An Empirical Analysis of Liability of Origin and Acquisition Completion from the Perspective of Information Asymmetry: Based on the Logit Model

*Shiqiong YIN

*Corresponding Author: 11820029@ zju.edu.cn

School of Management, Zhejiang University, Hangzhou, Zhejiang, China

Abstract—The high failure of different perceptions of the cross-border M&A of emerging market multinational enterprises (EMNEs) hinders their rapid catch-up in developed countries. This study attempts to interpret relevant influencing factors of M&A from the perspective of information asymmetry. Based on the data of Chinese multinational enterprises (CMNEs)' cross-border M&A from 2007 to 2018 in the SDC database, this study establishes a Logit model with the Stata analysis software, explores the impacts of the liability of origin on the CMNEs' cross-border M&A completion, and discusses the moderating effects of the status of enterprises and of employing legal advisors. As a result, it is found that: first, the higher the degree of the liability of origin is, the lower the success rate of M&A shall be; second, the special status of state-owned enterprises will aggravate the degree of the information asymmetry between the two sides, while employing legal advisors can reduce the degree of this asymmetry. Hence the former can significantly enhance the adverse effects of the liability of origin on M&A completion, while the latter can reduce the adverse effects.

Keywords-liability of origin; cross-border acquisition completion; information asymmetry

1 INTRODUCTION

In recent years, China as a developing country with the largest economic volume, has been occupying an important position in the global OFDI [1]. For example, the United Nations' data show that the global FDI fell by 42 % year-on-year in 2020, while China has achieved a contrarian growth, amounting to USD 163 billion and ranking first globally. As an important way to avoid the institutional voids of the home country, obtain the strategic assets and enter the global market [2], M&A has become the most popular FDI model for CMNEs. However, despite the upsurge of the overseas M&A, CMNEs have a failure rate of up to one-third in the overseas M&A [1]. On the one hand, acquisition completion is the prerequisite for realizing CMNEs' M&A purpose, which plays an important strategic role in enhancing their global value chain [3]. On the other hand, the eventual non-completion of an announced deal could create

reputation problems, bring high sunk costs for acquirer companies, and even result in heavy penalties and jeopardize the home country's investment position. Therefore, it is necessary to explore and study the influencing factors of CMNEs' cross-border acquisition completion, which can serve as a reference for CMNEs' foreign M&A.

It was reported that in 2016, as many as 30 Chinese overseas M&A deals failed due to the European and American regulations and the foreign exchange restrictions, totaling about USD 75 billion. Actually, such events are far more common: in January 2017, Ant Group reached an M&A agreement of USD 880 million with MoneyGram, but it had to give up because of the failure of obtaining the approval of the CFIUS; in 2011, Huawei was forced to cancel its M&A of the 3Leaf patented technology at CFIUS's request. From this, it can be concluded that the attitudes towards the M&A events of the host countries' stakeholders, especially the government agencies, can play a leading role in acquisition completion. However, since China is still a developing country, the government of the host country tends to hold the idea that China's system is imperfect and its economic and technological development lags, by defining China with a negative stereotype [4]. To be more precise, CMNEs lack legitimacy in overseas M&A deals and suffer the liability of origin.

The existing research on M&A can mainly be divided into two categories: the one studying the influencing factors of acquisition completion and the one studying the integration performance after M&A, and most of them are studied from the perspective of the acquisition of legitimacy. For example, some case studies analyze how CMNEs try to enhance the post-merger integration performance through the design and construction of different legalization strategies (such as the global architecture) [1], and how to adjust the priority of the internal and external acquisition of legitimacy at different M&A stages to enhance the possibility of enterprises' successful M&A in more developed economies. The empirical analysis literatures explore how the institutional distance, the status of acquirer enterprises [5], the political connection, the corporate social responsibility, and other factors influence the acquiring of legitimacy, which may reduce the possibility of acquisition completion.

