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Impact of Economic Determinants on the Scale Effect of Cross Border Merger and Acquisition: A Comparison Between Developed and Emerging Economies*

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Abstract

The main reason for the increase in cross-border mergers and acquisitions in developed and emerging countries is globalization and growing economic interdependence across countries. The state of the economy has a significant impact on whether cross-border mergers and acquisitions are encouraged or discouraged by international strategic capital market changes. This study empirically evaluates the influence of determinants of economic development on the scale effect of Cross Border M&As separately on emerging and developed nations as a research gap. We first separated the small and large scale firms based on companies' worth and used panel regression to analyze the impact of GDP, employment rate, and market capitalization on cross-border merger & acquisition deals over the period of 2008–2018. Results indicate that GDP and market capitalization have a positive effect on CBM&A, whereas employment rate has a negative effect on CBM&A deals in large-scale firms of both emerging and developed countries. This study results offer the implication for the potential investors and policymakers to strategically analyze the implementation of cross-border mergers & acquisitions.

Keywords: Cross-border Mergers and Acquisitions, Small- and Large-Scale Firms, GDP, Employment Rate, Market Capitalization

JEL Classification Code: E24, F12, F40, F62, G34

1. Introduction

Merger & Acquisitions are accredited as an important strategic agreement and dynamic approach of the firms. In today's competitive era of business, firms do not hesitate to expose their domestic and international plans and geographical strategies in terms of M&A (Datta et al., 2020). For the past few years, cross-border merger & acquisition activities have been rising. After the sluggishness of the financial crisis, shareholder activism increased, and they drove organizations towards selling them completely. Internal controls, organizational cultures, compensation of executives, and risk management practices gained attention due to the financial crisis (Ittner & Keusch, 2015). Companies started to invest billions of dollars to consolidate their businesses and enter new industries. Some of the researchers describe this rise in Cross Border mergers & acquisitions as due to globalization and growing economic integration among the countries (Yang, 2015). According to Morgan's 2017 global report, 36 percent of merger & acquisition deals performed worldwide were cross-border mergers & acquisitions.

Domestic and Cross Border Mergers & Acquisitions have been followed by companies to gain synergy, i.e., obtaining and securing a firm's value (Erel et al., 2012; Ranju & Mallikarjunappa, 2019). Cross Border M&A is different from domestic M&A due to institutional distances, cultural

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differences, lack of knowledge about local institutions, and legal procedures that increase the cost and risk for CBM&A (Yang, 2015). Unfavorable conditions in the economy, i.e., recession, depression, or limitations for capital, discourage the international strategic changes (Kish & Vasconcellos, 1993). On the other hand, Petreski and Kostoska (2007) expressed that growing economic conditions, cultural and managerial practices, and liberalization, and positive changes in capital markets enhance the cross-border merger & acquisition trends.

Impact of Cross Border Merger & Acquisitions on smaller-scale organizations can be offset by Economic development (Yu et al., 2020, 2021), i.e., institutional restraints relax when the economic development level increases, which ultimately decrease the scale effect of cross border Merger & Acquisitions and vice versa. National income or per capita income of the country, education level, and infrastructure defined Economic development (Meyer & Sinani, 2009). Level of national income increases when the economy grows which then generates plenty of financial resources for small organizations to make acquisition deals. An increase in urbanization rate and higher education level of the working population also enhance the survival of small enterprises and increase their capability to stack up with the larger organizations. It allows small firms to captivate the modern technological changes to increase innovation which improves their merger & acquisition performance as well.

Moeller and Schlingemann (2005) and Moeller et al. (2004) expressed their broad consensus that in larger public acquisitions, the value of acquiring shareholders decreased. Later on, (Alexandridis et al., 2013; Betton et al., 2009) are also likely to believe that Mergers & Acquisitions radically decrease the shareholders' value for acquiring a firm more than it is created during deals. However, Alexandridis et al. (2017) found an improvement in acquiring firms' gains in larger merger & acquisition deals after the post-financial crisis period i.e., post-2009 due to the positive development in the corporate governance structure that also resulted in greater reflection of improved merger & acquisition quality in larger deals. The changes in internal control systems encouraged the decisions of the management to make them more beneficial for shareholders that employ an optimistic effect on selecting acquisition investments and integrating post-merger processes. Corporate policymakers started directing towards more profitable and lucrative investment distributions that increased the value of acquiring firms (Deutsch et al., 2007).

