$). In contrast, the estimation results of Model 6 suggest a negative and significant coefficient for the interaction term of domestic institutional ownership and SOE acquirers (coefficient = -0.018, $p < 0.1$). However, because of the nonlinear nature of the probit model, the marginal effect of an interaction effect cannot be assessed simply by looking at the sign, magnitude, or statistical significance of the coefficients on the interaction term (Ai & Norton, 2003; Hoetker, 2007). With

this in mind, we also consider the interaction plots shown in Figures 3.1 and 3.2 to better understand the economic significance. Regarding Figure 3.1, despite the fact that coefficient on the interaction between foreign institutional ownership and SOE acquirers is not statistically significant, we still can learn from Figure 3.1 that the magnitude and statistical significance ranges widely, the strongest interaction effects take place at the probability of cross-border acquisition approximately 0.1 and 0.5, and the interaction effects remain positive until after the probability of cross-border acquisition is at 0.6, there are also many observations with negative interaction effects. In Figure 3.2, we find that almost the full interaction term is negative, except for a few observations with positive interaction effects when the likelihood of cross-border acquisition is around 0.1, while the strongest interaction effects occur at the likelihood of cross-border acquisition around 0.5 and 0.9. Thus *Hypothesis 2a and Hypothesis 2b* are confirmed.

Table 3.5 shows the results of logit models for cross-border acquisition completion. Consistent with the above estimation approach, we test Models 1 to 7. Model 1 in Table 3.5 shows that control variables such as stock acquisition method, acquiring public firms and a higher acquirer financial leverage tend to reduce the likelihood of acquisition completion. Conversely, acquisition experience and acquiring private firms make acquisition completion more likely. The empirical results of these noteworthy control variables are consistent to previous literature (Aguilera, *et al*, 2006; Dikova, Sahib, & Witteloostuijn, 2010; Li, Xia & Lin, 2017; Muehlfeld, Sahib, Witteloostuijn, 2012; Zhang, Zhou & Ebbers, 2011). In Model 2, as expected from previous studies (Li, Xia & Lin, 2017), we find that SOEs as acquirers often lead to legitimacy concerns from host-country governments, further negatively influencing their acquisition completion (coefficient=-0.583, $p < 0.05$), thus *Hypothesis 1b* is supported. In Models 3 to 4, the analysis results indicate that the presence of both foreign and domestic institutional ownership in acquirers positively contribute to the likelihood of acquisition completion (coefficient = 0.638, $p <0.01$; coefficient = 0.034, $p < 0.01$). Next, we analysis whether foreign or domestic institutional ownership in SOE acquirers can moderate the negative effect of legitimacy concerns on the likelihood of acquisition completion, which we expect with *Hypothesis 3a.*

Through empirical analyses in Models 5 and 6, we find that the interaction term between foreign institutional ownership and SOE acquirers has a significant and positive coefficient (coefficient = 1.164, $p < 0.05$). By contrast, the interaction term between domestic institutional ownership and

Table 3.4: Results of probit models predicting the probability of cross-border acquisition.

Probit regression

Possibility	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**
Deal Attribute							
Friendly attitude	0.732*** (0.142)	0.950*** (0.150)	0.977*** (0.152)	1.007*** (0.152)	0.979*** (0.153)	0.996*** (0.152)	1.015*** (0.155)
Deal value	-0.023 (0.019)	-0.036* (0.019)	-0.040** (0.020)	-0.040** (0.020)	-0.040** (0.021)	-0.038** (0.020)	-0.041** (0.020)
Stock payment	2.038*** (0.105)	2.127*** (0.107)	2.182*** (0.109)	2.143*** (0.108)	2.190*** (0.110)	2.139*** (0.108)	2.199*** (0.111)
Target Attribute							
Public status	-0.727*** (0.109)	-0.583*** (0.113)	-0.636*** (0.114)	-0.613*** (0.114)	-0.622*** (0.115)	-0.604*** (0.115)	-0.632*** (0.116)
Private status	1.678*** (0.094)	1.662*** (0.096)	1.733*** (0.098)	1.672*** (0.096)	1.740*** (0.098)	1.661*** (0.097)	1.735*** (0.099)
Industry Attribute							
Cross industry	0.263*** (0.080)	0.278*** (0.081)	0.315*** (0.082)	0.299*** (0.081)	0.315*** (0.082)	0.300*** (0.082)	0.336*** (0.083)
Politically Sensitive industry	0.051 (0.128)	0.027 (0.131)	0.001 (0.132)	0.043 (0.132)	0.014 (0.133)	0.046 (0.132)	0.032 (0.134)
Acquiror Attribute							
ROA	-0.648 (0.502)	-0.692 (0.498)	-0.712 (0.504)	-0.809 (0.504)	-0.684 (0.504)	-0.817 (0.505)	-0.774 (0.510)
Leverage	-0.043 (0.039)	-0.057 (0.052)	-0.058 (0.054)	-0.062 (0.063)	-0.057 (0.052)	-0.064 (0.068)	-0.063 (0.065)
Experience	0.617*** (0.140)	0.667*** (0.143)	0.659*** (0.145)	0.729*** (0.144)	0.660*** (0.145)	0.721*** (0.144)	0.707*** (0.147)
SOE acquirer		0.630*** (0.110)	0.661*** (0.112)	0.643*** (0.111)	0.614*** (0.116)	0.766*** (0.129)	0.788*** (0.135)
Foreign institutional ownership			0.129** (0.061)		0.048 (0.081)		0.006 (0.082)
Domestic institutional ownership				0.023*** (0.005)		0.029*** (0.006)	0.028*** (0.006)
SOE acquirer × Foreign institutional ownership					0.292 (0.186)		0.315 (0.183)
SOE acquirer× Domestic institutional ownership						-0.018* (0.010)	-0.024** (0.011)
Constant	0.069 (0.918)	0.053 (0.920)	0.090 (0.931)	0.020 (0.918)	0.082 (0.928)	0.011 (0.922)	0.037 (0.932)
Year FE	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y
Number of observations	2,163	2,163	2,163	2,163	2,163	2,163	2,163
Pseudo r-squared	0.448	0.459	0.472	0.466	0.473	0.467	0.480

(*Note:* N =2163. This table reports the estimate of a probit model of the likelihood of engaging in a cross-border M&A where the dependent variable is a dummy variable that equals one if the M&A deal is cross-border. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

Table 3.5: Results of logit models predicting acquisition completion.

Logistic regression

Completion	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Deal Attribute							
Friendly attitude	0.331 (0.414)	0.229 (0.417)	0.182 (0.418)	0.276 (0.420)	0.180 (0.419)	0.275 (0.423)	0.220 (0.422)
Deal value	0.052 (0.039)	0.058 (0.040)	0.053 (0.040)	0.066* (0.040)	0.058 (0.040)	0.065 (0.040)	0.062 (0.040)
Stock payment	-0.949*** (0.233)	-1.070*** (0.243)	-1.153*** (0.251)	-1.082*** (0.245)	--1.185*** (0.258)	-1.084*** (0.245)	-1.185*** (0.259)
Target Attribute							
Public status	-0.547** (0.248)	-0.579** (0.250)	-0.611** (0.253)	-0.552** (0.251)	-0.642** (0.255)	-0.553** (0.252)	-0.622** (0.256)
Private status	0.600** (0.287)	0.668*** (0.241)	0.730*** (0.248)	0.693*** (0.243)	0.767*** (0.253)	0.693*** (0.243)	0.780*** (0.256)
Industry Attribute							
Cross industry	-0.108 (0.174)	-0.117 (0.174)	-0.075 (0.177)	-0.091 (0.176)	-0.065 (0.178)	-0.090 (0.176)	-0.052 (0.179)
Politically sensitive industry	-0.710** (0.287)	-0.691** (0.289)	-0.637** (0.293)	-0.635** (0.292)	-0.616** (0.295)	-0.639** (0.293)	-0.586** (0.297)
Acquiror Attribute							
ROA	1.548 (1.277)	1.568 (1.275)	1.150 (1.282)	1.486 (1.282)	1.339 (1.286)	1.552 (1.282)	1.358 (1.290)
Leverage	-0.917** (0.389)	-0.768* (0.394)	-0.910** (0.400)	-0.903** (0.400)	-0.912** (0.401)	-0.882** (0.401)	-0.989** (0.405)
Experience	2.742*** (0.624)	2.716*** (0.627)	2.736*** (0.629)	2.671*** (0.626)	2.735*** (0.629)	2.659*** (0.625)	2.679*** (0.629)
SOE acquirer		-0.583** (0.244)	-0.635** (0.245)	-0.534** (0.246)	-0.758*** (0.252)	-0.706** (0.297)	-0.846*** (0.302)
Foreign institutional ownership			0.638*** (0.202)		0.388* (0.200)		0.334* (0.201)
Domestic institutional ownership				0.034*** (0.011)		0.025* (0.014)	0.020 (0.014)
SOE acquirer × Foreign institutional ownership					1.164** (0.579)		1.105* (0.586)
SOE acquirer× Domestic institutional ownership						0.025 (0.024)	0.020 (0.025)
Constant	0.421 (0.630)	0.393 (0.631)	0.490 (0.633)	0.197 (0.638)	0.502 (0.632)	0.217 (0.638)	0.360 (0.639)
Year FE	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y
Number of observations	865	865	865	865	865	865	865
Pseudo r-squared	0.136	0.141	0.157	0.149	0.161	0.150	0.166

(*Note:* N =865. This table reports the estimate of a logit model of the likelihood of success of a cross-border deal where the dependent variable is a dummy variable that equals one if a cross-border M&A bid is successful (or completed). Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

SOE acquirers is not statistically significant (coefficient = 0.025, $p > 0.1$). This means that domestic institutional ownership in SOE acquirers does not play a moderating role on legitimacy concerns in acquisition completion. Again, to better evaluate the interaction terms, it is crucial that we are not limited by their sign, magnitude, or the statistical significance of the coefficients, thus we additionally plot the predictions of the marginal effects of the interaction terms shown in Figures 3.3 and 3.4. Figure 3.3 represents the interaction effect between foreign institutional ownership and SOE acquirer as a function of predicted the likelihood of acquisition completion. We learn that the interaction effect is mostly significant when the predicted probability is around 0.5 and 0.8, while half of the interaction effect is positive and the other half is negative when the predicted probability is close to 1.0. This implies that SOE acquirers with foreign institutional ownership create the strongest interaction effects in the predicted probability of acquisition completion around 0.5 and 0.8, while the effects are less explicit for the predicted probability of acquisition completion around 1.0. Despite this, the overall interaction effects remain positive and the main terms are highly statistically significant in Figure 3.3. Furthermore, according to Figure 3.4, the magnitude and statistical significance of interaction effects between domestic institutional ownership and SOE acquirers ranges widely. The strongest interaction effects occur at the predicted probability of acquisition completion around 0.7. Moreover, and the interaction effects are all negative on the left side of the the predicted probability of 0.3 and on the right side of 0.9, while the interaction effects remain positive for all the predicted probability of 0.4 to 0.9. Although there is a lack of statistical significance of the coefficient on this interaction term, we still observe that the interaction effect is large and statistically significant for some observations. The empirical outcomes are consistent with our assumption that foreign institutional ownership as a moderator can help SOE acquirers to alleviate the adverse effects of legitimacy concerns on their acquisition outcome, while domestic institutional ownership does not have a corresponding moderating role. These findings confirm *Hypothesis 3a and Hypothesis 3b.*

Table 3.6 further shows the results of logit models predicting the likelihood of cross-border acquisition completion through adding four acquisition behaviours. Model 1 is the baseline model that includes independent and control variables. Model 2 adds the main effect to the baseline model. Models 3-8 are employed to examine the two-way interaction effects. Models 9-16 are represented to test the three-way interaction effects. In model 1, this chapter finds that the greater the deal value,

the more it can facilitate Chinese acquirers to complete cross-border acquisition transactions (coefficient= 0.206, p= 0.005). Previous literature also supports the result that a large-sized deal has a substantial boost in target shareholder value. Thus, these company shareholders are prone to back such large deals. At the same time, the stock payment method used by Chinese acquirers making an acquisition less likely to be completed (coefficient= -0.975, p= 0.000), which is consistent with previous research (Faccio & Masulis, 2000; Yang *et al*, 2019; Liu & Lu, 2007). Both the acquisition of foreign public companies and private companies are positively related to the likelihood of acquisition completion, which means that regardless of whether the target company is a public company or a private company, it tends to effectively promote the completion of the acquisition transaction (public target and private target, coefficient= 0.703 and 0.735, p= 0.003 and 0.001, respectively).

In addition, Chinese acquirers with high financial leverage or target companies with acquisitions in sensitive industries are prone to lower M&A completion rates (coefficient= -0.863 and -0.653, *p*= 0.015 and 0.000, respectively). Similarly, Chinese acquirers tend to face greater challenges in completing acquisitions of large target companies or making cross-industry acquisitions. Meyer and Thein (2014) further explain that large target companies or cross-industry acquisition is often considered a 'high profile' strategy that can attract the attention of the public or host government agencies and adversely affect the completion of cross-border acquisitions (Target size and cross industry acquisition, coefficient= -0.160 and -0.281, *p*= 0.027 and 0.058, respectively). Conversely, if the Chinese acquirer has acquisition experience with the target firm, this significantly facilitates the acquisition completion (coefficient= 2.561, *p*= 0.000), the result supported by previous literature (Li, Xia & Lin, 2017; Li, Li & Wang, 2018).

Hypothesis 4 suggests that cross-industry acquisition behaviour may worsen the negative relationship between SOEs and cross-border M&A completion. This chapter applies a two-way interaction term regression to examine how the cross-industry acquisition variable affects the relationship between SOE acquirers and cross-border M&A completion. In Model 3, the interaction coefficient of SOE acquirer and cross-industry acquisition is significant and negative (coefficient= -0.871 and p= 0.006). Therefore, the regression outcome is consistent with Hypothesis 4, and means that cross-industry acquisition behaviour intends to raise the legitimacy concerns and enhances the negative relationship between the SOE acquirer and likelihood of acquisition completion.

Hypothesis 5 argues that stock-payment acquisition behaviour may exacerbate the negative impact of SOE acquirers on the likelihood of acquisition completion. In Model 4, the interaction coefficient between stock-payment acquisition and SOE acquirers is negative and significant (coefficient= -0.939, p= 0.041) in Table 3.6, supporting Hypothesis 5.

Hypothesis 6 indicates that financial leverage may deteriorate the negative relationship between the SOE and the completion of cross-border M&As. In model 4 of table 3.6, the interaction coefficient estimate of two-way interaction between financial leverage and SOE acquirer is insignificant (Coefficient= 0.461, and p= 0.527). Thus Hypothesis 6 is not supported.

Hypothesis 7 suggests that private target status may exacerbate the negative impact of SOE acquirers on the likelihood of acquisition completion. In Model 4 of Table 3.6, the estimated coefficient of two-way interaction between private target status and SOE acquirers is negative and significant (coefficient= -0.160, p= 0.012), supporting Hypothesis 7.

In the next stage, from Model 9 to Model 16, we intend to include institutional investors' main moderating variable. Using a three-way interaction term, the institutional investor variable is added to the previous two-way interaction term to test whether institutional investors as shareholders of SOE acquirers can mitigate the negative impact of some of the above acquisitions on the relationship between SOE acquirers and the likelihood of acquisition completion. I also divide institutional investors into qualified foreign institutional investors (QFIIs) and domestic institutional investors and test whether these investors affect cross-border M&A and acquisition completion for SOE acquirers.

Hypothesis 4(a) and Hypothesis 4(b) predict that qualified foreign institutional investors (QFIIs) or domestic institutional investors as ownership in SOE acquirers may mitigate the negative impact of these firms' cross-industry acquisitions on acquisition completion. In Model 9 of Table 3.6, the estimated coefficient on the two-way interaction between cross-industry acquisitions and SOE acquirers is negative and significant (coefficient= -1.016, p= 0.002). In contrast, the estimated coefficient on the three-way interaction term between foreign institutional ownership, cross-industry acquisitions and SOE acquirers is positive and significant (coefficient= 2.098, p= 0. 050). The above regression results suggest that cross-industry acquisitions reduce the likelihood of completing acquisitions by SOE acquirers. However, when foreign institutional ownership is proportionally present among SOE acquirers, it helps these firms to overcome the legitimacy

concerns barriers posed by cross-industry acquisitions, thus effectively enabling them to increase the likelihood of completing acquisitions, supporting hypothesis 4(a).

However, with respect to Hypothesis 4(b), in Model 13 in Table 3.6, the regression results show that the impact of domestic institutional investors is not the same as that of QFIIs, whether it is a two-way interaction between cross-industry acquisitions and SOE acquirers, or a three-way interaction between domestic institutional ownership, cross-industry acquisitions and SOE acquirers, the coefficient estimates are not significant (coefficient= -0.448, p= 0.229. The coefficient is -0.074 and the p-value is 0.136), and therefore hypothesis 4 (b) is not supported.

Hypothesis 5(a) and Hypothesis 5(b) suggest that qualified foreign institutional investors (QFIIs) or domestic institutional investors (DIIs) as ownership in SOE acquirers may mitigate the negative impact of stock-payment acquisitions of these firms on acquisition completion. In Model 10 of Table 3.6, the coefficient estimate of the interaction term between stock payment acquisition and SOE acquirer is -1.499 with a p-value of 0.006, and the coefficient estimate of the three-way interaction term between foreign institutional ownership, SOE acquirer and stock-payment acquisition is positive and significant (coefficient= 3.048, p= 0.041).

In Model 14 of Table 3.6, the regression results compared to QFIIs show that domestic institutional investors are also not as effective as QFIIs, the coefficient estimate of the two-way interaction term between stock-payment acquisition and domestic institutional ownership is significant (coefficient= -1.338, p-value= 0.022), and a three-way interaction between domestic institutional ownership, SOE acquirer and stock-payment acquisition is non-significant (coefficient= 0.062, p-value= 0.253). These results provide evidence that domestic institutional ownership in SOE acquirers cannot help overcome the legitimacy concerns associated with stock-payment acquisitions in the same way that qualified foreign institutional ownership do, and therefore are not effective in assisting SOE acquirers to increase the likelihood of acquisition completion.