However, all these studies only take the liability of origin as the research background, while ignoring the impact of the information asymmetry on the stereotypes. The main research gaps are in the two following aspects: First, the existing research does not distinguish the different perceptions on the CMNEs' liability of origin which are held by different host countries' stakeholders. Differences especially the political ideas difference between countries, lead to the fact that CMNEs suffer the different gazes behind "colored glasses" in different host countries. Partners in Deloitte's M&A business have said that countries such as Mexico, Brazil and South Africa generally take a welcoming attitude towards the Chinese capitals. In a more unified political philosophy, the host country is more willing to understand China with an open mind, reduce the degree of information asymmetry, weaken the negative stereotype of CMNEs, and increase the possibility of CMNEs acquisition completion in this country.

Second, the existing research ignores the emerging economies, especially China's catch-up with the developed countries. In recent years, China has developed close ties with various countries worldwide, promoted other countries' further understandings of China and weakened the degree of information asymmetry. Also, China's great development in institutional environment and enhancement at economic level and technological level have promoted the long-term virtuous circle of the national image of Chinese products, which can be compared to the evolution of the

"Made in Japan" label from the 1960s to the 1980s [4]. Therefore, it is unreasonable to generally regard that China suffers the same liability of origin in different host countries without comparing the levels of national development.

2 THEORETICAL REVIEW AND HYPOTHETICAL DERIVATION

2.1 Liability of Origin and the Degree of Liability of Origin

The "liability of origin" refers to the phenomenon that host countries hold a negative stereotype of certain enterprises in a specific country or region, resulting in the inferior position of those enterprises in the competition of the host country [4]. Ramachandran et al. [4] divide the liability of origin into two categories: first, the capability-based liability. The imperfect system of the enterprises' home country, such as the incomplete legal system, the imperfect factors of the market and the lack of the technical personnel, increases the difficulty of the enterprises' acquisition of resources and building of its, leading to its inferior position in the international competition. Second, the legitimacy-based liability. The stakeholders in the host country tend to view the home country of the acquirer company with the overall impression of the group to which this developing country belongs, and then project the negative stereotype onto this multinational enterprise, which has a negative impact on the acquisition of legitimacy and the construction of reputation of this multinational enterprise in the host country, such as the negative institutional image, the negative image of products and the negative corporate ability. The lack of legitimacy has greatly increased the risk and cost of the multinational companies' activities in the host country's market.

In most existing studies, the liability of origin is taken as the research background to analyze the negative impacts of the liability of origin on the EMNEs' international competitiveness. However, it is improper to roughly assert that the EMNEs enterprises would suffer the same liability of origin when entering different host countries. First of all, based on the above parts, it can be concluded that the views of the host countries, especially those of the developed countries, on the EMNEs are negative. Despite that, the trust levels of the home countries of the acquirers in different host countries are not exactly the same, which depends on the overall legitimacy of the acquirer's home country and the organizations related to the acquirer in the host country. Accordingly, we can preliminarily claim that different host countries have different perceptions of the legitimacy of a particular country.

Second, the host country projects the negative stereotype on the acquirer companies mainly because the host country lacks sufficient awareness of the acquirers. When some stakeholders in the host country lack information, they can only transfer and compare their cognition of the legitimacy of the home country and the relevant organizations of the acquirer to the acquirer. Taking the CMNEs as an example, when the degree of this information asymmetry is lower, that is, the host country has a more real and complete cognition of the quality of CMNEs' products and their technical ability, their attitude towards those CMNEs will change, which can greatly reduce the liability of origin of those CMNEs. For example, based on Zoomlion's strong strength and popularity in Europe, the Italian CIFA expressed a warm welcome when the other side proposed the M&A, believing that Zoomlion's actually "offered the fuel in the snowy weather".

Third, the rapid development of China's institutional environment, economy and technology in recent decades has led to its catch-up or even surpassing some developed countries; that is, CMNEs may have more advantages in acquiring resources and building capabilities than some developed countries. Therefore, it is backward or wrong to continue recognizing China and CMNEs only as ordinary members of the group of developing countries. In addition, He et al. (2018) [6] pointed out that the enterprises' capabilities, cultivated in a similar institutional environment, may endow CMNEs with more competitive advantages in other developing countries, so they may face less liability of origin and even enjoy the advantage of origin.