As of now, there are several studies conducted on the nexuses of Cross Border mergers & acquisitions and economic growth, mainly in developed economies. However, a lack of empirical evidence is available on developing countries. Previously, it was hypothesized that developed countries are ahead of emerging economies due to their FDIs and number of M&As (Wan, 2005). Later on, emerging economies used to make M&A deals to enter into the global market and elevated the investment in Mergers and Acquisitions across the globe (Erel et al., 2012; Yang, 2015). Additionally, very rare literature is available on economic development's effect on the scale effect of Cross Border Mergers & Acquisitions (Bany-Ariffin et al., 2016; Du & Boateng, 2015). Our study is considerably different from prior studies as we have investigated an influence of economic development on the scale effect of Cross Border mergers & acquisitions of host countries in comparison between developed and emerging economies.

This study takes companies from China as the emerging nation and Australia as industrialized nations to study how economic development influence the scale effect of cross-border merger & acquisitions of both countries. We choose these countries due to the fluctuating trend in their trade openness. The Asia Pacific region is considered favorable for cross-border M&A because many states in this region are opening up their new markets and easing up their regulations, which boosts such arrangements.

The rest of the paper is structured along the following sequence. The second section consists of the theoretical literature concerning the relationship between determining factors of economic development and Cross Border Mergers & Acquisitions deals. Section 3 comprises the linear modeling framework that accounts for the macroeconomic effects on CBM&As. Forth section evaluates the study model and discusses the outcomes of the study. The last section is about a summary of the conclusion, which also comprises the discussion of the implications of the study.

2. Literature Review

As a critical strategy of internationalization, CBM&A has been broadly studied through scholars from a number of disciplines, which includes strategy, worldwide enterprise, organizational conduct, and economics in the current time period. Theoretically, with splendid monetary and strategic possibilities and intents, multinational firms ought to generate extra prices and reintroduce their marketplace situations by accomplishing CBM&A (Haspeslagh & Jemison, 1991). Though, the value initiation in large-scale firms is influenced by how efficiently they recognize these strategic and economic potentials in terms of changing their synergies into financials successfully. International firms want to have a greater size, experienced workforce and be geared up with more affluent sources to manipulate and conduct cooperation and collaboration with subsidiaries to minimize risk and resource integration.

The size of the firm plays a vital role in merger and acquisition deals domestically as well as across the border. The performance of the firms was positively affected after

the acquisition had taken place (Wu et al., 2016). They expressed that the post-acquisition performance of the larger firms seems superior rather than, the smaller firms. Contrary, (Kumar et al., 2020) found that younger firms are most likely to be found in liberalized era and affiliated younger firms conduct cross border M&A relatively faster. In addition, they found that unaffiliated firms follow competitive internationalization in terms of cross-border mergers & acquisitions.

Firms that can be large and skilled in internationalization have more assets and skills to deal with and execute CBM&A efficiently, whereas smaller sized and less experienced corporations face several restraints in soaking up, integrating, or even reorganizing sources, and for that reason, it is more difficult to manage significance in CBM&As (Cui & Jiang, 2009, 2012; Madhok, 1997). For instance, Pucik (2008) discovered that, in comparison with smaller size multinational firms, large firms with more accrued knowledge and internationalization experience be able to integrate the processes and cope with numerous managerial issues efficaciously, which increase their final performance.

After the introduction of merger & acquisition regulatory regimes, European Union and China made conforming provisions for Merger & Acquisition scales (Yu et al., 2020). Due to these regulatory alterations, there is a significant theoretical base for antitrust supervision that it is easy to get benefits from M&A activities in larger enterprises. Though, this theoretical base is conflicting with the academic literature where the association between cross-border Mergers & acquisitions and the size of the firm can be found in both positive and negative perspectives.

Cho and Ahn (2017) examined 4720 cross-border Mergers & Acquisitions deals and found a negative effect of the firm size of the target firm on the abnormal cumulative rate of return, i.e., the worse reaction of the market seen in larger size of the acquirer firms. According to them, if a foreign target firm is situated in a strong organizational atmosphere, then the stock payments can be less beneficial, and for institutionally developed acquirers, this shareholder value tends to rise. Conversely, Hu et al. (2020) expressed that in international businesses, deals valued over $500 m destroyed the value of shareholders in acquirer firms. However, they concluded that the acquirer firms of mega-deals with a good acquisition experience produce positive abnormal returns on stocks in the long and short run. Thereby, this makes an understanding that acquirer firms with greater experience are good at managing post-acquisition merger procedures and thus improve their operating performances.