Hypothesis 5(a) and Hypothesis 5(b) suggest that qualified foreign institutional investors (QFIIs) or domestic institutional investors (DIIs) as ownership in SOE acquirers may mitigate the negative.Hypothesis 6(a) and Hypothesis 6(b) suggest that qualified foreign institutional investors (QFIIs) or domestic institutional investors (DIIs) as ownership in SOE acquirers can mitigate the negative impact of these high-leveraged acquirers on acquisition completion. In Model 11 of Table 3.6, the estimated coefficient of the relationship between SOE acquirers and financial leverage is

Table 3.6: Results of logit models predicting acquisition completion.

Completion	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
Deal Attribute																
Deal value	0.206*** (0.005)	0.203*** (0.006)	0.200*** (0.008)	0.204*** (0.006)	0.198*** (0.008)	0.203*** (0.007)	0.209*** (0.005)	0.201*** (0.012)	0.196*** (0.009)	0.201*** (0.007)	0.207*** (0.006)	0.175** (0.020)	0.200*** (0.008)	0.201*** (0.007)	0.217*** （0.004）	0.200*** (0008)
Friendly attitude	-0.423 （0.281）	-0.378 （0.348）	-0.348 (0.375)	-0.368 （0.348）	-0.446 (0.262）	-0.409 (0.300)	-0.358 (0.361)	-0.416 (0.293)	-0.436 (0.274)	-0396 (0.318)	-0.305 (0.436)	-0.361 (0.363)	-0.513 (0.206)	-0.403 (0.309)	-0.335 (0.394)	-0.455 (0.255)
Stock payment	-0.975*** (0.000)	-1.124*** (0.000)	-1.128*** (0.000)	-1.123*** (0.000)	-1.148*** （0.000）	-0.714** (0.022)	-1.130*** (0.000)	-1.727*** (0.000)	-1.126*** (0.000)	-0.722** (0.024)	-1.112*** (0.000)	-1.824*** (0.000)	-1.112*** (0.000)	-0.515 (0.150)	-1.138*** (0.000)	-1.731*** (0.000)
Target Attribute																
Public target status	0.703*** (0.003)	0.720*** (0.002)	0.732*** (0.002)	0.720*** (0.002)	0.673*** (0.005)	0.723*** (0.002)	0.722*** (0.002)	0.706*** (0.003)	0.667** (0.005)	0.711*** (0.003)	0.715*** (0.000)	0.668*** (0.005)	0.724*** (0.003)	0.726*** (0.002)	0.753*** (0.001)	0.712*** (0.003)
Private target status	0.735*** (0.001)	0.831*** (0.000)	0.820*** (0.001)	0.831*** (0.000)	0.864*** (0.000)	0.576** (0.030)	0.830*** (0.000)	1.624*** (0.000)	0.828*** (0.001)	0.583** (0.034)	0.790*** (0.001)	1.711*** (0.000)	0.847*** (0.000)	0.579** (0.029)	0.841*** (0.000)	1.820*** (0.000)
Target size	-0.160** (0.027)	-0.143* (0.052)	-0.139* (0.060)	-0.143* (0.052)	-0.136* (0.065)	-0.133* (0.070)	-0.147** (0.047)	0.131* (0.075)	-0.132* (0.075)	-0.128* (0.083)	-0.149** (0.045)	-0.110* (0.153)	-0.140* (0.059)	-0.131* (0.074)	-0.153* (0.04)	-0.132* (0.074)
Industry Attribute																
Cross industry	-0.281* (0.058)	-0.284* (0.056)	-0.276* (0.064)	-0.283* (0.056)	-0.001 (0.995)	-0.268* (0.072)	-0.274* (0.066)	-0.259* (0.082)	0.0163 (0.929)	-0.253* (0.091)	-0.254* (0.091)	0.253* (0.094)	-0.016 (0.949)	-0.261* (0.081)	-0.257* (0.086)	-0.246 (0.101)
Sensitive industry	-0.653*** (0.000)	-0.619*** (0.000)	-0.630*** (0.000)	-0.619*** (0.000)	-0.605*** (0.001)	-0.621*** (0.000)	-0.608*** (0.001)	-0.610*** (0.001)	-0.614*** (0.001)	-0.650*** (0.000)	-0.602*** (0.001)	-0.617*** (0.001)	-0.637*** (0.000)	-0.627*** (0.000)	-0.628*** (0.000)	-0.630*** (0.000)
Acquirer Attribute																
ROA	1.463 (0.217)	1.538 (0.192)	1.740 (0.141)	1.532 (0.194）	1.556 (0.185)	1.447 (0.217)	1.570 (0.183)	1.522 (0.199)	1.723 (0.145)	1.699 (0.150)	1.812 (0.127)	1.845 (0.124)	1.556 (0.187)	1.455 (0.215)	1.542 (0.193)	1.506 (0.205)
Leverage	-0.863** (0.015)	-0.636* (0.086)	-0.611 (0.100)	-0.638* （0.086）	-0.728* (0.051)	-0.626* (0.092)	-0.814 (0.081)	-0.604 (0.105)	-0.696* (0.064)	-0.610 (0.103)	-0.729 (0.120)	-0.570 (0.130)	-0.690* (0.066)	-0.636* (0.088)	-0.194 (0.751)	-0.617* (0.098)
Experience	2.717*** (0.000)	2.708*** (0.000)	2.709*** (0.000)	2.709 (0.000)	2.728*** (0.000)	2.713*** (0.000)	2.709*** (0.000)	2.711*** (0.000)	2.753*** (0.000)	2.710*** (0.000)	2.722*** (0.000)	2.614*** (0.000)	2.741*** (0.000)	2.724*** (0.000)	2.736*** (0.000)	2.706*** (0.000)
Foreign institutional ownership	0.550*** (0.003)	0.586*** (0.002)	0.286 (0.165)	0.587*** (0.002)	0.568*** (0.003)	0.625*** (0.002)	0.588*** (0.002)	0.635*** (0.002)	0.469 (0.135)	0.334 (0.355)	0.793 (0.223)	0.325 (0.369)	0.539*** (0.005)	0.608*** (0.002)	0.615*** (0.002)	0.637*** (0.002)
Domestic institutional ownership	0.021* (0.057)	0.019* (0.078)	0.019* (0.075)	0.020 (0.137)	0.021* (0.059)	0.019* (0.075)	0.020* (0.073)	0.020* (0.073)	0.022** (0.041)	0.019* (0.074)	0.021* (0.058)	0.024** (0.044)	0.228 (0.271)	0.035* (0.067)	0.065** (0.043)	0.034* (0.073)
SOE acquirer		-0.406** (0.022)	-0.501*** (0.006)	-0.391* (0.083)	0.089 (0.724)	-0.167 (0.430)	-0.634 (0.115)	-0.110 (0.602)	0.069 (0.792)	-0.214 (0.350)	-0.850** (0.042)	-0.107 (0.618)	-0.152 (0.654)	-0.027 (0.920)	-0.510 (0.321)	0.061 (0.826)
SOE acquirer × QFIIs			0.904** (0.045)						0.148 (0.758)	0.420 (0.445)	3.346* (0.062)	0.184 (0.679)				
SOE acquirer × Domestic institutional investor				-0.002 (0.919)									0.047 (0.239)	-0.022 (0.433)	-0.019 (0.752)	-0.027 (0.366)
SOE acquirer × Cross industry					-0.871*** (0.006)				-1.016*** (0.002)				-0.448 (0.229)			
SOE acquirer × Stock payment						-0.939** (0.041)				-1.499*** (0.006)				-1.338** (0.022)		
SOE acquirer × Leverage							0.461 (0.527)				0.649 (0.385)				0.091 (0.923)	
SOE acquirer × Private status target								-1.160** (0.012)				-1.803*** (0.001)				-1.571*** (0.005)
Foreign institutional ownership × Cross industry									-0.349 (0.404)							
Foreign institutional ownership × SOE acquirer ×Cross industry									2.098* (0.05)							
Foreign institutional ownership × Stock payment										-0.078 (0.857)						
Foreign institutional ownership × SOE acquirer ×Stock payment										3.048** (0.041)						
Foreign institutional ownership × Leverage											-1.031 (0.398)					
Foreign institutional ownership × SOE ×Leverage											-3.750 (0.153)					
Foreign institutional ownership × Private status target												-0.079 (0.855)				
Foreign institutional ownership× SOE × Private status target												9.241** (0.030)				
Domestic institutional ownership × Cross industry													-0.003 (0.911)			
Domestic institutional ownership × SOE × Cross industry													-0.074 (0.136)			
Domestic institutional ownership × Stock payment														-0.031 (0.249)		
Domestic institutional ownership × SOE × stock payment														0.062 (0.253)		
Domestic institutional ownership × Leverage															-0.105 (0.121)	
Domestic institutional ownership × SOE × Leverage															0.056 (0.614)	
Domestic institutional ownership × Private target																-0.030 (0.270)
Domestic institutional ownership × SOE × Private target																0.065 (0.176)
Constant	1.203 (0.115)	1.018 (0.186)	1.100 (0.154)	1.014 (0.188)	0.800 (0.302)	0.753 (0.334)	1.068 (0.167)	0.702 (0.368)	0.896 (0.251)	0.781 (0.320)	1.204 (0.123)	0.805 (0.306)	0.862 (0.276)	0.654 (0.405)	0.853 (0.280)	0.660 (0.401)
Number of observations	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mean dependent var	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
Pseudo r-squared	0.104	0.108	0.112	0.108	0.121	0.112	0.108	0.114	0.122	0.122	0.116	0.137	0.118	0.113	0.115	0.116
SD dependent var	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500

(*Note:* N =890. This table reports the estimate of a logit model of the likelihood of success of a cross-border deal where the dependent variable is a dummy variable that equals one if a cross-border M&A bid is successful (or completed). Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

not significant (coefficient of 0.649, p-value 0.385), nor is the three-way interaction between foreign institutional ownership, SOE acquirers and financial leverage (coefficient= -3.750, p= 0. 153). In Model 11 of Table 3.6, the estimated coefficient of the relationship between SOE acquirers and financial leverage is not significant (coefficient= 0.649, p= 0.385), nor is the three-way interaction between domestic institutional ownership, SOE acquirers and financial leverage (coefficient= -3.750, p= 0.153). Comparatively, in the case of highly leveraged acquisitions, domestic institutional investors are less effective than QFIIs in helping SOE acquirers overcome the negative impact of high leverage on acquisition completion.

Hypothesis 7(a) and Hypothesis 7(b) suggest that qualified foreign Institutional Investors (QFIIs) or Domestic Institutional Investors (DIIs) as ownership in SOE acquirers may mitigate the negative impact of targeting private firms on acquisition completion. In Model 12 of Table 3.6, the estimated coefficient on the relationship between SOE acquirers and private target status is -1.803, p=0.001, and the association between foreign institutional ownership, SOE acquirers, and private target status is 9.241, p=0.030. While domestic institutional ownership in SOE acquirers is unable to mitigate the negative impact of acquiring private targets on SOE acquirers' acquisition completion, the coefficient estimates for the two-way interaction between SOE acquirers and private target status, and the three-way interaction between domestic institutional ownership, SOE acquirers and private target status are negative and insignificant (coefficient= -1.571, p= 0.005 and coefficient= 0.065, p= 0.176) therefore, hypothesis 10(a) is supported, but hypothesis 10(b) is not.

Table 3.7 presents the logit model results for predicting the likelihood of a cross-border acquisition. Model 1 in Table 3.7 is the baseline model and includes only the control variables. From Model 1，we find that when Chinese acquirers make cross-border acquisitions, they are more likely to choose cross-industry acquisitions and to use stock payments. Regarding target attribute variables, Chinese acquirers are also less willing to acquire private and public companies from overseas than other types of companies. Also, acquirers from China are more likely to acquire in the domestic market when they have acquisition experience and in the face of a friendly attitude from the target firm, while Chinese acquirers are less willing to acquire private companies and public companies from overseas compared to other types of companies.

In Model 2 of Table 3.7, which examines the SOE acquirer variable, the coefficient estimate between SOE acquirers and the likelihood of cross-border M&A is significant and positive

(coefficient= 1.425, p= 0.000), suggesting that Chinese SOE acquirers are more likely to choose cross-border M&A than domestic M&A transactions. In Models 3 and 4 of Table 3.7, we form two-way interaction terms between foreign institutional ownership, domestic institutional ownership and SOE acquirers, respectively, to test Hypothesis 8(a) and Hypothesis 8(b) - Whether there is a positive relationship between foreign institutional ownership and the likelihood of cross-border M&A by SOEs. Hypothesis 8(a) predicts that foreign institutional ownership positively influences the decisions of SOE acquirers in the same way that their firms in other countries behave, promoting the likelihood of cross-border M&As by SOEs.

In In Model 3 of Table 3.7, we find a coefficient estimate of 0.351 and a p-value of 0.255 between foreign institutional ownership and SOE acquirers, suggesting that foreign institutional ownership cannot play a key role in influencing the strategic decisions of Chinese SOE acquirers and therefore Hypothesis 8(a) is not supported. Comparatively, in Model 4 of Table 3.7, the coefficient estimate between domestic institutional ownership and SOE acquirers is negative and significant (coefficient= -0.040, p= 0.015), and the regression outcome shows that domestic institutional ownership can influence the strategic decisions of SOE acquirers. Based on their preferences, it is clear that domestic institutional investors prefer to require the companies they invest in to engage in domestic M&A rather than high-risk cross-border M&As.According to Table 3.7, the regression findings provide several significant contributions. First, we find that Chinese SOE acquirers are extraordinarily active and willing to engage in cross-border M&A transactions, rather than searching for target firms in the domestic market. There are several explanations for this: (1) SOEs differ from other firms. According to resource dependency theory, they depend heavily on government-provided resources, while they must accept government-provided intervention in corporate strategic decisions. The 'Go abroad' policy, an effort initiated by the Chinese government in 1999, has dramatically encouraged domestic firms to undertake mergers and acquisitions overseas, thereby gaining access to advanced foreign technology, management experience and distribution networks, and is considered an essential means of improving a firm's international competitiveness (Zhang, Zhou and Ebbers, 2011). On the other hand, SOEs with a political background usually have a monopoly in their industries and present a monopoly position. Compared to international markets, there is limited market space and room for growth, so aggressive overseas M&A can expand a company's market and increase its global visibility. (2)

Table 3.7: Results of logit models predicting cross-border acquisition probability

Logistic regression	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Deal Attribute				
Deal value	-0.003 (0.950)	0.002 (0.965)	0.001 (0.990)	0.007 (0.889)
Attitude	-1.145*** (0.000)	-1.622*** (0.000)	-1.625*** (0.000)	-1.608*** (0.000)
Stock payment	3.510*** (0.000)	3.703*** (0.000)	3.713*** (0.000)	3.712*** (0.000)
Target Attribute				
Public status	-0.882*** (0.000)	-0.612*** (0.001)	-0.603*** (0.001)	-0.603*** (0.001)
Private status	-3.154*** (0.000)	-2.991*** (0.000)	-3.002*** (0.000)	-3.000*** (0.000)
Target size	-0.031 (0.530)	-0.095* (0.067)	-0.094* (0.070)	-0.096* (0.062)
Industry Attribute				
Cross industry	0.589*** (0.000)	0.578*** (0.000)	0.582*** (0.000)	0.589*** (0.000)
Sensitive industry	0.068 (0.604)	-0.095 (0.487)	-0.091 (0.507)	-0.103 (0.452)
Acquirer Attribute				
ROA	-0.917 (0.240)	-0.666 (0.412)	-0.621 (0.445)	-0.665 (0.415)
Leverage	-0.040 (0.411)	0.064 (0.321)	0.063 (0.320)	0.065 (0.330)
Experience	-0.932*** (0.000)	-1.074*** (0.000)	-1.067*** (0.000)	-1.062*** (0.000)
Foreign institutional ownership	-0.213** (0.012)	-0.169* (0.057)	-0.442 (0.748)	-0.166* (0.063)
Domestic institutional ownership	0.009 (0.224）	0.009 (0.250)	0.009 (0.237)	0.021** (0.019)
SOE acquirer		1.425*** (0.000)	1.378*** (0.000)	1.685*** (0.000)
SOE acquirer × QFIIs			0.351 (0.255)	
SOE acquirer × Domestic institutional investor				-0.040** (0.015)
Constant	0.731 (0.000)	0.567 (0.003)	0.573 (0.003)	0.476 (0.014)
Number of observations	2194	2194	2194	2194
Year FE	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y
Mean dependent var	0.406	0.408	0.408	0.408
Pseudo r-squared	0.347	0.378	0.379	0.380
SD dependent var	0.491	0.491	0.491	0.491

(*Note:* N =2,194. This table reports the estimate of a logit model of the likelihood of engaging in a cross-border M&A where the dependent variable is a dummy variable that equals one if the M&A deal is cross-border. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

On the other hand, SOEs with a political background usually have a monopoly in their industries (2)

With China's rapid economic development, there is an increasing demand for natural energy and high technology, so the government will likely use SOEs to help them access these important resources. As a government asset, SOEs are unlikely to refuse government requests and are more likely to respond positively to national policy and engage in cross-border M&A, even if cross-border M&A carries many risks or is not in the company's development interests. (3) In line with this strategy, the Chinese government provides many supports for such firms, such as VAT and preferential financing (Xiao & Sun, 2005). In particular, most of the incentives granted by the government are for SOEs (Schweizer, Walker, and Zhang, 2019). Thus Chinese SOE acquirers are more likely than other types of firms to engage in cross-border M&As. Furthermore, we fail to find empirical evidence from the estimation to support the prediction of Hypothesis 11(a) that foreign institutional ownership in SOE acquirers may facilitate the relationship between SOEs and the likelihood of cross-border M&A. One possible reason for this unexpected result is that the overall shareholding of foreign institutions is very low in SOEs due to the restrictions imposed by the Chinese government on QFIIs investment quotas, which results in the total foreign institutional ownership not exceeding 30% even if the shareholding of foreign institutions is further increased, resulting in the voice remaining very low compared to that of state-owned shares and the shareholding of domestic institutions. Conversely, we find that domestic institutional ownership can influence SOE acquirers' strategic decisions, but they prefer to undertake M&A in the domestic market. Several reasons explain this result: (1) domestic institutional investors are not restricted by the government in terms of their shareholding and investment size. As a result, they can usually hold a large percentage of shares in SOEs and are, therefore, able to have a voice in the company's M&A decisions. (2) Domestic institutional investors' preferences for M&A in the domestic market are risk-averse. This is because SOEs in which they invest have a strong monopoly position and high returns in the domestic market due to strong government support. As a result, such institutional investors prefer to enjoy this low-risk, high-return status. For cross-border M&A, these transactions are risky and inexperienced compared to domestic M&A, so domestic institutional investors are reluctant for the SOEs they invest in to be involved in cross-border M&As.