To sum up, this paper argues that different host countries have different perceptions on enterprises' legitimacy in one particular country; that is, the enterprises in a particular country suffer different degrees of liability of origin in different host countries.

2.2 Liability of Origin and Acquisition Completion from the Perspective of Information Asymmetry

In the absence of sufficient awareness of the home country of acquirer companies, the acquirer enterprises lack legitimacy in the host country. The stakeholders in the host country tend to view the home country of acquirer companies with the overall impression of the group of developing countries, which naturally leads to the liability of origin of CMNEs, not to speak those Western countries have always been regarding China as mysterious and opaque. Even if CMNEs are listed in China, the Western enterprises will still not trust the information disclosed by the Chinese listed enterprises, but instead, believe that the information of these CMNEs is missing. Even worse, some stakeholders in the host country will spontaneously affix such labels as "with stronger political purpose than economic motivation" and "military-industrial enterprises" to the CMNEs that are unrelated to such assertion, resulting in those enterprises' serious lack of legitimacy. In this situation, for such political purposes as national security, host governments will review or even stop the M&A performed by the acquirer CMNEs. That is to say, there is a low possibility for acquisition completion, if the home country of the acquirer suffers the liability of origin.

According to the discussion in the previous section, CMNEs suffer from different degrees of liability of origin in different host countries, which largely depends on the frequency of the close communication between China and the host country. The closer the political and economic contacts between the two sides are, the more complete the host country's perception of China will be, and the less affected by the negative stereotype of the developing countries as a whole will China be. At the same time, since the M&A events need the approval of the regulatory agencies of both sides to be truly completed, this study pays more attention to the frequency of the political exchanges between the two sides and the similarity of their political concepts. In summary, the following assumption can be made:

H1: The lower the liability of origin of CMNEs in the host country is, the higher their M&A success rates are.

2.3 The Moderating Role of Information Asymmetry

The status of the enterprise will greatly affect the process of acquisition completion. Li et al. (2017) [5] point out that in the context of the cross-border M&A, the greater the regulatory agencies' concerns about the legitimacy of acquirers are, the lower the possibility of acquisition

completion shall be, and the longer the duration of M&A deals shall take. Moreover, the state-owned background of acquirer companies will exacerbate the regulator agencies' concerns of legitimacy. Scholars generally believe that the information disclosure of state-owned enterprises is opaque [2], and they may even conceal the relevant information that may involve political deals or political corruption. The resulting information asymmetry will hence exacerbate the host countries' suspicion of the national security and the economic security, etc., resulting in the regulators being more inclined to make adverse rulings on the M&A events which involve the state-owned acquirer companies [2, 5]. Accordingly, this paper proposes the following hypothesis:

H2: The state-owned status of the enterprises will positively regulate the negative correlation between the degree of liability of origin and the possibility of acquisition completion. That is to say, if the status of CMNEs is state-owned, the possibility of their acquisition completion will be weakened, when CMNEs are at a low degree of liability of origin in the host country.

While the strength of the professional institutions can be relied on alleviate the degree of information asymmetry to some extent. In the existing research, it is noticed that the listing of the acquirer and the employing of the audits, legal advisers and financial advisers can increase the acquirer's degree of information disclosure, while signaling the acquirer's willingness to share information, which can also enhance the credibility of the disclosed information, for only the credible information can reduce the non-transparency and improve the legitimacy of the enterprises [2]. Therefore, this study believes that the employment of legal advisers can reduce the acquirer's unfamiliarity with the laws and regulations of the host country, disclose the necessary information in a more recognized and acceptable way for the stakeholders of the host country, weaken the host country's concerns of the legitimacy, and reduce the degree of information asymmetry in an absolute sense. Accordingly, this paper puts forward the following hypothesis:

H3: The employment of legal advisers by the acquirer will negatively regulate the negative correlation between the degree of liability of origin and the possibility of acquisition completion. That is to say, when the liability of origin of CMNEs in the host country is low, the possibility of acquisition completion will be further enhanced if legal advisers are hired.