Karels et al. (2011) investigated the Cross Border M&As between US and India in the context of whether the difference in CBM&A was due to the country's environment or to firm's characteristics and found a combination of results of US and Indian acquiring firms where share prices of Public and private firms varied after the M&A announcement. They found that acquirers of targets from both nations have the same diversification level. However, the market value of acquirers from the US was greater than India. A major portion of the shares in privately held target firms was acquired by both economies rather than publically held target firms and found a negative and insignificant abnormal return for the US if they acquire Indian firms.

Economic development has a negative impact on the scale effect of cross-border mergers & acquisitions (Yu et al., 2020). They expressed that it is not favorable for larger organizations to seek foreign acquisitions if the economy is developing in contrast with small-scale organizations, where they are more likely to seek foreign gains so that they become bigger. They also found that cross-border Mergers & Acquisitions from the home country have an increasing effect on the scale. Conversely, Aybar and Ficici (2009) found a positive influence of abnormal returns in large organizations on the announcement of Cross Border mergers & Acquisition deals.

Foreign Direct Investment as a measure of Cross border mergers & acquisitions has been investigated that FDI positively affects economic growth i.e., GDP in the short-run as well as a long run, which encourages a reduction in technological gaps in emerging countries in comparison with advanced nations (Hudea & Stancu, 2012). They raised a point that FDI and GDP have a bidirectional causal effect on each other. Countries with a bigger size GDP encourage companies to participate in more acquisitions deals (Ali-Yrkkö, 2002) due to the reallocation of economic resources with the intention of their optimal usage. High GDP encourages inward Mergers & Acquisitions on account of greater demand and the possibility of higher profits within the host country (Globerman & Shapiro, 1999).

Merger and Acquisition deals get higher when the economy is booming and less when the economy is depressed (Ji, 2016). He also expressed that M&A shares in the country differ in respect of sector and origin of local and foreign acquirers, i.e., if acquiring a firm is of foreign origin, it will slow down the local economy. In comparison, Lobanova et al. (2016) expressed a negative effect of FDI due to Cross Border Mergers & Acquisitions on GDP per capita during the year of Mergers or Acquisitions and positive impact only after one year. In a longer period, they showed a negative effect on GDP per capita, which exhibits short-term interests of foreign companies that crowd out the local companies. Boateng et al. (2011) also found negative variations in Cross Border Mergers & Acquisitions inflows due to real GDP and inflation in two different regimes of the UK. Higher GDP discourages the acquisition of foreign firms as the cash reserves are usually utilized in acquiring local firms and

increasing their sizes, and expanding the influence in the market (Healy & Palepu, 2003).

Cross Border Mergers & Acquisitions cause downscaling in various sectors as well as weakens the industries. Turnover rate increases in the post-merger & acquisition period as the higher level of uncertainty in the organization creates a negative impact on employees. Instability in the organizations due to the M&A process causes psychological and behavioral impacts on employees (Sun et al., 2018a). Technical staff and senior management prefer to quit the organization after mergers and acquisitions if they do not take significant measures to retain those employees (Wang et al., 2014).

Lehto and Böckerman (2008) expressed that domestic Mergers & Acquisitions increase the unemployment rate in each sector, though, from a foreign acquisition perspective, it only affects the service and construction industry. Furthermore, they particularized that the variation in employment rate is also influenced by the nature, nationality, and the distance between the target and acquiring firm. In weak labor regulation countries, acquirers purchase the firms that are labor dependent, whereas, in stronger labor regulation countries, they use cross-border mergers & acquisitions for entering new markets (Levine et al., 2020).