3.5 Robustness and Further Analysis

The purpose of this section is to address the endogeneity concerns in our empirical study with the following approaches: (i) We use year, industry fixed effect in the two main research questions we studied, the probability of cross-border acquisition and the likelihood of acquisition completion to solve the omitted variable issue. (ii) We use a two-stage least squares (2SLS) estimation that gives an exogenous variation in institutional ownership (not directly related to M&As) and a regression in changes to address the potential endogeneity bias, specifically that institutional ownership tends to be an endogenous decision linked to other company characteristics that may affect acquisition outcomes. This practice may raise the omitted variable bias (Bi & Wang, 2018; Fich, Trana, & Walklinga, 2013).The results are reported in Tables 3.4, 3.5, 3.6, and 3.7 show that our critical variables and interaction terms remain significant when fixed effects are included in our empirical

Figure 3.1: Interaction effect (SOE acquirer x foreign institutional ownership) as a function of predicted the probability of cross-border acquisition.

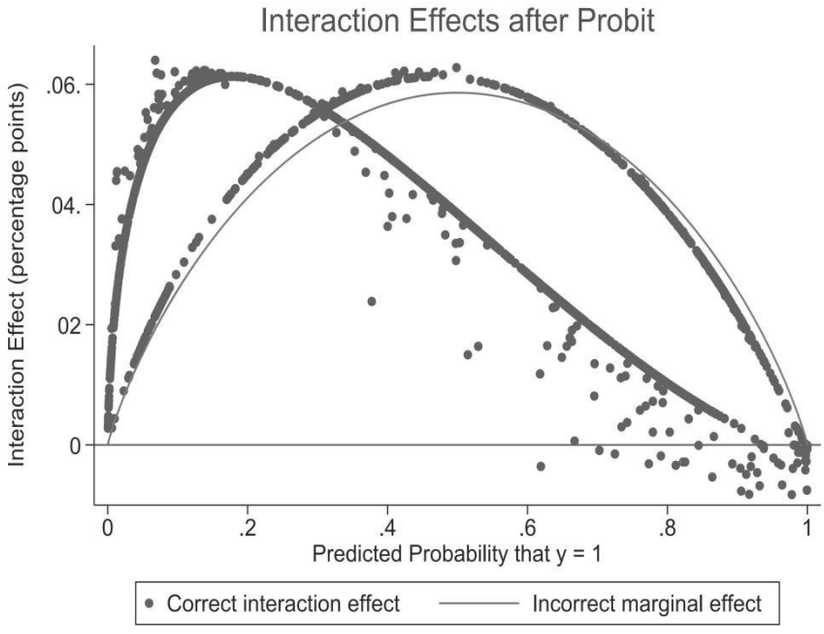


Figure 3.2: Interaction effect (SOE acquirer x domestic institutional ownership) as a function of predicted the probability of cross-border acquisition.

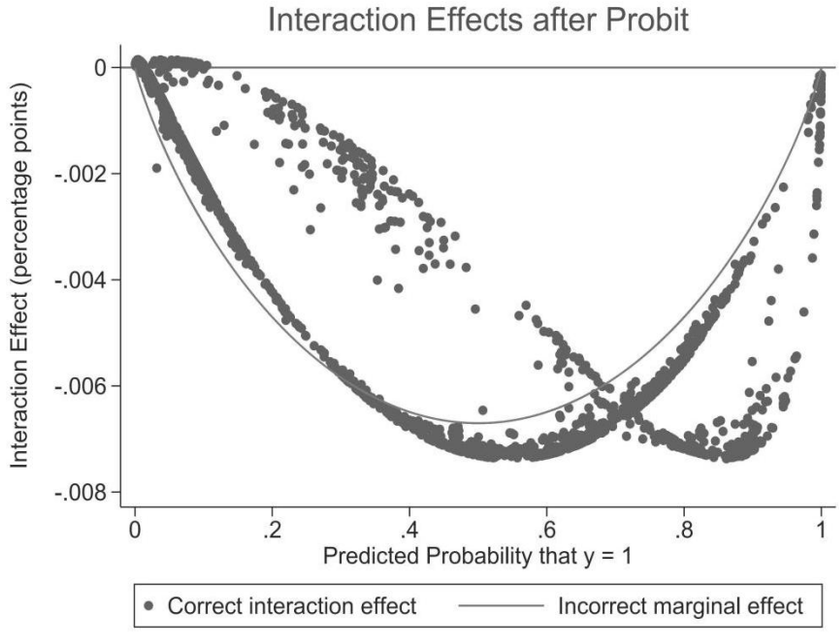


Figure 3.3: Interaction effect (SOE acquirer x foreign institutional ownership) as a function of predicted the likelihood of cross-border acquisition completion.

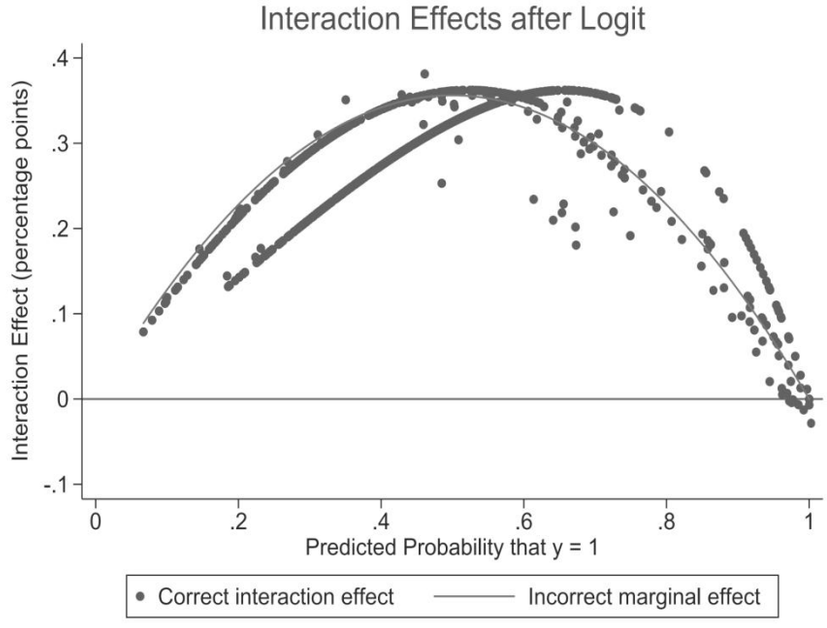
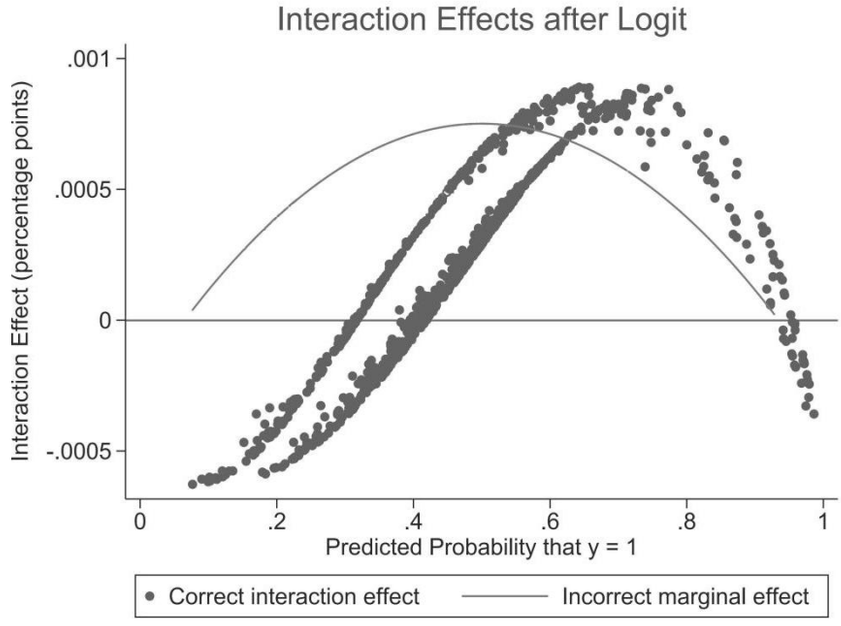


Figure 3.4: Interaction effect (SOE acquirer x domestic institutional ownership) as a function of predicted the likelihood of cross-border acquisition completion.



analyses. Moreover, we further address omitted variables and reverse causality issues simultaneously by the instrumental variables method (Ferreira, Massa and Matos, 2010). This paper applies instrumental variables through 2SLS estimation to isolate the effect of institutional ownership on cross-border M&As activity. To achieve this, we require instruments for the level of institutional ownership in a firm: a variable that is correlated with institutional ownership, but not indirectly with independent variables. That is, the instrument is supposed to be a variable that can be 'excluded' from the initial list of control variables without influencing the results, but has a close relationship with institutional ownership.

This chapter uses several firm-level (acquirer and target) characteristics as instrumental variables for institutional ownership. (1) A dummy variable for whether the acquirer company shares are included in the Morgan Stanley Capital International (MSCI) World Index. The inclusion of shares in this index means that the company is more likely to attract investments (Ferreira & Matos, 2008). (2) A dummy variable for whether the acquirer company is cross-listed on the Chinese exchanges (via ordinary A-share and H-share). Cross-listing has been demonstrated to increase the shareholding of institutional investors (King, & Segal, 2006). (3) The firm's dividend yield. Dividend yields have been proven to be negatively correlated with institutional investors' interest in stock holdings due to unfavorable factors concerning dividend withholding taxes (Ferreira, Massa and Matos, 2010). As reported in Panel A of Table 3.8, we find that first-stage regressions present

evidence on the quality of these three instruments. As expected, foreign and domestic institutional investors are attracted to companies that include shares in the MSCI index and are cross-listed on Chinese exchanges, as well as to those with low dividend yields. These empirical results indicate that our instruments satisfy the first condition for being appropriate instruments (i.e., they are associated with potentially endogenous variables). Following the approach by Hausman, Stock and Yogo (2005) and Staiger and Stock (1997), we test for the strength of our instruments. As shown in Panel A of Table 3.8 that the F statistic in the first stages reaches 17.270 and 12.120, which both exceed the rule-of-thumb value of 9.08. The results for the Anderson canon likelihood ratio (LR) statistics (15.318) is greater than the critical value (13.91, 5% maximal IV relative bias) and for Cragg-Donald F statistic overwhelmingly reject the null of weak instruments, indicating that the chosen instruments are relevant and hence there is no problem of weak instruments (Bascle, 2008; Mukhopadhyay & Chakraborty, 2017). Additionally, these three instrument variables may also be correlated with the dependent variable in our main regression, thus we also conduct a Hansen overidentification test in second-stage regression, this test suggests that these variables do not directly affect the probability of cross-border acquisition through a channel different from their impact on institutional ownership. In summary, the empirical results of the second-stage regression confirm a positive relationship between foreign and domestic institutional ownership and probability of cross-border M&A, even after we control for the potential endogeneity of institutional ownership.

Panels B and C of Table 3.8 provide further robustness checks. First, we test for the role of foreign and domestic institutional block-holdings in the incidence of cross-border acquisitions. We concentrate on foreign/domestic institutional investors who hold more than 5% of the shares outstanding (La Porta *et al*, 1998; Li & Prabhala, 2007). The empirical results show a positive and significant relationship between foreign/domestic institutional blockholders and the probability of cross-border acquisitions in the first column in Panel B of Table 3.8. This finding is line with the crucial importance of blockholders to help mitigate the free-rider problem (Ferreira, Massa & Matos, 2010; Shleifer & Vishny 1986). Also, to better control for bias in the overall institutional investor representation in the institutional holdings data set, we provide an additional measure of foreign holdings relative to domestic holdings (Foreign-to-domestic inst. Ratio) and total institutional ownership. The empirical results of these measurements are in line with the findings reported to

date, indicating that the foreign-to-domestic institutional ownership ratio and total institutional ownership have a positive relationship with the probability that a bid will be cross-border.

Third, in Panel C of Table 3.8, we additionally examine the sensitivity of our empirical results to the definition of the sample of countries studied. We consider resolving the concern that the results may be driven by U.S. and Canadian companies and institutions, which are large players worldwide. Thus, we remove the acquisitions of target companies from the U.S. or Canada. At same time, we also exclude the acquisitions of target companies from Hong Kong in our sample, according to Li, Li & Wang (2018), Hong Kong is a special case because its political and economic policies are affected by Chinese mainland in a way not found in other economies. Panel C of Table 3.8 reports the results that foreign and domestic institutional ownership both remain positive and significant after separately removing the sample for these two groups of countries/regions.

Table 3.9 reports the results of some robustness tests by adding three new control variables, forming Panel 1, Panel 2 and Panel 3, which we will test to see if they affect our main results and moderating outcomes. We measure institutional quality based on the International Country Risk Guide (ICRG) Corruption Index, Rule of Law Index and Democratic Accountability Index. Li. et al. (2018) show that the institutional quality of the host country significantly affects the completion outcomes of cross-border M&As. For example, a host country environment with good institutional quality tends to reduce the time and cost for foreign firms to decipher complex procedures and related laws and regulations. At the same time, the market is also highly regulated and required, which protects the interests of foreign acquirers and benefits the acquisition outcomes (Muehlfeld, Sahib, & Witteloostuijn, 2007; Zhang, Zhou, & Ebbers 2011). The results in Panel 1 show that the findings are largely unaffected by the system's quality, with coefficient values and positive and negative values for SOE acquirers, as well as positive and negative values for the coefficients of the two-way and three-way interaction moderating variables.

In addition, in panels 2 and 3, we include the cash payment and acquirer size variables, which strongly impact M&A outcomes, respectively, to examine whether they affect our main results, adjusting for the impact results.Li et al (2018) illustrate that cash payments are more likely to reduce target firm shareholder resistance and reduce target firm transaction risk, thereby increasing acquirer firm completion rates. Compared to the acquirer size variable, the larger the acquirer size, the more likely it is to complete a cross-border M&A because the larger the firm, the stronger it is,

the more risk-resistant it is, and the greater its advantage in market transactions. The results of panels two and three show that the findings primarily change with adding cash payments and acquirer size as new control variables. Table 3.9 reports the results of some robustness tests by adding three new control variables, forming Panel 1, Panel 2 and Panel 3, which we will test to see if they affect our main results and moderating outcomes. We measure institutional quality based on the International Country Risk Guide (ICRG) Corruption Index, Rule of Law Index and Democratic Accountability Index. Li et al (2018) show that the institutional quality of the host country significantly affects the completion outcomes of cross-border M&As, and that a host country environment with good institutional quality reduces the time and cost for foreign firms to decipher complex procedures and related laws and regulations, while the market is also highly regulated and requires This protects the interests of foreign acquirers and increases completion rates (Muehlfeld et al, 2007; Zhang et al, 2011). The results of the first group show that the findings are largely unaffected by institutional quality, with coefficient values and positive and negative values for SOE acquirers, as well as positive and negative values for the coefficients of the two-way and three-way interaction moderating variables.

In addition, in panels 2 and 3, we include the cash payment and acquirer size variables, which significantly impact M&A outcomes, respectively, to examine whether they affect our main results, adjusting for the influence outcomes.

Table 3.8: Analysis of the incidence of cross-border mergers and acquisitions: Additional tests and robustness..

	Panel A: 2SLS			Panel B: institution type			Panel C: Sample	
	First stage Foreign ins. ownership	First stage Domestic ins. ownership	Second stage Cross-boder ratio	Blocks ins.	Foreign-to-domestic ins. ratio	Total ins.	Exclude US and Canada	Exclude Hong Kong
Foreign institutional ownership			0.184** (0.091)				0.104* (0.056)	0.183* (0.098)
Domestic institutional ownership			0.022* (0.013)				0.019*** (0.006)	0.018*** (0.005)
MSCI stocks	0.350*** (0.092)	2.341*** (0.794)						
Cross-listings	0.331*** (0.057)	0.841* (0.493)						
Dividend yield	-0.018* (0.011)	-0.461*** (0.093)						
Foreign institutional blockholders				0.133* (0.077)				
Domestic institutional blockholders				0.020*** (0.005)				
Foreign-to-domestic institutional ownership ratio					0.099* (0.058)			
Total institutional ownership						0.024*** (0.005)		
Deal control variables	Y	Y	Y	Y	Y	Y	Y	Y
Target control variables	Y	Y	Y	Y	Y	Y	Y	Y
Industry control variables	Y	Y	Y	Y	Y	Y	Y	Y
Acquiror control variables	Y	Y	Y	Y	Y	Y	Y	Y
Constant	-0.059 (0.379)	4.556 (3.276)	0.511 (0.193)	0.062 (0.915)	0.288 (1.069)	0.023 (0.918)	-0.552 (0.736)	0.051 (0.944)
First stage F-statistic	17.270***	12.120***						
Anderson canon. corr. LM statistic			15.318***					
Cragg-Donald Wald F statistic			14.932					
Hansen-*J*-statistic *p* value			1.717 0.490					
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
Number of observations	2,203	2,203	2,203	2,175	1,938	2,175	1,921	2,011
Pseudo r-squared	0.097	0.090	0.356	0.467	0.466	0.466	0.466	0.468

(*Note: N =2203.* This table presents the estimate of a probit model where the dependent variable is a dummy variable that equals one if the M&A is cross-border. Panel A reports estimates of a two-step probit model with a dummy variable that take the value one if a acquirer's shares are included in the MSCI World index; a dummy variable that takes the value of one if a acquirer's shares are cross-listed on Chinese exchanges; dividend yield. Panel B uses alternative institutional type variables: Foreign/ Domestic institutional blockholders, Foreign-to-domestic institutional ownership ratio, and Total institutional ownership. Panel C uses alternative samples: excludes M&A deals that involve the targets from the United States, Canada, and Hong Kong.. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively).

Table 3.9: Analysis of the incidence of cross-border mergers and acquisitions: Additional tests and robustness.