3 DATA AND ANALYSIS

3.1 Data

The data of this paper are from CMNEs' cross-border M&A deals from 2007 to 2018 in the SDC M&A database, and there are 2,803 observed values after processing. The SDC M&A database includes more than 621,000 M&A deals around the world, and it records the data at the level of deals, such as the time of the announcement, the end time, the attitude of the target side, the employment of the consultants or not, the share of the M&A, and the mode of M&A deals, as well as the data of the M&A side and the target side at the level of the enterprise. It is one of the commonly used databases for domestic and foreign scholars to study cross-border M&A events.

3.2 Illustration of the Variables

3.2.1 Dependent Variables

Kaufmann et al. [7] developed the World Governance Indicator (hereinafter referred to as WGI) to represent the political environment of countries around the world. In some studies, the difference of WGI between China and the home country of the target side is taken as evidence that CMNEs have the liability of origin. However, this data cannot well reflect the impacts of the liability of origin on acquisition completion, nor does it emphasize the role of the host country's regulatory agencies in the events of the M&A deals; while based on the similarity of each country's voting at United Nations conferences in different years, the political affinity actually can show the degree of fitness of each country's political ideas and is very suitable to represent the degree of liability of origin. In this method, the higher the similarity of each country's voting is (the highest is 1, while the lowest is 0), the more similar each country's political concepts shall be; the lower the degree of the liability of origin perceived by the host country shall be. Therefore, the final model results are in a positive and adverse relationship with the previous hypotheses.

3.2.2 Independent Variables and Regulated Variables

Drawing on previous literatures [2, 5], this paper considers whether the M&A deal is completed or not an independent variable. If the M&A deal is completed, the variable shall be recorded as 1 and 0 otherwise. Then, it takes whether the acquirer is a state-owned enterprise or not as the first regulated variable. If the acquirer is a state-owned enterprise, the variable shall be recorded as 1 and 0 otherwise. In addition, it considers whether the acquirer has employed a legal adviser or not the second adjustment variable. If the acquirer has employed a legal adviser, the variable shall be recorded as 1 and 0 otherwise.

3.2.3 Control Variables

After referring to the relevant literature of the cross-border acquisition completion, the following eight control variables are selected in this paper:

a) Same industry. Based on the two-digit standard industrial classification (hereinafter referred to as SIC) of both sides of the M&A, if SIC is consistent, it is considered that both sides are in the same industry to be denoted as 1 and 0 otherwise. Suppose the two sides are in the same industry. In that case, there can be more corresponding business contacts. The upstream and downstream related enterprises can have more contacts, and the two sides can better understand each other, which helps reduce the degree of information asymmetry.

b) Target public. This variable is a 0,1 variable. If the target side is listed, it will be denoted as 1; otherwise, 0. In general, if the target side is a listed company, it will involve more stakeholders, and the scope and extent of attention can be greater. For technical protection and other considerations, the host country's regulatory agencies are more likely to make adverse rulings on the M&A deals.

c) Acquiror public. This variable is a $0 - 1$ variable. If the target side is listed, it will be denoted as 1; otherwise, 0. As a listed enterprise, the acquirer must disclose its information to a certain degree in accordance with the laws and regulations, and this information disclosure requires to be authentic and credible. In this sense, it helps the target side and the stakeholders of the host

country to obtain more relevant information, including the M&A motivation and the technical level of the acquirer and so on, so as to make favorable decisions.

d) Financial advisors. Similar to employing legal advisers, employing such third-party institutions as financial advisers can help the acquirer make more scientific decisions and enhance the credibility of the information disclosure.

e) Attitude to deals. This variable is a 0-1 variable. It will be denoted as 1 if the management layer of the target side shows friendly attitudes to the M&A; otherwise, 0. Suppose the management layer of the target side shows unfriendly attitudes to the M&A. In that case, they may hinder acquisition completion, and show preference to other or potential acquirers, which will increase the difficulty of acquisition completion.

f) Percentage of sought. The higher the percentage of the shares sought by the acquirer in the acquisition is, the more likely it will be to enhance the M&A difficulty and increase the duration of acquisition completion.

g) Target subsidiary. This variable is a 0-1 variable. If the target enterprise is a subsidiary, it will be denoted as 1; otherwise, 0. Generally speaking, if the target party is a subsidiary, each party will pay less attention to it, which helps to reduce the resistance to acquisition completion.

h) Prior merge experience. If the acquirer has rich experience in international M&A, managers of acquirer company can learn from previous M&A events to enhance the possibility of this acquisition completion.

3.3 Estimation Method

As the dependent variable, namely, the acquisition completion, is a 0-1 variable, this paper applies the Logit model in its estimation method. The specific formula is as follows:

$$P(i)=1/(1+e^{-\beta X_i}) \tag{1}$$

In this formula (1), P (i) represents the probability of the completion of event i, namely, the M&A deal; x (i) is a vector of the independent variable, including a series of variables that can affect acquisition completion; e is an exponential function; β is the coefficient of vector X (i) of the independent variable; $\beta > 0$ indicates that the independent variable is positively correlated with the possibility of acquisition completion, and vice versa.

4 RESULTS

In order to evaluate the moderating effect, this paper draws on the practice of He (2018) [6] and uses the estimation coefficient of the interaction term to judge the moderating effect, which helps to overcome the limitations of traditional methods. Before the formal regression analysis, this paper examines the correlation between the independent variables to avoid potential multicollinearity problems. Table 1 shows that the correlation coefficients between all variables are far less than the critical value of 0.7. In addition, the VIF value of each model in this paper is far less than the critical value 10.

The estimated results of the Logit model are shown in Table 2. Among them, Model 1 tests the main effect, that is, the relationship between the degree of liability of origin and the acquisition completion. Models 2 and 3 respectively examine the moderating effect of employing legal advisers by the acquirer company and the status of the acquirer.

From the results of Model 1, it can be found that the coefficient of the political affinity is positive and significant at the level of 1 %, indicating that the closer the political concepts of the two countries are, the lower the degree of liability of origin can be, the greater the possibility of acquisition completion can be, which supports hypothesis 1. In Model 2, the coefficient of the status of the enterprise is negative and significant at the level of 5 %, which supports hypothesis 2. That is to say, when the degree of the liability of origin of CMNEs in the host country is relatively lower and the acquirer Chinese enterprise is state-owned, the possibility of acquisition completion will be weakened. In Model 3, the coefficient of employing the legal advisors by the acquirer is positive and significant at the level of 5 %, which supports hypothesis 3. That is to say, when the degree of the liability of origin of CMNEs in the host country is relatively lower and legal advisors are employed, the possibility of the acquisition completion will be further enhanced.

TABLE 1. DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11
1. Completion	0.535	0.498											
2. Political Affinity	60.180	19.860	-0.067***										
3. Legal advisors	0.342	0.682	0.165***	-0.051***									
4. Acquiror SOE	0.008	0.088	0.006	0.023	0.005								
5. Same industry	0.431	0.495	-0.015	0.028	0.027*	-0.004							
6. Target public	0.204	0.403	-0.069***	-0.033*	0.058***	0.032**	-0.053***						
7. Acquiror public	0.359	0.480	-0.163***	-0.010	-0.022	-0.066***	0.153***	-0.136***					
8. Financial advisors	0.240	0.576	0.080***	0.016	0.497***	-0.008	0.031**	0.127***	0.003				
9. Attitude to deal	0.914	0.281	0.157***	-0.048***	0.052***	-0.015	0.034**	0.128***	0.034**	0.040***			
10. Percentage of sought	65.580	35.960	0.068***	-0.100***	0.055***	-0.043***	0.012	0.426***	0.058***	0.065***	0.134***		
11. Target subsidiary	0.417	0.493	-0.061***	0.114***	0.026*	-0.016	0.020	-0.047***	-0.006	0.032**	0.070***	0.288***	
12. Prior M&A experience	0.113	0.488	-0.032***	0.086***	0.084***	-0.001	0.016	0.029**	0.023	0.143***	0.034**	-0.014	0.088***