	Model 1	Model 2	Model 3	Model 4
Panel 1:Including Institutional Quality				
SOE	-0.391**	0.118	-0.100	-1.119
	(0.028)	(0.663)	(0.705)	(0.727)
SOE×Cross industry		-0.893***	-1.039***	-0.483
		(0.005)	(0.002)	(0.264)
SOE×Cross industry×Foreign institutional ownership			2.109**	
			(0.049)	
SOE×Cross industry×Domestic institutional ownership				-0.725
				(0.147)
N	*890*	*890*	*890*	*890*
Chi squared/F	*144.64*	*152.56*	*160.88*	*156.17*
Pseudo/adj R2	*0.1175*	*0.1239*	*0.1307*	*0.1268*
SOE	-0.391**	-0.160	-0.195	-0.012
	(0.028)	(0.449)	(0.370)	(0.964)
SOE×Stock payment		-0.912**	-1.475***	-1.336**
		(0.048)	(0.007)	(0.023)
SOE×Stock payment×Foreign institutional ownership			3.106**	
			(0.036)	
SOE×Stock payment×Domestic institutional ownership				0.066**
				(0.227)
N	*890*	*890*	*890*	*890*
Chi squared/F	*144.64*	*148.74*	*160.96*	*150.81*
Pseudo/adj R2	*0.1175*	*0.1208*	*0.1307*	*0.1225*
SOE	-0.391**	-0.587	-0.805*	-0.462
	(0.028)	(0.145)	(0.054)	(0.369)
SOE×Leverage		0.396	0.587	0.016
		(0.587)	(0.432)	(0.986)
SOE×Leverage×Foreign institutional ownership			-1.01	
			(0.409)	
SOE×Leverage×Domestic institutional ownership				0.057**
				(0.607)
N	*890*	*890*	*890*	*890*
Chi squared/F	*144.64*	*144.94*	*154.18*	*147.71*
Pseudo/adj R2	*0.1175*	*0.1177*	*0.1252*	*0.12*

SOE	-0.391**	-0.102	-0.101	-0.077
	(0.028)	(0.628)	(0.639)	(0.782)
SOE×Private Target		-1.137**	-1.779***	-1.573***
		(0.014)	(0.001)	(0.005)
SOE×Private Target×Foreign institutional ownership			9.317**	
			(0.030)	
SOE×Private Target×Domestic institutional ownership				0.069
				(0.153)
N	*890*	*890*	*890*	*890*
Chi squared/F	*144.64*	*151.09*	*177.39*	*153.38*
Pseudo/adj R2	*0.1175*	*0.1227*	*0.1441*	*0.1246*
Panel 2:Including cash payment				
SOE	-0.371**	0.093	0.072	-0.148
	(0.026)	(0.714)	(0.784)	(0.663)
SOE×Cross industry		-0.868***	-1.012***	-0.479
		(0.006)	(0.002)	(0.270)
SOE×Cross industry×Foreign institutional ownership			2.078*	
			(0.052)	
SOE×Cross industry×Domestic institutional ownership				-0.069
				(0.167)
N	*885*	*885*	*885*	*885*
Chi squared/F	*140.7*	*148.21*	*156.46*	*151.43*
Pseudo/adj R2	*0.1149*	*0.121*	*0.1277*	*0.1236*
SOE	-0.371**	-0.161	-0.196	-0.055
	(0.026)	(0.448)	(0.367)	(0.840)
SOE×Stock payment		-0.938**	-1.501***	-1.304**
		(0.043)	(0.006)	(0.026)
SOE×Stock payment×Foreign institutional ownership			3.079**	
			(0.039)	
SOE×Stock payment×Domestic institutional ownership				0.056
				(0.302)
N	*885*	*885*	*885*	*885*
Chi squared/F	*140.7*	*145.01*	*157.05*	*157.08*
Pseudo/adj R2	*0.1149*	*0.1184*	*0.1282*	*0.1282*
SOE	-0.371**	-0.624	-0.841**	0.575
	(0.026)	(0.122)	(0.045)	(0.268)
SOE×Leverage		0.458	-0.645	-0.169
		(0.531)	(0.389)	(0.858)

SOE×Leverage×Foreign institutional ownership			-3.672	
			(0.163)	
SOE×Leverage×Domestic institutional ownership				0.036
				(0.747)
N	*885*	*885*	*885*	*885*
Chi squared/F	*140.7*	*141.1*	*150.28*	*144.2*
Pseudo/adj R2	*0.1149*	*0.1152*	*0.1227*	*0.1177*
SOE	-0.371**	-0.103	0.101	0.028
	(0.026)	(0.625)	(0.640)	(0.922)
SOE×Private Target		-1.162**	-1.813***	-1.537***
		(0.012)	(0.001)	(0.006)
SOE×Private Target×Foreign institutional ownership			9.218**	
			(0.030)	
SOE×Private Target×Domestic institutional ownership				0.059
				(0.224)
N	*885*	*885*	*885*	*885*
Chi squared/F	*140.7*	*147.42*	*173.8*	*149.2*
Pseudo/adj R2	*0.1149*	*0.1204*	*0.1419*	*0.1218*
Panel 3:Including Acquirer Size				
SOE	-0.380**	0.122	0.022**	-0.135
	(0.045)	(0.643)	(0.044)	(0.700)
SOE×Cross industry		-0.875***	-1.017***	-0.425
		(0.006)	(0.002)	(0.328)
SOE×Cross industry×Foreign institutional ownership			2.095**	
			(0.051)	
SOE×Cross industry×Domestic institutional ownership				-0.078
				(0.119)
N	*890*	*890*	*890*	*890*
Chi squared/F	*140.84*	*148.47*	*156.83*	*152.07*
Pseudo/adj R2	*0.1151*	*0.1213*	*0.1282*	*0.1243*
SOE	-0.380**	-0.167	-0.202	-0.027
	(0.045)	(0.430)	(0.350)	(0.920)
SOE×Stock payment		-0.939**	-1.499***	-1.337**
		(0.041)	(0.006)	(0.022)
SOE×Stock payment×Foreign institutional ownership			3.047**	
			(0.041)	
SOE×Stock payment×Domestic institutional ownership				0.062
				(0.253)

N	*890*	*890*	*890*	*890*
Chi squared/F	*140.84*	*145.69*	*157.78*	*147.46*
Pseudo/adj R2	*0.1151*	*0.1183*	*0.1282*	*0.1198*
SOE	-0.380**	-0.633	-0.850**	-0.510
	(0.045)	(0.115)	(0.042)	(0.321)
SOE×Leverage		0.461	0.649	0.091
		(0.527)	(0.385)	(0.923)
SOE×Leverage×Foreign institutional ownership			-3.750	
			(0.153)	
SOE×Leverage×Domestic institutional ownership				0.056
				(0.614)
N	*890*	*890*	*890*	*890*
Chi squared/F	*140.84*	*141.72*	*151.15*	*144.47*
Pseudo/adj R2	*0.1151*	*0.1151*	*0.1228*	*0.1173*
SOE	-0.380**	-0.110	-0.107	0.061
	(0.045)	(0.602)	(0.618)	(0.826)
SOE×Private Target		-1.160**	-1.802***	-1.571***
		(0.012)	(0.001)	(0.005)
SOE×Private Target×Foreign institutional ownership			9.242**	
			(0.030)	
SOE×Private Target×Domestic institutional ownership				0.065
				(0.176)
N	*890*	*890*	*890*	*890*
Chi squared/F	*140.84*	*148.07*	*174.48*	*150.09*
Pseudo/adj R2	*0.1151*	*0.1203*	*0.1417*	*0.1219*

(*Note: N =890.* This table reports the results of robustness tests. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

Li, Li, and Wang (2018) illustrate that cash payments are more likely to reduce resistance and transaction risk from the target's shareholders, thereby increasing the completion rate of the acquirer firm. Compared to the acquirer size variable, the larger the acquirer size, the more likely it is to complete a cross-border M&A, because the larger the firm, the stronger it is, the more risk-resistant it is, and the greater its advantage in market transactions. The results of panels two and three show that the findings largely change with the addition of cash payments and acquirer size as new control variables.

The results of panels 2 and 3 show that the findings largely change with adding cash payments and acquirer size as new control variables. Our study offers several important contributions. First, this chapter applies resource dependency theory to explain the special relationship between Chinese market-based SOE acquirers and their governments, while complementing this with a perspective of legitimacy concerns to understand better the challenges faced by SOEs in cross-border M&As due to their special political relationship with their governments. Due to their special political relationship, SOE acquirers are likely to face external challenges - questions about legitimacy from host country regulators and target companies - when undertaking cross-border M&As, while internal challenges mainly stem from SOEs' inadequate market orientation, which can more easily lead to SOEs losing or failing to seize fleeting M&A opportunities in a competitive foreign market in a timely manner. Both of these issues are not common among non-SOEs, but are particularly acute among SOEs, and will likely be a major impediment to completing their cross-border acquisitions.

In addition, the chapter focuses on the link between legitimacy concerns and the efficiency of corporate governance among cross-border M&As by SOEs. With regard to legitimacy concerns, it is described how the 'theorization' of host country regulators plays a crucial role in specifying and arguing for the acceptability of acquisition transactions, thus significantly influencing acquisition outcomes (Li, Xia & Lin, 2017). SOE acquirers with political affiliations are often perceived as unacceptable, inappropriate or undesirable transactions by host countries (Cuervo- Cazurra, *et al*, 2014; Meyer, *et al*, 2014), but this does not mean that cross-border M&As by these foreign SOE acquirers are illegal or completely unacceptable, hence the emergence of a 'theorizing' phase by regulators to assess these transactions based on their definitions or rules, which are largely based on a range of acquisition by SOE acquirers behaviour. If some acquisitions by SOE acquirers exacerbate legality concerns, this is likely to generate further resistance in the host country, with the result that these M&A transactions are rejected. Therefore, we introduce numerous acquisitions that raise legitimacy concerns to test whether legitimacy concerns can significantly affect the completion of acquisitions by SOE acquirers. Our study finds that acquisitions are intended to either facilitate or hinder the completion of acquisitions by SOE acquirers to some extent, thus furthering a better understanding of the internationalization of Chinese SOEs from a legitimacy perspective.

Regarding cross-industry acquisitions by SOE acquirers, we have found that when using

cross-industry acquisition behaviour, SOE acquirers are less likely to complete their acquisition deals than non-SOE acquirers. Regulators are often sensitive to such acquisitions because of the potential political objectives and unknown high risks that raise questions about the legitimacy of such acquisitions, which may lead host governments to reject such transactions by Chinese SOE acquirers based on political and strategic considerations and fears of threats to national security. Furthermore, stock-payment acquisitions can also raise legitimacy concerns, particularly where there is an information asymmetry between the parties to a cross-border transaction, as such acquisitions are likely to expose the weaker party to losses. As a result, when host governments or target companies are faced with equity-paying acquisitions, they will be very cautious, especially for foreign SOE acquirers with political affiliations and ambiguous intentions to engage in equity-paying acquisitions, which can significantly increase legitimacy concerns and thus further reduce the likelihood of M&A completion. The results of the two-way interaction regressions show that equity-paying acquisitions have a negative impact on the completion of cross-border M&As for both SOEs and non-SOEs, but when considering only the relationship between equity-paying acquisitions and SOE acquirers on acquisition completion, their coefficient estimates are also negative at -0.936, while the coefficient estimate for the single effect of equity-paying on acquisition completion is negative and at -0.699, which implies that the legitimacy concerns raised by share-based payment acquisitions tend to have a more negative impact on acquisition completion for SOE acquirers than for non-SOE acquirers.

Besides, based on the behaviour of high-leveraged acquisitions, we find evidence that acquirers with higher leverage experience challenges in completing cross-border acquisitions. In general, high leverage implies that a company has high debt ratios, low cash liquidity, limited financing capacity and a weak ability to withstand external risks. As a result, such companies generally will not take high risks to acquire overseas and are more likely to be acquired by other companies (Uysal, 2011; Hu & Yang, 2016). For special SOEs, one possible reason for their special relationship with the government compared to other non-SOEs is that their unique relationship can provide them with strong support when undertaking cross-border M&A transactions, such as financial support from the government, preferential treatment, and support in adverse situations (Xia et al, 2014). This support undoubtedly solves the problem of difficult financing and low cash flow for acquirers of highly leveraged SOEs, thus largely eliminating the concerns of target firms. In contrast, non-SOEs find it

difficult to obtain government support, reducing their completion rate of cross-border M&As when they are highly leveraged.

In terms of sufficient market orientation, this is important to improve a company's competitiveness in a highly competitive market. Good market positioning of the company can respond to market changes in a timely manner and seize fleeting opportunities in the market, especially in cross-border M&A transactions, which can well coordinate the cooperation of the company's internal and external professional teams, better collect and analyze information about the target company and gain an information advantage, thus increasing the likelihood of M&A completion. For the SOE acquirers with political backgrounds we studied, most of their top management were directly appointed by the government, while these appointed managers were basically previously employed in the government and had less experience in managing companies and professions. On the other hand, as SOEs accept government intervention and have less autonomy, it is more difficult for them to make decisions and respond to the market as quickly as other types of companies, so it is more difficult for them to coordinate well inside and outside the company, collect information about the target company and build up an information advantage. Our study has conducted a target company characteristic - private target company status - where information is not publicly available, placing high demands on the acquirer's management efficiency and information gathering capabilities. We will use this target firm characteristic to test whether the inefficient management of an SOE acquirer affects the completion of its M&A. Based on our regression results, consistent with the conjecture above, it is shown that SOE acquirers are less likely to complete their acquisition deals than non-SOE acquirers when the target firm is a private firm.

Further, this study adds the main moderating variable, institutional investors, to the above two-way interaction term to form a three-way interaction term to test whether institutional investors can help Chinese acquirers mitigate the negative effects of legitimacy concerns on cross-border M&A completion. We find that foreign institutional investors can help SOE acquirers overcome legitimacy concerns associated with cross-industry acquisitions and stock-payment acquisitions. The coefficient estimates of SOE acquirers and, cross-industry acquisitions, and stock-payment acquisitions on acquisition completion are negative and significant. However, when QFIIs are added to the three-way interaction term, their coefficient estimates are both positive and significant, implying that QFIIs with higher reputation, influence, expertise and extensive experience in

international trade activities reinforce legitimacy concerns about cross-border M&A despite the cross-industry acquisition behaviour and stock-payment acquisition behaviour of SOE acquirers. When institutional investors are present in a certain proportion of SOE acquirers, this is seen as a positive sign by the host country's regulators and the target company, as these institutions are sensitive and ambivalent in the 'theorization' phase when faced with SOEs with opaque information and political backgrounds. Whereas, the presence of QFIIs who are among the top 50 investors in the world in terms of reputation, financing capacity, professionalism and experience in international transactions will give confidence to external institutions that these QFIIs will play an active role in monitoring and facilitating the transactions of the acquirers of SOEs.

Thus, to a large extent, the proportion of their presence will be one of the criteria for judgement, which will help complete the M&A.

Relative to the impact of domestic institutional investors on the legitimacy concerns on the completion of M&A by SOE acquirers, we find that they fail to help SOE acquirers overcome the legitimacy concerns posed by cross-industry acquisitions and stock-payment acquisitions such as QFIIs. Possible reasons for this are: (1) Domestic institutional investors do not have the globally renowned reputation, financing capabilities, professionalism and extensive international transaction experience that QFIIs have, and therefore host country auditors and target companies are likely not to take this as a significant positive signal to alleviate legitimacy concerns. (2) A significant number of domestic institutional investors are also affiliated with government agencies or SOEs, so they are likely to have private interests with the SOE acquirers they invest in or be susceptible to government interference, making it difficult for them to play an important monitoring and facilitation role in cross-border M&As like QFIIs.

Lastly, we have found that QFIIs can help SOE acquirers mitigate the negative impact of a company's lack of market positioning on the completion of an acquisition. When the target company is a private company, its information is not as public as that of a public company, so this tests the acquiring company's ability to gather information and coordinate internally and externally. With these capabilities, the acquiring company can respond quickly to market changes, thus gaining an information advantage and increasing the likelihood of M&A completion. However, our findings suggest that QFIIs compensate for the inefficient corporate management of SOE acquirers. While supervising corporate management, they also leverage their information-gathering expertise and

extensive international transaction experience to compensate for the deficiencies of SOE acquirers and help the SOE acquirers they invest in to build an information advantage in competitive foreign markets, thereby increasing the likelihood of acquisition completion. In contrast, domestic institutional investors cannot help SOE acquirers improve their corporate management efficiency and target company information gathering capabilities in the same way as QFIIs because they have less international trading experience, specialist information gathering capabilities and international reach as QFIIs.

3.6 Conclusion and Discussion

This study has investigated the moderating role of foreign v.s. domestic institutional ownership in legitimacy concerns raised Chinese SOE acquirers in cross-border M&As. Our findings suggest that SOE acquirers follow the 'Go Global' policy initiated by the Chinese government and aggressively engage in overseas investment, increasing the likelihood of cross-border M&As. Moreover, because of their semi-political nature, SOEs also often face legitimacy concerns from host-country regulatory agencies, making their cross-border M&As less likely to be completed. Furthermore, this chapter examines the moderating role of institutional ownership in M&A decision-making and legitimacy concerns of SOE acquirers through the outcomes of cross-border M&As. It is found that because of the restrictions imposed by the China Securities Regulatory Commission (CSRC) on the investment sizes by foreign institutional investors, they have no significant moderating role in the relationship between SOE acquirers and the likelihood of cross-border M&As. Thus such investors have little influence in the M&A decision-making of the SOE acquirers they invest in. By comparison, domestic institutional ownership can influence the M&A decision-making of SOE acquirers. They prefer domestic acquisitions, possibly due to familiarity bias or a desire to take advantage of the monopoly position of SOE acquirers in their home markets to obtain low-risk and stable returns. In terms of legitimacy perspective, it is interesting to note that foreign institutional ownership can mitigate the negative relationship between SOE acquirers and their cross-border acquisition completion. In contrast, domestic investors have no significant moderating role in legitimacy concerns of cross-border M&As by SOE acquirers, because local investors often are regarded as having private interests in the management of the company and may utilize deliberate strategies to conceal company data. Our empirical results differ in many respects from the role of

institutional investors in cross-border M&As by public-listed acquirers from traditional western free economies. These findings further complement the role of institutional investors in the M&A field by filling the gap between the role of foreign institutional investors and their domestic counterparts in decision-making and legitimacy concerns regarding SOE acquirers.

Theoretical contributions

Resource dependency theory emphasises the interdependence of companies and external factors (such as individuals, companies and governments) that have a strong influence on the decisions and behaviour of companies. Firms rely on external actors for basic resources such as material resources, information and social legitimacy. However, dependence leads to a power imbalance between the firm and external factors, and as a result, external factors tend to interfere with the firm's decisions and behaviour (Pfeffer & Salancik,1978;Hillman, Withers & Collins, 2009)

This study considers a further extension of resource dependency theory and its application to cross-border M&A transactions in emerging markets. Specifically, we argue that state ownership is an important resource for obtaining support from the home government and that state ownership will also interfere with firms' decisions in cross-border M&As (Choudhury & Khanna,2014; Luo, Xue, a& Han, 2010). Therefore, this chapter extends this theory by exploring whether acquirers with state ownership in cross-border M&A decisions will be influenced by government policies, thus demonstrating that they are subject to government interference in cross-border M&As.

In addition, this chapter further extends the signalling theory (Spence, 1973) by linking the legitimacy perspective, to explore how institutional investors help SOE acquirers mitigate their legitimacy concerns in cross-border M&As. Foreign institutional investors can act as the signal sender to disclose the company information to the outside world and fill the information gap between SOE acquirers and target firms. Such an increase in information transparency could substantially alleviate the negative impact of their legitimacy concerns in cross-border M&As.

Empirical contributions:

This chapter finds that SOE acquirers have a higher probability of cross-border acquisition and a lower likelihood of acquisition completion than non-SOE acquirers. In terms of M&A decision-making, foreign institutional ownership among SOE acquirers fails to moderate the intensity of cross-border acquisitions according to their investment preferences, while domestic institutional ownership substantially influences SOE acquirers' M&A decision-making, they prefer

domestic M&As. From the legitimacy perspective, foreign institutional ownership among SOE acquirers tends to mitigate the negative impact of legitimacy concerns on acquisition completion, but domestic institutional investors do not have the same effect.

Managerial contributions

Our findings also provide guidelines for the Chinese SOE acquirers in engaging in cross-border M&As. According to our findings, the greater the shareholding of foreign institutional investors in an SOE acquirer, the greater the likelihood it will be able to complete the acquisition. Conversely, the shareholdings of domestic institutional investors in a SOE acquirer have a negligible impact on the likelihood of completing a cross-border M&A. Therefore, it is favourable for the management teams of SOEs to attract more foreign institutional investors into their shareholdings when considering increasing the likelihood of their cross-border M&A being completed.

Chapter 4: The Construction of High-speed Railway and Legitimacy Concerns of SOEs

The opening of the high-speed railway (HSR) increases the probability of cross-border M&As for foreign companies by 63.4% and the likelihood of acquisition completion by 42.5%, respectively, and shorten the acquisition duration by an average of 98.4 days. These results are robust to the inclusion of control variables, instrumental variables method, aircraft traffic controls, and a propensity score matching DID model. In terms of the heterogeneous influence of the opening of HSR on cross-border M&As, we find that this effect is more pronounced in in less developed and western cities, suggesting the launching of HSR can promote geographical and economic development balance by establishing a foreign investment bridge for these cities, and also can break the trade barriers created by the long-established information occlusion in these cities by increasing cross-border acquisition completion and reducing acquisition duration. In addition, from target company characteristic perspective, the effect is more evident when the target company is a SOE or in an infrastructure industry, implying that HRS opening enhances cross-border M&As access to these companies and also mitigates legitimacy concerns raised by the Chinese regulatory agency. The results are consistent with the hypothesis that HRS act as foreign investment and information bridges between the foreign bidder and the local target to promote the likelihood, quality and efficiency of cross-border M&As in the Chinese market.

4.1 Introduction

Infrastructure development is seen as the key to the post-pandemic recovery. Around the world, governments are announcing huge infrastructure stimulus packages with the aim of promoting the economy recovery (Akrofi, & Antwi, 2020; Wilkins, Gilchrist, & Phillimore, 2020). As an important component of infrastructure development, high-speed rail (HRS) accounts for a considerable proportion of the public investment in these newly introduced infrastructure stimulus packages (Wang, & Dong, 2022). For example, US President Joe Biden's new $1.2 trillion infrastructure stimulus package, of which $66 billion is allocated for upgrading railways, and

dedicated funds for the construction of high-speed rail services. The European Union has launched a $340 billion 'Global Gateway' fund to upgrade global infrastructure, with HRS as a key part of the package. As well as the Indian government's announcement of a US$1.35 trillion infrastructure programme called 'Gati Shakti', the construction of railways (including HSR) will be a vital engine for this plan. It is clear to see that these infrastructure stimulus packages have included the construction of HSR, giving it high expectations of contributing the recovery of economic activity in the post-epidemic era (Lee, & Woo, 2020; Rosenberg, 2022). In turn, for the recovery of economic activity, foreign direct investment (FDI) and portfolio flows are an important driver and also an important attraction for these government infrastructure stimulus packages (Bekaert & Harvey, 2000; Stulz 2005), and more than half of the total FDI has taken the form of cross-border mergers and acquisition (Ferreira, Massa, & Matos, 2010). Thus, the questions as to whether the construction of the HSR can contribute foreign direct investment activity in all aspects and further contribute to the recovery of economic activity, as expected, remain unanswered. In this chapter, we investigate the role of HRS in cross-border mergers and acquisitions (M&As) in the Chinese market. The Chinese market is chosen because the construction of HSR in China started in 2008, while by 2022 the total mileage will exceed 40,000 km, benefiting more than 180 prefecture-level cities and 370 county-level cities, accounting for more than two-thirds of the total global HSR mileage (Awrence, Bullock, & Liu, 2019; Ma, 2017). With its safety, high speed and wide regional connectivity, HSR is increasingly becoming a popular transportation mode and has also become one of the most important transport for business people to travel across regions for research and investment. Therefore, on the basis of the HSR's early construction, its world-leading scale and its high availability to the general public, the Chinese market is very desirable for studying the relationship between HSR and cross-border M&A outcomes, and thus further develop a reference implication for governments worldwide starting infrastructure programs in the post-pandemic era.

This article focuses on three main questions about the impact of the construction of HSR on cross-border M&A outcomes (acquisition probability, acquisition completion, and acquisition duration). We expect the opening of HSR to induce more cross-border M&As, to increase the likelihood of acquisition completion, and to reduce the acquisition duration for at least two reasons. First, HSR trains can be operated at a maximum speed of 350 km/h, and the average speed of HSR rail has reached 300 km/h, the high speed of HSR greatly reduces the travel time for investors and

increases their willingness to travel to cities with HRS to find suitable investment opportunities (Xia, Wang, & Zhang, 2018). For foreign investors, who are less familiar with the transport situation (e.g., traditional railway, road system) than local investors in China, they prefer to use the airplane transportation, which is faster and more direct mode of transport (Al-Awadhi, Alsaifi, Al-Awadhi, & Alhammadi, 2020). The construction of airports, however, requires a high level of integration in a city, usually in a densely populated or economically developed city, so the construction of HSR largely compensates for the limitations of air transport and is a good option for foreign investors (Zhang, Wan, & Yang, 2019). Second, the opening of HSR improves geographical accessibility. At present, over 550 cities in China are covered by HSR, forming a '4 horizontal and 4 vertical' network covering the east, west, north and south of the country, including some remote and economically underdeveloped cities with great potential for development. The coverage of these cities by HSR provides opportunities for foreign investors to visit, survey and invest. Third, the construction of HSR enhances the openness of the city and reduces the information asymmetry.

At the same time, the high-speed railway covers more than 550 cities in China, forming a '4 horizontal and 4 vertical' network covering the east, west, north and south of the country (People's Republic of China Ministry of Railways, 2017).The scale and speed of this network has greatly reduced the time investors spend on travelling and increased their access to remote areas. Before the opening of the HSR, some investors, especially foreign investors, did not have the desire to travel to these areas to find suitable target companies due to the lack of access or the high cost of transportation, as well as the unfamiliarity of the areas and the closed nature of information. Third, the construction of HSR enhances the openness of cities and reduces information asymmetries. Cities without HSR especially those cities in remote or economically underdeveloped areas, generally form trade barriers and information blockages due to a chronically inactive economic market and low frequency of communication with external business, fearing the loss of local businesses. HSR serves as an information bridge to open these regional governments and target companies, facilitating information communication between foreign acquirers and target companies, reducing concerns caused by information blockage and information asymmetry, and significantly improving the quality and efficiency of foreign investment (Jin, Yang, & Zhang, 2021).

In this chapter, we examine 8,740 M&A deals, which include 1,801 cross-border M&A transactions from 42 different acquirer countries or regions invested in 194 cities and 6,939 domestic M&A

transactions invested in 274 cities over the period 2005–2020 in China. We perform a multi-period differences-in-differences (DID) model using city-level data and find that the opening of HSR significantly increases the probability of cross-border acquisitions, the likelihood of cross-border acquisition completion, and reduces the duration of cross-border acquisition completion. Specifically, the number of local firms being targeted by foreign bidders increases by 63.4%, the likelihood of acquisition completion by 42.5%, and shorten the acquisition duration by an average of 98.4 days respectively, following the opening of HSR in the local city. These results are robust to the inclusion of control variables, instrumental variables method, aircraft traffic controls, and a propensity score matching DID model. The results of the parallel test also support the validity of the DID model.

Further analyses indicate that the effects of HSR in facilitating cross-border M&As (cross-border acquisition probability, completion, and duration) are more pronounced when: i) the acquisition of target company is located in an economically less-developed city; ii) the acquisition of target company is located in an western-regional city; Moreover, from the perspective of the target company characteristics, we also find a more pronounced result when the target company is a SOE or in an infrastructure industry following the opening of HSR.

From the perspective of information asymmetry theory, most of the literature argues that 'relationships' reduce the level of information asymmetry between parties (Chen, Shihua et al., 2013; Ishii and Xuan, 2014), but little literature has examined how to mitigate legitimacy concerns in M&A from the perspective of geographical distance-induced information asymmetry.

This study provides new insights into the cross-border investment literature by focusing on the impact of the opening of HSR on cross-border acquisition outcomes. Previous studies have focused on the impact of HSR network expansion on domestic corporate decision -- cross-region acquisitions (Jin, Yang, & Zhang, 2021), little is known about how the impact of the opening of HSR on cross-border acquisitions by foreign acquirers. Unlike domestic acquirers, foreign acquirers not only have different investment objectives, investment strategies, and investment preferences, but also have very different government investment policies and regulatory approval compared to domestic acquirers (Patnaik, & Shah, 2013; Chen, Johnson, Lin, & Liu, 2009; Gaur, Ma, & Ding, 2018), This leads to heterogeneity in the M&A behaviour between foreign and domestic acquirers. Our study therefore takes an important step forward in filling this gap in the literature on the impact

of the opening of HSR on cross-border acquisitions. Second, our study contributes to the literature investigating the regional economic impacts of transportation infrastructure. We find that the HSR serves as 'foreign investment bridge' to increase the probability of cross-border M&As in less-developed and western-regional cities following the opening of HSR, further enhancing the balance of regional economic development. On the other hand, the opening of HSR has broken down trade barriers to foreign investment in these cities, increasing the acquisition completion and reducing the acquisition duration, and greatly enhancing the economic activity in these cities.

Finally, our study to investigate the impact of transport infrastructure on legitimacy concerns is based on target company characteristics. It has been well documented that legitimacy concerns raised by host-country regulatory agencies create uncertainties for the foreign acquirers (Li, Xia, & Lin, 2017). Information asymmetry with the acquirer, the target company, and the government is an important cause of legitimacy concerns. A variety of mechanisms has been identified to alleviate information asymmetries between M&A parties, thus further alleviating legitimacy concerns, including the use of stock swaps (Officer, Poulsen, & Stegemoller, 2009), performance-linked compensation contracts (Reuer, Shenkar, & Ragozzino, 2004), risk-sharing contracts (Jansen, 2020), shared auditors (Dhaliwal, *et al*, 2016) and high-quality accounting information (Marquardt & Zur, 2015; McNichols & Stubben, 2015; Martin & Shalev, 2017; Chen, & Haynes, 2017). Our study highlights the role of HSR in reducing information asymmetry in M&As from the legitimacy perspective, we use target company characteristics- state-owned enterprises (SOEs) or a target in a infrastructure industry as the legitimacy threshold and find that the opening of HSR increases the probability of cross-border M&As in SOEs and a target in a infrastructure industry, further analyses show that HSR increases the acquisition completion and reduces the acquisition duration, suggesting the opening of HSR helps foreign acquirers to mitigate legitimacy concerns raised by host-country regulatory agencies.

The rest of the chapter is organized as follows: Section 2 provides a literature review and develops hypotheses; Section 3 discusses the sample selection procedure and empirical designs; Section 4 presents the empirical results; Section 5 concludes.

4.2 Theory and Hypothesis Development

4.2.1 The Opening of HSR and Cross-border Deals

The Covid-19 crisis has significantly suppressed global economic activity. In 2020 alone, average global GDP showed a 4.5% contraction (OECD, 2020). Many governments have stepped in to cushion the impact on households and business. These governments have introduced many stimulus programs, with much of the spending aimed at ensuring that businesses will still be able to survive and develop. Infrastructure investment is one path to achieve this and is widely regarded as an effective way to spur economic activity. A point out that the infrastructure spend multiplier in the economy is about 1.5. For every $1.00 spent, the benefit to GDP will be $1.50. Such returns outstrip those of 'normal public spending' (Alan, 2017). As a safe, convenient and efficient mode of transportation, the HSR can significantly boost the economic activity in the opening city and also become an important part of the infrastructure stimulation package. In turn, in the recovery of economic activity, foreign direct investment (eg., cross-border mergers and acquisitions) has been an attractive target for many governments' stimulus packages in the post-epidemic era, as it is often seen as the engine of economic recovery (Wilkins, Gilchrist, & Phillimore, 2020). Cross-border M&A not only brings external capital, technology and management experience to target company, further contributing to the company's development, but also drives the development of the local economy (Aybar, & Ficici, 2009). However, unlike local investors, foreign M&A investors are often concentrated in large metropolitan areas, where market investment fragmentation due to distance prevents them from accessing projects in cities without HSR (Schamp, Rentmeister, & Lo, 2004). Because of unfamiliarity with the culture, geography and transportation in relatively small or remote cities without HSR, foreign investors are seldom available or willing to travel to these cities to find suitable investment opportunities for fear of increasing their opportunity costs. However, the development of infrastructure - the opening of HSR - has somewhat changed the investment landscape for foreign acquirers. The HSR, because of its comfort, efficiency and wide accessibility, has significantly reduced the time and cost of travel for investors, broken down the market investment fragmentation caused by distance and serves as an investment bridge for foreign investors, increasing the opportunities for foreign M&A to find suitable target companies in cities with HSR, thus we propose the following hypothesis:

Hypothesis 1: *The opening of HSR increases the probability of inbound acquisitions by foreign acquirers.*

In contrast, before the opening of HSR in cities, they usually have relatively few opportunities to interact with external markets due to geographical distance constraints, their markets are less active in terms of investment and economic activities, and foreign direct investment is even more rare (Jin, Yang, & Zhang, 2021). And this prolonged trade blockage in these cities is likely to lead to a less open market, with local governments or companies resisting foreign takeovers, as foreign takeovers also imply a transfer of control from the target company to the foreign acquirer company. These cities, unlike metropolitan areas, not only have relatively small markets or few core businesses, but also have little experience in dealing with foreign investment and fear the loss of core technology, natural resources, market development, etc. In the event of a failure or loss of foreign investment, it is likely to have a negative impact on the local economy and employment (Zhang & He, 2014). However, the opening of the HSR tends to act as an information bridge to convey more information about the company, the transaction, the investment objectives and strategies, and increase the transparency of information through on-the-ground communication and research between the investor and the local government, and the target company (Coval & Moskowitz, 1999, 2001; Chakrabarti & Mitchell, 2013), which can significantly reduce the resistance of the local government and the target company at the time of M&As, thus significantly improving the quality (the likelihood of acquisition completion) and efficiency (the likelihood of acquisition duration) of cross-border M&As. These arguments lead to the following hypotheses:

Hypothesis 2: *The opening of HSR increases the likelihood of inbound acquisition completion by foreign acquirers.*

Hypothesis 3: *The opening of HSR reduce the duration of inbound acquisitions by foreign acquirers.*

(Cross-border mergers and acquisitions also imply a transfer of control of the acquired company, which can have a significant impact on the economy and employment in the area where the acquired company is located, and may lead to local government intervention.)

The impact of HSR on cross-border M&As will depend on the perceived role of HSR in reducing distance-induced information asymmetries and legitimacy concerns. We find that information asymmetry between bidders and targets may be higher in the following circumstances, and therefore

bidders may rely more on HSR to increase communication with targets and reduce the negative impact of information asymmetry on M&A transactions (Chen & Haynes, 2017; Lin, 2017). Firstly, since information asymmetry increases with geographical distance, the benefits of HSR in terms of reducing information asymmetry and stimulating cross-border M&A will also increase with geographical distance (Rossi, & Volpin, 2004). Similarly, bidders and target companies will benefit more from the opening of HSR when they can save more travel time and costs by travelling on HSR trains than by regular modes of transportation when alternative modes of transportation such as highways and airports are not available, we expect foreign acquirers to rely more on HSR in acquiring information about targets in remote regional cities (western-regional cities). Secondly, as information asymmetries increase with the increase in trade barriers caused by economic differences (Huang, & Li, 2019). Less-developed cities often have lower levels of economic activity or rely on a single or small number of pillar companies to support the city's economy (Jin, Peng, & Song, 2019). As a result, local governments and target firms often have higher trade barriers to external M&A activity, particularly cross-border M&A. The opening of HSR will act as an information bridge to increase communication opportunities between outbound M&A buyers and the governments of these underdeveloped cities as well as the target companies, further breaking down long-term trade barriers (Bushman, Piotroski, & Smith, 2011). Thirdly, as information asymmetry increases with the political sensitivity of the target company, when the target company is involved in a state-owned enterprise (SOE) or is in a politically sensitive industry, foreign acquirers often encounter legitimacy concerns from the host country's regulatory agencies,while often the information asymmetry is exacerbated by the ambiguity of the acquirer's M&A objectives and the target company's lack of disclosure due to its own political considerations (Li, Li, & Wang, 2018). The opening of the HSR will act as a legitimacy-building bridge, increasing communication opportunities between foreign acquirers and these target companies, increasing the transparency of information about each other, further building legitimacy for foreign acquirers and increasing the likelihood, quality and efficiency of cross-border acquisitions of these companies.