VARIABLES	Model 1	Model 2	Model 3
Same industry	0.050	0.049	0.052
	（0.085）	（0.085）	（0.085）
Target public	-0.410**	-0.458***	-0.416***
	（0.133）	（0.135）	（0.133）
Acquiror public	-0.777***	-0.763***	-0.785***
	（0.087）	（0.088）	（0.088）
Financial advisors	0.381***	0.107	0.378***
	（0.096）	（0.106）	（0.096）
Attitude to deal	1.476***	1.435***	1.475***
	（0.171）	（0.169）	（0.172）
Percentage of sought	0.003***	0.003*	0.003*
	（0.001）	（0.001）	（0.001）
Target subsidiary	-0.322***	-0.347***	-0.325***
	（0.094）	（0.095）	（0.094）
Prior M&A experience	-0.290**	0.104	0.290
	（0.110）	（0.163）	（0.110）
Political affinity	0.028**	0.023**	-0.029***
	（0.009）	（0.009）	（0.009）
Legal advisors		-0.091	
		（0.288）	
Political affinity* Legal advisors		0.010*	
		（0.005）	
Acquiror SOE			2.522
			（1.457）
Political affinity* Acquiror SOE			-0.049*
			（0.022）
constant	-1.746***	-1.545***	-1.774***
	（0.354）	（0.365）	（0.355）
Observations	2803	2803	2803
Target nation dummies	YES	YES	YES

Robust standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

5 CONCLUSIONS AND SUGGESTIONS

Through the Logit analysis of the data of China's overseas M&A in the SDC M&A database from 2007 to 2018, this paper draws the following conclusions: First, the lower the liability of origin is, the higher the possibility of completing the overseas M&A by CMNEs can be. Second, the employment of legal advisers by the acquirer can weaken the negative effect of the liability of origin on the M&A completion rate. Third, the status of the state-owned acquirer companies can enhance the adverse effects of the degree of the liability of origin on the M&A completion rate.

The theoretical contributions of this paper are as follows: First, it demonstrates that CMNEs have different degrees of liability of origin in different host countries, which is not only related to the development gap between China and host countries, but also largely depends on the similarity of the political concepts between the two countries. Second, from the perspective of information asymmetry, this paper analyzes the influence of the liability of origin on acquisition completion. This paper points out that when the host country lacks the cognition of CMNEs, the

stakeholders of the host country tend to adopt and project the overall cognition of developing countries onto CMNEs, which results in a lack of legitimacy of CMNEs. In this situation, if the Chinese acquirers are state-owned with highly opaque corporate information, the shareholders of the host country will increase concerns about the legitimacy of the M&A event. The regulatory agencies of the host country are more likely to make adverse decisions, given the considerations of national security and other aspects. If CMNEs employ legal advisers and disclose relevant information in accordance with the laws and regulations of the host country, the credibility of information can be enhanced to reduce the information gap between the two sides, obtain the goodwill of the stakeholders in the host country and increase the possibility of acquisition completion.

Therefore, when making overseas M&A decisions, CMNEs should learn to avoid deals with the host countries with a much too high degree of liability of origin and increase the possibility of acquisition completion. If it is necessary to make deals with the host country with a relatively higher degree of liability of origin for M&A, CMNEs can increase their degree of information disclosure and credibility by weakening their identity label of state-owned enterprises or employing legal advisers, and hence maximize overseas M&A to the full extent.

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