Hypothesis 4: *The effect of the opening of HSR on inbound M&As is stronger when target companies in cities : i) are less-developed city; ii) are western-region city; and when target companies iii) are state-owned enterprise (SOE); iv) are in the Infrastructure industry;*

4.3 Data and Methodology

This chapter derived a sample of cross-border and domestic acquisitions in the Chinese market over the fifteen-year period between between 2005 and 2020 from the Securities Data Corporation (SDC) database that has been widely used in prior M&A literature (Erel, Liao, & Weisbach, 2012; Li, Xia & Lin, 2017; Tao, Liu, Gao, & Xia, 2017), and city-level and firm-level data were supplemented according to CSMAR (i.e., China Stock Market & Accounting Research Database). We obtain HSR data from the China Railway Corporation Website and we manually collect the earliest date when the HSR route was opened in each city. Our data further were processed with the following standards (i) firms in financial industries were excluded; (ii) re-purchases, re-capitalizations, sales of minority interests, spin-offs, and transactions identified as internal, rumored and unknown transaction were ignored; (iii) firms with obvious data errors or missing data were removed. These criteria yielded a final sample of 8,740 acquisition transactions, which included 1,801 cross-border M&A transactions (21%) from 42 different acquirer countries or regions invested in 194 cities and 6,939 domestic M&A transactions (79%) invested in 274 cities. The first independent variable of interest was the probability of cross-border M&As. The chapter followed previous studies (Andriosopoulos &Yang, 2015; Ferreira, Massa & Matos, 2010), and measured the indicator as taking the value of 1 for cross-border M&As conducted by foreign acquirers and 0 otherwise. As the time of opening of HSR varies across cities, we use a multi-period DID model to examine the impact of HSR opening on cross-border M&As, thus we develop the following regression model (1):

$$Logit\ (probability_{i,t}) = \alpha + \beta_1 HRS_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (1)$$

In further, to verify the impact of the opening of the HSR on the likelihood of completion of cross-border M&As, this chapter introduces a second dependent variables, which took 1 if the acquisition was successfully completed after the public announcement of cross-border M&As by the foreign acquirer, and 0 otherwise (Nguyen, Phan & Simpson, 2019), thus we develop the following regression model (2):

$$Logit\ (success_{i,t}) = \alpha + \beta_1 HRS_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (2)$$

In addition, this study also look at the impact of the opening of the HSR on the duration of

cross-border M&As, involving a third dependent variable -- acquisition duration, we followed previous studies (Ferris & Houston, 2015; Li, Xia & Lin, 2017), and measured the indicator as the number of days for the difference between the acquisition announcement date and the completion date, thus we construct the following regression model (3):

$$Logit\ (duration_{i,t}) = \alpha + \beta_1 HRS_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (3)$$

4.3.1 Independent and Moderating Variables

High-speed Railway (HSR): the value is 1 if the city in which the target company is located is not connected to HSR in the sample period; The value is 0 if the acquisition announcement time of the target company is before the city is opened to HRS and 1 if it is opened to HSR.

West region city was a dummy variable, coded as 1 if the target company is located in a western region city in of China, 0 otherwise. According to the geographical economic division of the Chinese State Council through the 'Go West Campaign', the western region covers one municipality Chongqing, and six provinces: Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, and Qinghai; and three autonomous regions: Tibet, Ningxia, and Xinjiang (The State Council issued the Decisions on the Implementation of Certain Policy Measures for the Development of the Western Region, 2000).

Less developed city: a dummy variable is constructed to characterize the GDP of the city in which the target firm is located. If the target company's city GDP is below the sample median, the value is 1, otherwise it is 0.

State-owned enterprise Target (SOE target) was captured if their immediate or ultimate owner belonged to any administrative level of government (Li, Li, & Wang, 2018). To determine the immediate or ultimate owner, it is sometimes necessary to track through the entire ownership structure and calculate the proportion of ownership directly and indirectly owned in a generally pyramidal structure (Claessens, Djankov, & Lang, 2000). The key independent variable, the SOE, was collected primarily from the Securities Data Corporation (SDC) database and supplemented by the CSMAR database. A target company was coded as the SOE if its state-owned shares were the largest shareholder (Berkman, Cole, & Fu, 2010); or if all state-owned shares exceeded 50% of all shares (Li, Xia & Lin, 2017); or if the company official information indicated that the ultimate

Table 4.1: Descriptive statistics and correlation matrix

Variable	Obs	Mean	Std. Dev.	Min	Max	1	2	3	4
1.HRS	8740	0.660	0.474	0	1	1			
2.Percentage sought	8740	57.959	34.425	0.410	100	0.004	1		
3.Cross industry acquisition	8740	0.589	0.492	0	1	0.069	0.011	1	
4.Friendly attitude	8740	0.910	0.287	0	1	0.139	0.246	-0.006	1
5.Deal size	8740	2.915	2.021	-3.325	6.575	0.095	0.318	-0.005	0.082
6.Stock payment	8740	0.104	0.305	0	1	0.026	0.248	0.029	0.033
7.Cash payment	8740	0.449	0.497	0	1	0.194	-0.207	0.005	0.033
8.Target public status	8740	0.031	0.174	0	1	-0.031	-0.133	-0.020	-0.129
9.Target subsidiary	8740	0.450	0.498	0	1	-0.041	0.052	-0.031	0.022
10.Acquirer size	8741	1.121	1.219	-6.097	12.647	0.002	0.008	0.016	-0.007
11.Acquirer leverage	8740	0.392	0.204	0.115	0.840	0.011	-0.007	0.028	-0.017
12.Acquisition experience	8740	0.085	0.279	0	1	0.036	-0.128	-0.052	0.023
13.Less-developed city	8740	0.502	0.500	0	1	-0.468	-0.011	-0.079	-0.072
14.Western City	8740	0.134	0.341	0	1	-0.122	-0.011	-0.000	-0.021
15.SOE target	8740	0.089	0.285	0	1	-0.038	0.053	-0.029	-0.041
16.Infrastructure industry	8740	0.113	0.317	0	1	-0.161	0.007	-0.005	-0.013
17.Slope	8740	2.301	2.269	0.039	9.249	-0.231	0.004	-0.007	-0.035

5	6	7	8	9	10	11	12	13	14	15	16	17
1												
0.305	1											
-0.208	-0.307	1										
0.159	-0.025	-0.036	1									
-0.008	0.065	0.017	-0.163	1								
0.010	0.008	-0.012	-0.013	-0.012	1							
0.011	0.005	-0.025	0.009	-0.008	-0.009	1						
-0.022	0.032	0.024	-0.024	0.117	0.002	-0.012	1					
-0.061	-0.023	-0.052	-0.003	0.090	-0.031	-0.012	-0.007	1				
0.018	0.009	0.024	-0.005	0.051	-0.016	0.001	-0.016	0.190	1			
0.152	0.164	-0.074	-0.008	0.151	-0.004	-0.003	0.002	0.063	0.063	1		
0.028	0.017	0.030	-0.008	0.083	0.002	-0.014	0.001	0.130	0.072	0.071	1	
-0.014	0.012	0.010	-0.023	0.049	-0.014	-0.018	-0.010	0.199	0.292	0.034	0.085	1

(*Note: N =8740.* This table reports the sample variable summary statistics, e.g., Mean , Standard Deviation, Maximum and Minimum and correlation matrix for all the variables)

controller of the enterprise was the government (Lin & Bo, 2012).**Infrastructure industries**: This paper controlled for infrastructure industry, coded as 1 if the target firm was in infrastructure industries with SIC codes of 40–42, 44, 45, and 47–49, and 0 otherwise. The infrastructure industry, such as the construction of high speed railways, is an industry where large amounts of capital are

invested upfront, mainly from government finance, bank financing and social capital, to facilitate the sustainable development of these industries. However, regulatory barriers to foreign investment in infrastructure industries, which are key development strategies for China, tend to be particularly high (Shapiro, Russell, and Pitt, 2007).

4.3.2 Control Variables

This chapter likewise in line with previous leading literature (Li, Li & Wang, 2018; Li, Xia & Lin, 2017), by employing several control variables to control for the impact of our independent variable of interest -- the HSR on acquisition outcomes. ***Deal attributes:*** **Percentage sought** was constructed as the fraction of ownership that an acquirer had initially sought. Seeking a greater stake may generate more resistance from the host country government (Ferreira, Massa, & Matos, 2010). **Cross-Industry acquisition** was classified as cross-industry M&As based on whether the two-digit SIC codes of acquirers and targets were the same or not. When the two-digit SIC codes of acquirers and targets were identical, it was coded as 1, and 0 otherwise (Sambharya, 1996). **Friendly attitude** was denoted as a dummy variable, coded as 1 if the SDC database classified the deal as friendly and 0 otherwise (Li, Li, & Wang, 2018). A positive and friendly attitude from the host country may effectively help the acquirer to complete a transaction; **Deal value** was captured as the natural logarithm of a deal's total value. The greater the transaction value, the more likely it attracts the host government and society's attention and vigilance, thus increasing the resistance to the completion of an M&A (Ferreira, Massa, & Matos, 2010); **Stock payment** was defined as a dummy variable indicating whether an acquirer was paid entirely in share in a transaction. The dummy variable took 1 if the entire payment method for an M&A transaction was through stock payment and 0 otherwise. Stock acquisition methods may make it more difficult for acquirers to complete transactions (Aguilera *et al*, 2006); **Cash payment** was defined as a dummy variable indicating whether an acquirer was paid entirely in cash in a transaction. The dummy variable took 1 if the entire payment method for an M&A transaction was through cash payment and 0 otherwise.

Target attributes: **Target public status** took 1 if the target was a publicly listed company and 0 otherwise; **Target subsidiary** was coded as 1 if the target was a subsidiary company and 0 otherwise.

Acquirer size was captured as the natural logarithm of acquirers' total assets. (Boateng, *et al*, 2018).

Acquirer leverage was measured as the ratio of acquirer company total debt to total assets in the year prior to the focal deal announcement (Antoniou, Guney, & Paudyal , 2008; Lang, Ofek, & Stulz, 1996). **Acquisition experience** was defined as the acquirer's attempts to acquire shares of the target company in the five years prior to the focal transaction. Thus, the acquirer's previous experience in attempting to acquire shares of the target company, whether unsuccessful or successful, was created as the value of 1, and 0 otherwise (Li, Xia & Lin, 2017; Li, Li & Wang, 2018).

4.3.3 Methodology

The difference-in-differences approach (DID) is a statistical technique used in quantitative research in econometrics and the social sciences that attempts to mimic experimental research designs by using observational research data, to study the differential effects between a 'treatment group' and a 'control group' in a natural experiment. (the explanatory or independent variable) on the outcome (i.e. the response or dependent variable) by comparing the mean change in the outcome variable over time in the treatment group with the mean change in the control group. Although it is designed to mitigate the effects of extraneous factors and selection bias, depending on how the treatment group is selected, this approach may still be subject to certain biases (e.g. mean regression, reverse causality and omitted variable bias).

In this Chapter, in order to capture the net effect of changes in acquisition outcomes (e.g.,acquisition completion, probability, and duration) after the opening of HSR, we we employ the DID model to assess the impact of the quasi-natural experimental event "opening of the HSR" on acquisition outcomes. Our treatment group (Treatment Group) is a sample of is a sample of the opening of the HSR in the target city before the M&A transaction, and our control group (Control Group) is a sample of the opening of the HSR in the target city before the M&A transaction.

Logit models are a form of statistical model used to predict the probability of an event occurring. logit models are based on logistic functions and are used to model situations where there are two/binary possible outcomes or categorical outcomes. logistic functions can be used to model a variety of situations, including binary dependent variables, dichotomous dependent variables and categorical data. Our study of the likelihood of M&A completion and the likelihood of cross-border M&A uses logit models to predict in empirical research. In studying the impact of the opening of

the HSR on the duration of acquisition, we apply OLS models in this section. Ordinary least squares (OLS) is widely used to estimate the parameters of linear regression models. the OLS estimator minimises the sum of squared errors (the difference between the observed and predicted values) and is suitable for applications such as acquisition duration, where the number of days of an acquisition is the dependent variable. To examine how the opening of the HSR can affect the duration of acquisition completion, we carry out the OLS regressions, where acquisition duration is measured the indicator as the number of days for the difference between the acquisition announcement date and the completion date.

4.4 Empirical and Analysis

Table 4.1 reports the summary statistics and correlation matrix for all the variables used to examine the potential multicollinearity issues in this research. According to Zhang, Zhou, and Ebber (2010), when the correlation of the variables is lower than the commonly used cut-off threshold of 0.7, no multicollinearity problem needs to be considered. As shown in Table 4.1, all correlations of variables we studied are below 0.7.

The dependent variables are the probability of cross-border M&As, the likelihood of cross-border acquisition completion, and the duration time of cross-border acquisition completion, with empirical results corresponding to column (1), (2), and (3) in Table 2, respectively. To examine the impact of the opening of the HSR on the cross-border M&As, Table 4.2 reports the estimation on Eq.(1), Eq.(2), and Eq.(3) using the multi-period differences-in-differences (DID) model.

In Table 4.2, our focus is on the coefficient of the key explanatory variable HSR. Specifically, In Column 1, we estimate a logit regression including control variables and fixed effects. The empirical result shows that the opening of HSR increases the probability of cross-border M&As, with an estimated coefficient of 0.634 and significant at the 1% level, supporting Hypothesis 1 that the number of target firms being acquired by foreign bidders significantly increases following the opening of HSR in the city. In Column 2, exploring how HSR affects the likelihood of cross-border acquisition completion using a logit regression, we find that the opening of HSR in the city increases the likelihood of cross-border acquisition completion (coefficient = 0.425, $p < 0.01$), which is consistent with our Hypothesis 2. Furthermore, In Column 3, we further conduct the

results of OLS model for acquisition duration, the estimated coefficient on HSR is negative and significant (coefficient = -98.804, $p < 0.01$), confirming Hypothesis 3 that the duration time of cross-border acquisition completion reduces by 98.8 days after the city opens the HSR services.

4.5 Heterogeneity Analysis

4.5.1 City Characteristics and the Opening of HSR

This research considers how the opening of HRS, as the moderating variable, influence the impact of the city-level characteristics on cross-border M&A outcomes (i.e., cross-border acquisition probability, acquisition completion, and acquisition duration). According to the level of economic development and geographical division of the city (Jin, Yang, & Zhang, 2021; Han, Li & Yang, 2022). The State Council issued the Decisions on the Implementation of Certain Policy Measures for the Development of the Western Region, 2000). Dummy variables are constructed based on the level of GDP of the city and whether the city is divided into western regions. Less-developed city is measured by if the city GDP is below the sample median, and

Less-developed city and western-regional city are constructed to measure cities that have a lower GDP development than the sample median or are classified in the western region. These cities are characterised their lack of direct external direct investment opportunities, especially foreign direct investment (FDI), compared to the economically developed and eastern coastal cities, due to their underdeveloped economies and remote locations. Furthermore, such long-term trade isolation and low economic activity has led to the formation of trade barriers by local governments and target enterprises in these cities, which is more likely to detrimental to the outcomes of inward investment, especially cross-border investment. Thus, the chapter investigates whether the opening of HSR can serve as a foreign investment bridge to increase the probability of cross-border M&As in these cities, while as an information bridge to alleviate trade barriers in these cities, increasing the likelihood of acquisition completion and reducing the duration of acquisition completion. According to Table 4.5, in Columns 1, 4, and 7. the empirical results show that less-developed and western-regional cities do have a lower probability of cross-border M&As, a lower likelihood of M&A completion and a longer M&A duration than more-developed and eastern-regional cities.

When the HRS services are opened up, the positive contribution to cross-border M&As is more

pronounced in less developed and western cities, in Columns 2 and 3, we find that the opening of

Table 4.2: Results of logit and OLS models predicting acquisition outcomes

Variable	Probability	Success	Duration
	(1)	(2)	(1)
HRS	0.634***	0.425***	-98.804***
	(0.095)	(0.163)	(18.278)
Deal attributes			
Percentage sought	-0.001	0.005***	-0.043
	(0.001)	(0.002)	(0.177)
Cross-industry acquisition	-0.158**	-0.234**	31.398**
	(0.068)	(0.113)	(12.866)
Friendly attitude	0.971***	0.023***	15.732
	(0.117)	(0.195)	(21.590)
Deal size	0.014	0.100	5.021*
	(0.018)	(0.025)	(2.957)
Stock payment	-0.964***	-0.194	54.42**
	(0.124)	(0.231)	(27.168)
Cash payment	-0.983***	0.403	19.517
	(0.075)	(0.129)	(14.051)
Target attributes			
Target public status	0.450***	-0.095	-9.070
	(0.163)	(0.231)	(26.929)
Target subsidiary	-0.587***	-0.152	4.282
	(0.067)	(0.113)	(12.710)
Acquirer attributes			
Acquirer size	0.018	0.036	0.756
	(0.026)	(0.465)	(5.206)
Acquirer leverage	5.090***	0.547	7.077
	(1.078)	(0.614)	(8.931)
Acquisition experience	0.739***	0.174	-7.042
	(0.109)	(0.168)	(7.581)
Constant	1.472	0.005	69.673
	(0.434)	(0.678)	(30.188)
Observations	8740	1801	903
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes
Pseudo R^2	0.238	0.484	0.214

(*Note:* N =8740. This table reports the estimate of the logit and OLS model of the likelihood, success, and duration of engaging in a cross-border M&A. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

HRS as a foreign investment bridge significantly increases the probability of cross-border M&As (coefficient = 0.279, $p < 0.05$; coefficient = 0.562, $p < 0.05$), and as an information bridge alleviate

trade barriers to increase the likelihood of acquisition completion and reducing the duration of acquisition completion (coefficient = 0.525, $p < 0.05$, coefficient = 0.911, $p < 0.05$; and coefficient = - 8.270, $p < 0.05$; coefficient = - 157.846, $p < 0.01$) in less-developed and western-regional cities. These results imply that the positive impact of the opening of HSR services on cross-border M&A is more pronounced in less economically developed cities and western cities, while promoting a more balanced economic and geographical development in China. These results imply that the opening of HSR services exerts a more significant positive impact on less economically developed and western cities, while further promoting balanced economic and geographical development in China.

4.5.2 Target Firm Characteristics and the Opening of HSR

Target firm-level characteristics greatly influence the outcomes of cross-border M&As. This chapter also considers the opening of HSR how to moderate the relationship between target firm-level characteristics (i.e.,the state-owned enterprise (SOE) and infrastructure industry) and cross-border M&A outcomes. As reported by Columns 1, 4, and 7 in Table 4.6, we find that foreign companies are less likely to acquire the SOE or target companies in the infrastructure industry than the non-SOE or target companies in the non-infrastructure industry (coefficient = - 0.418, $p < 0.05$). Also, because of the political sensitivity of the SOE and target companies in the infrastructure industry, foreign acquirers targeting such companies often raise legitimacy concerns that tend to reduce the likelihood of acquisition completion and lengthen the acquisition duration (coefficient = - 1.180, $p < 0.05$; coefficient = 173.396, $p < 0.01$). When the HSR services are opened up, in Columns 2 and 3, the empirical results show that HSR significantly promote the probability of cross-border M&As in the SOE and target companies in the infrastructure industry (coefficient = - 1.180, $p < 0.05$; coefficient = 173.396, $p < 0.01$). Furthermore, the opening of HSR in the target company's city is likely to complete the acquisition and shorten the acquisition duration (coefficient = 1.032, $p < 0.05$, coefficient = 1.346, $p < 0.01$; and coefficient = - 486.612, $p < 0.01$; coefficient = - 265.679, $p < 0.01$) as shown in Column 5, 6, 8, and 9, implicating that HRS can act as an information bridge to mitigate the negative impact of legitimacy concerns on the outcomes of cross-border M&As.

4.6 Robustness Check

4.6.1 Parallel Trend Test

To investigate whether the sample in this paper satisfies the parallel trend hypothesis, we define six year dummy variables, Year - 2, Year - 1, Year 0, Year 1, Year 2 and Year 3, representing two years prior to the opening of the HSR to three years after the opening of the HSR, respectively. The coefficients of Eq.(4) are then estimated by replacing HSR in Eq. (1), Eq.(2) and Eq.(3) with the product of the above six time dummy variables and HSR is estimated.

$$y_{i,t} = \alpha + \sum_{n=-2}^{3} \beta_n (Year\_n)_{i,t} * HRS_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (4)$$

The results in Table 4.7 show that the coefficients on both Year - 2 * HSR and Year - 1* HSR are not significant, i.e. the trends in the treatment and control groups are not significantly different prior to the opening of HSR. Therefore, the indicators related to the prediction of cross-border M&A outcomes by the opening of HSR are generally consistent with the hypothesis of parallel trends by the DID method. The coefficients for Year 0 * HSR to Year 3 * HSR are reflected in Columns 1, 2 and 3 respectively, which shows that the impact of HSR on the likelihood of cross-border M&As gradually increases in the year of opening, while the impact on the likelihood of cross-border M&A completion and acquisition duration gradually increases after two years of opening. This suggests that the opening of HSR can drive M&A transactions in to the local market efficiently and in real time, however, regarding the cross-border M&A completion and duration, it can take some time for local governments and target companies to adapt.

In order to further control the endogeneity, this paper uses the average slope of the target company's location (Slope) to construct an instrumental variable of' whether the city where the listed company is located opened to HSR by referring to Li, Xia, & Lin (2017), and uses two-stage least squares (2SLS) to further control the effect of endogeneity. The regression is shown below, where Eq.(6) is the first stage of the two-stage least squares method. The first stage of the two-stage least squares method is to regress whether the listed company's city opens HSR on the instrumental variable 'the average slope of the listed company's location, and estimate the predicted probability of the target company's location opening to HSR (prob_HSR). The second stage examines the impact of the probability of HSR opening in the location of the target company (prob_HSR) on the outcomes of cross-border M&As),

$$y_{i,t} = \alpha + \sum_{n=-2}^{3} \beta_n (Year\_n)_{i,t} * HRS_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (4)$$

$$HRS_{i,t} = \alpha + \beta_1 Slope_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (5)$$

In order to further control the endogeneity, this paper uses the average slope of the target company's location (Slope) to construct an instrumental variable of 'whether the city where the listed company is located opened to HSR by referring to Li *et al*. (2017), and uses two-stage least squares (2SLS) to further control the effect of endogeneity. The regression is shown below, where Eq.(6) is the first stage of the two-stage least squares method. The first stage of the two-stage least squares method is to regress whether the listed company's city opens HSR on the instrumental variable the average slope of the listed company's location, and estimate the predicted probability of the target company's location opening to HSR (prob_HSR). The second stage examines the impact of the probability of HSR opening in the location of the target company (prob_HSR) on the outcomes of cross-border M&As), i.e., Eq.(7).

$$y_{i,t} = \alpha + \beta_1 prob\_HSR_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (6)$$

Columns (4) (5) and (6) of Table 4.8 report the results of the first stage regressions, respectively, where the coefficients of a series of slopes (Slope* Year) are negative and significant at the 5% significance level, indicating that city slope is indeed negatively related to the probability of opening a HSR. The coefficients of prob_HSR in columns (1) - (2) are both positive, and the coefficient of prob_HSR in (3) is negative and all are significant at the 5% significance level, indicating that the opening of HSR increases the probability of cross-border M&As, the likelihood of acquisition completion, and at the same time decreases the duration of acquisition completion. Moreover, the p-value of the Anderson canon. corr. LM statistics are at the 5% significance level, indicating that the instrumental variables do not have the problem of under-identification and for the minimum characteristic statistic in the Cragg-Donald Wald F statistic is far greater than the 5% critical value, thus there is ample evidence to reject the null of weak instruments, indicating that the chosen instruments are relevant and hence there is no problem of weak instruments (Bascle, 2008; Mukhopadhyay & Chakraborty, 2017).

We also conduct the Hansen J statistics test for over-identification test in second-stage regression, the results show the null of exogenous instrument is not rejected with p-values of 0.105 (for Column 1), 0.269 (for Column 2), and 0.711(for Column 3).

Considering that airplanes have a substitute role for HSR in travel choices, foreign acquirers communication with local governments and target companies may be achieved through airplanes.We therefore control for the airport dummy variable (Airport) in regression equation (7)

$$y_{i,t} = \alpha + \beta_1 HSR_{i,t} + \beta_2 Airport_{i,t} + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (7)$$

by taking 1 if the city in which target firm *i* is located has an airport in year *t* and 0 otherwise.

From the HSR coefficients in Table 4.9, the absolute value of the coefficient decreases after controlling for airports, but is still significant at the 5% level. This shows that airplanes have a substitution effect on HSR, but even after controlling for airports, the opening of HSR still increases the probability of cross-border M&As, the likelihood of M&A completion, and reduces the M&A duration.We further examine the robustness of our main empirical results by using a propensity score matching (PSM)-DID model. The PSM-DID model effectively help to control for the effect of inherent differences between the treatment and control groups. We first estimated the following model (7):

$$HRS_{i,t} = \alpha + \sum_j \beta_j Controls_{i,t-1} + \sum Year + \sum Industry + \sum City + \varepsilon_{i,t} \quad (7)$$

where HRS is an indicator variable that equals 1 if the city has opened HSR, and 0 otherwise. Control variables are the same as those in Eq. (1).

We then obtain the predicted value of HRS (i.e., propensity score) for each city. Next, we match each treatment city that opened a HSR with the control city that possesses the closest propensity score and without building a HSR for the entire sample period. a HSR during the entire sample period. We then repeated our tests with the construct PSM sample in Table 4.4. The results are showed in Columns 1 and 2, where the estimated coefficient on HRS is positive and significant (coefficient = 0.051, $p < 0.05$, and coefficient = 0.017, $p < 0.05$, respectively), and in Column 3, where the estimated coefficient on HRS is negative and significant (coefficient = - 100.369, $p < 0.01$), consistent with the results in Table 4.2.

Table 4.3: Propensity score matching

	(1)				(2)				(3)			
Variable	Treated	Control	Diff	P-Value	Treated	Control	Diff	P-Value	Treated	Control	Diff	P-Value
Deal attributes												
Percentage sought	58.063	57.775	0.288	0.106	54.239	56.803	-2.564	0.140	55.539	54.131	0.694	0.566
Cross-industry acquisition	0.536	0.542	-0.006	0.566	0.585	0.572	0.013	0.588	0.543	0.498	0.603	0.188
Friendly attitude	0.882	0.854	0.028	0.198	0.938	0.950	-0.012	0.289	0.938	0.935	0.001	0.887
Deal size	2.860	2.650	0.210	0.197	2.914	3.052	-0.138	0.175	3.117	2.889	0.000	0.122
Stock payment	0.103	0.093	0.010	0.529	0.055	0.069	-0.014	0.190	0.053	0.072	0.190	0.252
Cash payment	0.197	0.315	-0.118	0.911	0.305	0.241	0.064	0.194	0.313	0.303	0.000	0.764
Target attributes												
Target public status	0.037	0.039	-0.002	0.909	0.069	0.072	-0.003	0.776	0.070	0.067	0.683	0.891
Target subsidiary	0.473	0.479	-0.006	0.116	0.368	0.387	-0.019	0.422	0.373	0.411	0.640	0.256
Acquirer attributes												
Acquirer size	1.112	1.117	-0.005	0.577	1.137	1.094	0.043	0.408	1.008	0.943	0.856	0.462
Acquirer leverage	0.114	0.191	-0.077	0.321	0.009	0.005	0.004	0.154	0.010	0.005	0.005	0.413
Acquisition experience	0.064	0.071	-0.007	0.324	0.115	0.107	0.008	0.071	0.125	0.120	0.120	0.833

	(1)		(2)		(3)	
Variable	Pre-match	Post-match	Pre-match	Post-match	Pre-match	Post-match
Deal attributes						
Percentage sought	-0.003**	-0.001	-0.002***	-0.001	-0.001**	-0.002
	(0.010)	(0.080)	(0.003)	(0.002)	(0.003)	(0.004)
Cross-industry acquisition	-0.055	-0.006	0.012***	0.014	-0.010	-0.014
	(0.070)	(0.044)	(0.116)	(0.023)	(0.025)	(0.031)
Friendly attitude	0.111	-0.004	0.029***	0.005	-0.008**	-0.009
	(0.223)	(0.011)	(0.026)	(0.043)	(0.041)	(0.051)
Deal size	0.447**	0.003	-0.001***	0.003	-0.002**	0.012
	(0.018)	(0.001)	(0.003)	(0.005)	(0.006)	(0.017)
Stock payment	0.002	0.002	-0.081	-0.012	0.095	0.122
	(0.115)	(0.118)	(0.227)	(0.032)	(0.052)	(0.063)
Cash payment	-0.147**	0.005	0.015***	0.003	0.030***	0.041
	(0.074)	(0.006)	(0.024)	(0.014)	(0.027)	(0.033)
Target attributes						
Target public status	0.568**	0.023	0.051	0.023	-0.005	-0.010
	(0.228)	(0.014)	(0.030)	(0.040)	(0.052)	(0.062)
Target subsidiary	-0.206***	0.008	0.014**	0.005	0.014**	0.018
	(0.065)	(0.005)	(0.200)	(0.022)	(0.024)	(0.030)
Acquirer attributes						
Acquirer size	0.017	0.001	-0.006	-0.005	-0.012**	-0.010
	(0.025)	(0.012)	(0.012)	(0.008)	(0.010)	(0.012)
Acquirer leverage	0.302	0.044	-0.023*	0.072	-0.268*	0.125
	(0.830)	(0.032)	(0.120)	(0.042)	(0.132)	(0.184)
Acquisition experience	0.242*	-0.003	0.051	0.060	0.014	0.007
	(0.125)	(0.008)	(0.037)	(0.021)	(0.034)	(0.042)
Constant	0.401*	0.388	-0.050	-0.128	-0.104	-0.092
	(0.237)	(0.344)	(0.073)	(0.146)	(0.546)	(0.192)
Observations	8,732	6,159	1,801	1,070	903	716
Year fixed effects	Y	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y	Y
City fixed effects	Y	Y	Y	Y	Y	Y
Pseudo R^2	0.066	0.001	0.112	0.041	0.181	0.032

(*Note:* N=8740. This table reports the results of a propensity score matching (PSM) routine for HSR and non- HSR from 2005 to 2020. We match firms using a nearest neighbor propensity score matching, Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively

Table 4.4: Propensity score matching (PSM)-DID model

Variable	Probability	Success	Duration
	(1)	(2)	(1)
HRS	0.051**	0.017**	- 100.369***
	(0.030)	(0.052)	(19.219)
Deal attributes			
Percentage sought	-0.005***	0.001**	-0.071
	(0.002)	(0.004)	(0.206)
Cross-industry acquisition	-0.012	-0.074**	-30.085**
	(0.011)	(0.027)	(15.064)
Friendly attitude	0.086***	-0.024***	16.833
	(0.021)	(0.054)	(24.903)
Deal size	-0.004	0.018	5.422*
	(0.005)	(0.007)	(3.444)
Stock payment	-0.119***	-0.028	58.179*
	(0.015)	(0.069)	(30.777)
Cash payment	-0.132***	0.093	24.718
	(0.021)	(0.040)	(16.159)
Target attributes			
Target public status	0.139***	0.032	-14.941
	(0.042)	(0.089)	(30.341)
Target subsidiary	-0.049***	-0.051*	6.225
	(0.008)	(0.026)	(14.666)
Acquirer attributes			
Acquirer size	-0.004	-0.015	0.167
	(0.002)	(0.013)	(5.962)
Acquirer leverage	0.674***	-0.086	-49.580
	(1.142)	(0.193)	(91.008)
Acquisition experience	0.050***	0.023	-19.361
	(0.017)	(0.042)	(20.515)
Constant	0.388	0.537	67.392
	(0.344)	(0.196)	(94.262)
Observations	6,159	1,070	716
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes
Pseudo R^2	0.243	0.192	0.232

(*Note:* N=6159. This table examines the robustness of our main empirical results by using a propensity score matching (PSM)-DID model. The PSM-DID model effectively help to control for the effect of inherent differences between the treatment and control groups.Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

4.7 Conclusion and Discussion

This chapter investigates the relationship between infrastructure development and legitimacy concerns, and regional economic development through cross-border M&As. The empirical findings in this chapter show that: first, the opening of HSR in a city significantly both the probability and completion of cross-border acquisitions, as well as reduce the duration of such acquisitions. These results are robust to the inclusion of control variables, instrumental variables method, aircraft traffic controls, and a propensity score matching DID model. Moreover, this positive effect is more pronounced when target companies: i) are state-owned enterprise (SOE); ii) are in the Infrastructure industry, and when target companies in cities: iii) are less-developed city; iv) are western-region city. These findings suggest that HRS construction can mitigate the negative impact of legitimacy concerns on cross-border M&As, as well as promote the development of a balanced regional economy.

Theoretical contributions:

On a theoretical level, this chapter takes the unique perspective of the opening of HSR, and exploring the role played by the construction of HSR in corporate acquisitions expands the intersection between the fields of geography and finance and enriches the literature on the role of financial intermediation in corporate acquisitions. Specifically, this section extends information asymmetry theory from a geographical perspective, where we argue that the opening of HSR shortens geographical distances and increases communication opportunities for both the acquirers and targets, thereby reducing information asymmetry, alleviating legitimacy concerns and achieving better acquisition outcomes.

Empirical contributions:

With these findings, there is limited previous research focusing on the impact of HSR in legitimacy concerns raised by SOE target among cross-border M&As.Infrastructure development is generally considered to be an important engine for boosting economic activity and an essential part of many governments' proposed stimulus plans in the post-epidemic era. The construction of HSR as a key to infrastructure development affects the recovery of the economy. Over the past 20 years, China has been leading the world in the rapid development of HSR, this provides a favourable environment for cross-border M&As and a good database to study this transaction. Overall, our

study finds that the opening of HSR serves as the foreign investment and information bridges to increases the probability of cross-border M&As for foreign companies by 63.4% and the likelihood of acquisition completion by 42.5%, respectively, and shorten the acquisition duration by an average of 98.4 days, helping foreign acquirers to overcome the trade barriers and legitimacy concerns, thus facilitating the probability, quality and efficiency of cross-border acquisitions.

Managerial contributions:

These empirical results tend to serve as a reference for governments around the world that have issued or are preparing to issue infrastructure stimulus packages. Infrastructure development such as HSR construction can stimulate economic activity, attract more foreign investment to economically less developed and remote regions, and promote a balance in their regional economic development. Our findings also provide guidelines for foreign acquirer in managing their cross-border M&As. The construction of HSR in the host country could mitigate the information asymmetry problem arising from its intention to acquire a SOE as a target company, thereby mitigating the negative impact of legality concerns.

Table 4.5: Results of logit and OLS models predicting the relationship between city characteristics and the opening of HSR

Variable	Probability	Probability	Probability	Success	Success	Success	Duration	Duration	Duration
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
HRS	0.405***	0.219*	0.354***	0.517***	0.226*	0.466***	--107.864***	-104.091***	-101.023***
	(0.102)	(0.143)	(0.095)	(0.169)	(0.213)	(0.171)	(18.592)	(24.298)	(18.624)
Deal attributes									
Percentage sought	-0.002*	-0.003	-0.002*	0.005***	0.005***	0.005***	-0.043	-0.020	-0.024
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.176)	(0.177)	(0.175)
Cross-industry acquisition	-0.152**	-0.149**	-0.149**	-0.222*	-0.214*	-0.230**	-32.858**	-33.790***	-34.023**
	(0.069)	(0.069)	(0.069)	(0.113)	(0.113)	(0.113)	(12.784)	(12.825)	(12.716)
Friendly attitude	0.976***	0.981***	0.979***	0.029	0.012	0.034***	17.467	15.116	19.079
	(0.118)	(0.118)	(0.119)	(0.195)	(0.196)	(0.196)	(21.436)	(21.476)	(21.336)
Deal size	0.016	0.011	0.018	0.098***	0.100***	0.102***	5.188*	4.860*	4.271
	(0.018)	(0.018)	(0.018)	(0.026)	(0.026)	(0.026)	(2.937)	(2.945)	(2.925)
Stock payment	-0.968***	-0.967***	-0.976***	-0.184	-0.169	-0.182	59.282**	58.214**	59.624**
	(0.125)	(0.126)	(0.125)	(0.231)	(0.230)	(0.231)	(26.989)	(27.120)	(26.857)
Cash payment	-0.977***	-0.975***	-0.973***	0.397***	0.399***	0.389***	20.396	19.788	22.391
	(0.075)	(0.075)	(0.074)	(0.129)	(0.129)	(0.129)	(13.948)	(13.992)	(13.889)
Target attributes									
Target public status	0.422**	0.424**	0.414**	-0.094	-0.082	-0.119	-8.200	-6.727	3.619
	(0.164)	(0.165)	(0.164)	(0.231)	(0.232)	(0.232)	(26.738)	(26.817)	(26.746)
Target subsidiary	-0.574***	-0.571***	-0.574***	-0.151	-0.137	-0.153	1.599	3.106	3.026
	(0.067)	(0.067)	(0.068)	(0.113)	(0.114)	(0.114)	(12.633)	(12.678)	(12.549)
Acquirer attributes									
Acquirer size	-0.026	-0.028	-0.026	-0.034	-0.032	-0.034	1.895	1.941	2.294
	(0.021)	(0.026)	(0.021)	(0.047)	(0.047)	(0.047)	(5.175)	(5.190)	(5.151)
Acquirer leverage	5.131***	5.139***	5.070***	0.522	0.509	0.479	12.580	14.309	19.583
	(1.077)	(1.078)	(1.075)	(0.614)	(0.619)	(0.620)	(8.395)	(8.610)	(8.078)
Acquisition experience	0.719***	0.714***	0.718***	0.182	0.176	0.171	-2.810	-5.359	-4.361
	(0.110)	(0.111)	(0.110)	(0.168)	(0.169)	(0.169)	(7.537)	(7.555)	(17.298)
Less-developed city	-0.347***	-0.527***	-0.349***	-0.250**	-0.013*	-0.264**	35.801***	33.215*	41.406***
	(0.076)	(0.124)	(0.076)	(0.120)	(0.168)	(0.121)	(13.206)	(18.864)	(13.165)
Western-region city	-0.763***	-0.755***	-1.005***	-0.085**	-0.108*	-0.294*	51.183**	51.315**	127.945***
	(0.114)	(0.113)	(0.152)	(0.206)	(0.206)	(0.269)	(23.059)	(23.157)	(31.316)
Less-developed city × HRS		0.279**			0.525**			-8.270**	
		(0.151)			(0.234)			(25.948)	
Western-region city × HRS			0.562**			0.911**			-157.846***
			(0.221)			(0.418)			(0.418)
Constant	1.950	2.088	1.975	-0.251	-0.122	-0.232	101.306	102.680	104.283
	(0.451)	(0.457)	(0.451)	(0.691)	(0.692)	(0.691)	(30.388)	(30.836)	(39.879)
Observations	8,740	8,740	8,740	1801	903	1801	903	903	903
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.247	0.247	0.248	0.097	0.214	0.099	0.145	0.141	0.154

(*Note:* N=8740. This table reports the relationship between city characteristics and the opening of HSR. Standard errors are reported in parentheses. ***, ** and * statistical significance at the 1%, 5% and 10% levels, respectively)

Table 4.6: Results of logit and OLS models predicting the relationship between target firm characteristics and the opening of HSR.

Variable	Probability	Probability	Probability	Success	Success	Success	Duration	Duration	Duration
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
HRS	0.581***	0.553***	0.515***	0.423**	0.369**	0.338**	-99.050***	-63.661***	-92.645***
	(0.097)	(0.099)	(0.099)	(0.164)	(0.166)	(0.167)	(17.246)	(16.668)	(17.093)
Deal attributes									
Percentage sought	-0.002	-0.002	-0.002	0.005***	0.005***	0.005***	-0.050	-0.127	0.073
	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.002)	(0.167)	(0.158)	(0.165)
Cross-industry acquisition	-0.167**	-0.168**	-0.162**	-0.226**	-0.237**	-0.220**	-32.270***	-27.014**	-31.599***
	(0.068)	(0.068)	(0.069)	(0.113)	(0.113)	(0.113)	(12.149)	(11.486)	(12.002)
Friendly attitude	0.941***	0.936***	0.938***	0.009	0.019	0.035	9.032	14.092	10.705
	(0.117)	(0.118)	(0.118)	(0.196)	(0.197)	(0.197)	(20.400)	(19.272)	(20.155)
Deal size	0.023	0.022	0.022	0.109***	0.106***	0.109***	0.689	2.048	0.121
	(0.018)	(0.018)	(0.018)	(0.026)	(0.026)	(0.026)	(2.822)	(2.668)	(2.790)
Stock payment	-0.924***	-0.934***	-0.925***	-0.202	-0.202	-0.204	48.816*	42.985*	51.219**
	(0.125)	(0.126)	(0.125)	(0.231)	(0.231)	(0.231)	(25.632)	(24.214)	(25.325)
Cash payment	-0.987***	-0.988***	-0.983***	0.412***	0.415***	0.418***	19.581	19.026	16.951
	(0.075)	(0.075)	(0.075)	(0.129)	(0.130)	(0.129)	(13.251)	(12.515)	(13.103)
Target attributes									
Target public status	0.438**	0.448**	0.444***	-0.143	-0.138	-0.145	10.798	12.459	11.329
	(0.163)	(0.163)	(0.163)	(0.232)	(0.233)	(0.234)	(25.489)	(24.072)	(25.179)
Target subsidiary	-0.536***	-0.537***	-0.534***	-0.133	-0.137	-0.128	0.398	3.097	-3.723
	(0.067)	(0.068)	(0.068)	(0.114)	(0.233)	(0.114)	(11.991)	(11.328)	(11.879)
Acquirer attributes									
Acquirer size	-0.019	-0.019	-0.019	-0.038	-0.037	-0.040	0.021	-1.764	0.145
	(0.026)	(0.026)	(0.023)	(0.047)	(0.047)	(0.047)	(4.913)	(4.643)	(4.853)
Acquirer leverage	5.161***	5.114***	5.188***	0.510	0.526	0.527	15.139	23.675	6.007
	(1.105)	(1.093)	(1.106)	(0.616)	(0.615)	(0.616)	(5.035)	(6.425)	(4.274)
Acquisition experience	0.727***	0.726***	0.731***	0.145	0.115	0.148	5.738***	-5.651	13.047
	(0.109)	(0.109)	(0.109)	(0.168)	(0.168)	(0.169)	(13.206)	(15.731)	(16.531)
State-owned target	-0.750***	-0.968***	-0.752***	-0.564**	-1.041***	-0.576**	247.472***	455.181***	257.755***
	(0.135)	(0.187)	(0.135)	(0.247)	(0.344)	(0.249)	(26.259)	(32.370)	(26.036)
Infrastructure industry	-0.418**	-0.417***	-0.571***	-1.187**	-1.180**	-1.170***	162.513***	173.396***	317.705***
	(0.184)	(0.185)	(0.192)	(0.531)	(0.531)	(0.569)	(47.274)	(44.659)	(57.585)
State-owned target × HRS		0.458*			1.032**			-486.612***	
		(0.262)			(0.495)			(48.739)	
Infrastructure industry × HRS			0.728***			1.346***			-265.679***
			(0.221)			(0.457)			(57.684)
Constant	1.787	1.802	1.701	0.143	-0.174	-0.212	64.217	43.433	53.806
	(0.458)	(0.458)	(0.455)	(0.683)	(0.683)	(0.687)	(85.055)	(80.353)	(84.049)
Observations	8,740	8,740	8,740	1,801	1,801	1,801	903	903	903
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.242	0.243	0.244	0.099	0.101	0.103	0.227	0.311	0.246

(*Note:* N=8740. This table reports the relationship between target firm characteristics and the opening of HSR.. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively

Table 4.7： Addressing endogeneity: Parallel Trend Test

Variable	Probability	Success	Duration
	(1)	(2)	(1)
Year -2 * HSR	-0.074	-0.427	6.816
	(0.150)	(0.228)	(6.003)
Year -1 * HSR	-0.035	-0.084	22.829
	(0.159)	(0.255)	(6.865)
Year 0 * HSR	0.426***	-0.085	12.679
	(0.140)	(0.223)	(2.144)
Year 1 * HSR	0.488***	0.041	14.254
	(0.141)	(0.230)	(1.457)
Year 2 * HSR	0.523***	0.287**	-8.574**
	(0.136)	(0.200)	(0.434)
Year 3 * HSR	0.668***	0.453**	-22.829**
	(0.119)	(0.177)	(6.864)
Deal attributes	Y	Y	Y
Target attributes	Y	Y	Y
Acquirer attributes	Y	Y	Y
Constant	1.350	-0.061	85.380
	(0.430)	(0.682)	(94.933)
Observations	8,740	1,801	903
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes
Pseudo R^2	0.238	0.098	0.104

(*Note:* N=8740. This table investigate whether the sample in this paper satisfies the parallel trend hypothesis, we define six year dummy variables, Year - 2, Year - 1, Year 0, Year 1, Year 2 and Year 3, representing two years prior to the opening of the HSR to three years after the opening of the HSR, respectively. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

Table 4.8: Addressing endogeneity: Two-stage least squares (2SLS)

Variable	Probability	Success	Duration	Probability	Success	Duration
	(1)	(2)	(3)	(4)	(5)	(6)
prob_HSR	0.324***	0.169**	-238.082**			
	(0.042)	(0.137)	(122.805)			
Slope* 2008				-0.027***	-0.018***	-0.013**
				(0.005)	(0.009)	(0.010)
Slope* 2009				-0.054***	-0.017***	-0.016**
				(0.006)	(0.006)	(0.015)
Slope* 2010				-0.067**	-0.021***	-0.034***
				(0.008)	(0.007)	(0.014)
Slope* 2011				-0.053***	-0.032***	-0.018**
				(0.006)	(0.011)	(0.022)
Slope* 2012				-0.484***	-0.026***	-0.001**
				(0.005)	(0.007)	(0.018)
Slope* 2013				-0.058***	-0.048***	-0.025*
				(0.006)	(0.008)	(0.017)
Slope* 2014				-0.054***	-0.057***	-0.045**
				(0.006)	(0.010)	(0.022)
Slope* 2015				-0.033***	-0.060***	-0.008***
				(0.005)	(0.011)	(0.019)
Slope* 2016				-0.040***	-0.042***	-0.009**
				(0.006)	(0.009)	(0.026)
Slope* 2017				-0.047***	-0.038***	-0.031**
				(0.006)	(0.019)	(0.022)
Deal attributes	Y	Y	Y	Y	Y	Y
Target attributes	Y	Y	Y	Y	Y	Y
Acquirer attributes	Y	Y	Y	Y	Y	Y
Constant	0.388	0.491	52.987	-0.181***	0.032	-0.080**
	(0.344)	(0.143)	(89.396)	(0.060)	(0.096)	(0.173)
Anderson canon. corr. LM statistic	16.603***	18.681***	19.273**			
Cragg-Donald Wald F statistic	65.510	23.310	21.760			
5% maximal IV relative bias	20.74	20.53	20.74			
10% maximal IV relative bias	11.49	11.46	11.49			
Hansen-J-statistic(*p* value)	0.105	0.269	0.711			
Observations	8,740	1,801	903	8,740	1,801	903
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.367	0.129	0.361	0.203	0.235	0.163

(*Note:* N=8740. This table indicates that the average slope of the target company's location (Slope constructs an instrumental variable of 'whether the city where the listed company is located opened to HSR, and uses two-stage least squares (2SLS) to further control the effect of endogeneity. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively)

Table 4.9: Addressing endogeneity: HSR and airport

Variable	Probability	Success	Duration
	(1)	(2)	(1)
HRS	0.455*** (0.101)	0.418*** (0.163)	-90.099*** (18.584)
Airport	0.440*** (0.081)	0.167 (0.138)	-26.632* (14.085)
Deal attributes	Y	Y	Y
Target attributes	Y	Y	Y
Acquirer attributes	Y	Y	Y
Constant	1.114** (0.440)	0.113 (0.682)	96.502 (91.102)
Observations	8,740	1,801	903
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes
Pseudo R^2	0.241	0.095	0.223

(*Note:* N=8740. This table presents results from the regression of cross-border probability, completion, and duration on the HRS and airport.Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels)

Chapter 5: Conclusion and Recommendation

5.1 Introduction

This thesis has so far contributed to filling some gaps in the study of the M&A field. An insight is provided into how the relationship between SOEs and legitimacy concerns in cross-border M&As is explored and how the moderating variables of PC advisors, institutional investors, and HSR construction affect SOEs' legitimacy concerns in M&As. The one main question is exploring whether Chinese SOEs in cross-border M&As encounter legitimacy concerns that negatively affect the outcome of M&As. By finding the answer to this question, the thesis can analyse the problem -- legitimacy concerns that SOEs encounter in cross-border M&As, and further explore whether the inclusion of external moderating variables can help SOEs overcome such concerns. These questions are presented through a systematic review of the literature. However, the current literature rarely evaluates these questions' impact on cross-border M&As, particularly in the context of China, involving political connections, institutional ownership (QFIIs/DIIs), and infrastructure construction. Therefore, the objective of this thesis was to contribute to the role of SOEs as acquirers and targets in cross-border M&As in the context of China by developing:

1. A solution to analyse the relationship between SOEs and legitimacy concerns in cross-border M&As.

2. A solution to explore hiring external political connections-- PC advisors, whether or not they can help foreign acquirers to overcome legitimacy concerns when buying SOE targets.

3. A solution to examine holding internal institutional shareholdings-- institutional investors (QFIIs/DIIs) whether or not they can help SOE acquirers to overcome legitimacy concerns when buying targets overseas.

4. A solution to discover infrastructure development -- High-speed Railway construction or not can help foreign acquirers to overcome legitimacy concerns when buying SOE targets.

These four solutions clearly explain the relationship between Chinese SOEs and legitimacy concerns in cross-border M&As, and how the negative impact of legitimacy concerns on such companies can be effectively mitigated, further implications for foreign acquirers who are proposing cross-border M&A intending to acquire SOEs in China, as well as for Chinese SOE

acquirers that are considering M&As abroad.

5.2 Summary and Main Contributions to Knowledge

In chapter 1, this thesis discusses the advantages and disadvantages of Chinese SOEs in cross-border M&As as an acquirer or target from the perspective of theoretical background and current literature review. It also explores in depth the problem of legitimacy concerns arising from the interdependence of SOEs with their home governments in cross-border M&A and predicts the negative impact of legitimacy concerns on the outcome of such enterprises in cross-border M&As. Further, a series of moderating variables are introduced to briefly analyse the effective moderating effect on the negative impact of SOEs' legitimacy concerns from theoretical and existing literature.

Chapter 2 explores the relationship between politically connected financial advisors (PC advisors) and legitimacy concerns raised by SOEs as targets in cross-border M&A transactions. Analysing 2,393 cross-border M&A deals in China, we find that the acquisitions that foreign acquirers attempt to acquire SOEs are less likely to be completed and time-consuming than those of non-SOEs. From a legitimacy perspective, the appointment of PC advisors facilitates acquisition completion. It shortens acquisition duration when the target company is a SOE or in a politically sensitive industry, but this comes at the cost of higher advisory expenses than non-PC advisors. Thus, the unique value of this chapter, as one of the studies on cross-border M&A, is to study the relationship between external political connections and legitimacy concerns of SOE targets in the context of a government-dominated economy.

Chapter 3 investigates the moderating effect of institutional ownership on SOE acquirers through cross-border acquisition outcomes. Based on a sample of 2,203 acquisition deals by Chinese acquirers between 2005 and 2020, it is found that SOE acquirers have a higher probability of cross-border acquisition and a lower likelihood of acquisition completion than non-SOE acquirers. In M&A decision-making, the thesis finds that foreign institutional ownership among SOE acquirers fails to moderate the intensity of cross-border acquisitions according to their investment preferences. In contrast, domestic institutional ownership substantially influences SOE acquirers' M&A decision-making. From the legitimacy perspective, it is further found that foreign institutional ownership among SOE acquirers tends to mitigate the negative impact of legitimacy concerns on

acquisition completion, but domestic institutional investors do not have the same effect. This chapter complements the role of institutional investors in SOEs under a government-led economy in the M&A field.

Chapter 4 examines the impact of the opening of high-speed rail (HSR) services on legitimacy concerns raised by SOE targets through cross-border M&As. Using the multi-period differences-in-differences (DID) model, it is found that the opening of HRS increases both the probability and completion of cross-border acquisitions, as well as reduce the duration of such acquisitions. These results are robust, including control variables, instrumental variables method, aircraft traffic controls, and a propensity score matching DID model. Further analyses show the effect of HSR on facilitating the probability of cross-border M&As when the target company is a SOE or in the infrastructure industry, implying that HRS opening enhances cross-border M&As access to these companies and mitigates legitimacy concerns raised by the Chinese regulatory agency. This chapter shows that HRS acts as a foreign investment and information bridge between the foreign bidder and local target to maintain regional economic development balance and overcome legitimacy concerns in the Chinese market.

5.3 Implications for Future Research

With regard to these findings and limitations in this thesis, there are still some academic issues that remain to be studied in future. These issues can be addressed for new development in some relevant fields.

Future innovation can be developed by complementing research in different country contexts. Because of the specific nature of SOEs in the Chinese market, the thesis has only considered the Chinese market for SOE M&A activity in this study. In future studies, SOEs from several national backgrounds could be considered for comparative analysis (e.g. BRICS, G20, and emerging and developed countries) to more deeply explore and complement the role of SOEs in cross-border M&A worldwide.

Moreover, innovation can be further implemented in the choice of moderating variables. This article explores the impact of political connections, institutional shareholdings, and the construction of high-speed rail on legitimacy concerns in M&As of SOEs, based on the characteristics of the

Chinese market. In future research, we could consider country-level relationships, such as bilateral trade volumes, bilateral political relations, or firm-level, such as SOE M&A experience, political burdens, etc., to explore the complementary effects on legitimacy concerns.

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