Change in ownership due to merger and acquisition weakens the implicit and explicit contractual ties with the employees, which loses their job interests and wages (Shleifer & Vishny, 1988). However, leveraged buyouts with unrelated Private and non-Private Equities do not affect the blue-collar employees and their wages, whereas related takeover negatively affects employment (Amess et al., 2014). On the other hand, Hossain (2021) postulates that firms prefer to connect in the form of M&A with similar and well-connected human resource capital. Regarding this, the operating cash flows and the announcement returns increase after the merger deals occurrence in related human capital firms as the wages and employment decrease with the increase in labor productivity and operating efficiencies (Chatterjee et al., 1992).

Firms' boundaries are determined by countrywide borders that are accompanied by various frictions. Mergers usually take place when it is perceived that the value of the combined firm will increase more than the value of separate firms (Aguiar & Gopinath, 2005). Firms choose target firms to acquire assets in those countries that offer fewer prices to reallocate the capital efficiently. Bullish trend in the stock market encourages cross-border mergers & acquisitions (Coeurdacier et al., 2009). Vasconcellos and Kish (1998) observed that a depressed U.S. Stock market relative to the overseas inventory market encourages overseas acquisitions of U.S. Organizations. Francoeur (2006) expressed that in the short run, the stock performance of the firms increases right after the merger or acquisition deals, and in the long run, this increase in share value is maintained throughout the post-merger period. Firms tend to be more acquirers in those countries where the stock market and its market value has increased while weak performer countries tend to target (Erel et al., 2012).

3. Data and Methodology

Cross Border Merger & Acquisition and determinants of economic development have been investigated by using a number of methods. In this study, CBM&A is our dependent variable and is measured by the value of merger & acquisition deals across the border in host and home countries in the particular year. Recently, Khan and Salman (2019) studied the reaction of stock prices on cross-border merger & acquisition deals where they used the same deal value to analyze the cross-border merger and acquisitions. The data of Cross Border Merger & Acquisition deals is obtained from Thomson one database. Determinants of economic development are our explanatory variable which is measured by Gross Domestic Product, Employment rate, and Market Capitalization. Ibrahim and Raji (2018) studied the GDP as the most important macroeconomic factor that causes fluctuating trends in cross-border mergers & acquisitions. Ciuhu et al. (2018) used the employment rate as a measure of economic growth. Iqbal and Zahid (1998) considered stocks of capital as a measure of economic growth in Pakistan. The scale of firms is our exogenous variable which is measured by the size of the firm (total assets). Hashmi et al. (2020) took total assets as a measure of firm size.

The data of Cross Border Merger & Acquisition deals is obtained from Thomson one database while the data source for GDP, Employment Rate, and Market Capitalization is UNCTAD and World Bank database. Total Assets as a measure of the Firm size of the organizations have been extracted from the annual reports of the respective time period. All the data has been converted into US Dollars with the exchange rate applicable in the particular time period. The period of the study is from January 2008 to December 2018 as the cross-border merger & acquisition activities increased after the financial crisis and more shareholders value was created by the acquiring firms (Alexandridis et al., 2017). Shareholder's actively increased their influence by putting internal control and efforts towards selling the organizations (Ittner & Keusch, 2015).

China has been representative of emerging countries, whereas Australia has been evocative of developed nations. In this study, completed merger & acquisition deals are included in the sample, and the announcement of these deals lies between the study periods. Companies whose value is more than 1 billion dollars are considered as large-scale firms, and less than this limit are considered as small-scale firms in the sample. Our final sample comprises 228 firms involved in cross-border merger & acquisition deals among

the above-mentioned countries where 184 Chinese firms acquired Australian Firms including 131 large and 53 small firms and a total of 44 Australian firms acquired Chinese Firms which includes 20 larger and 24 smaller firms.

The relationship between economic growth and merger & acquisition has been analyzed by various methods. By following previous researchers Changqi and Ningling (2010), we employed a linear regression model and correlation analysis to test the proposed hypotheses. The dependent variable is lagged by one period to reduce the endogeneity.

Following models are implemented for the relationship between Cross Border Merger & Acquisition and various determinants of economic development:

$$Y_{it} = \alpha_{it} + \beta Y_{(S,\,L)it-1} + \sum \gamma A_{it} + \sum \delta B_{it} + \sum \zeta C_{it} + \mathcal{E}_{it} \qquad (1)$$

Where in Eq (1) Y is the Cross Border Merger & Acquisitions deals (CBM&A), subscript S and L is for small and large scale firms respectively, and subscript i is a country (Host Country), subscript t for the time period 2008–2018. α, β, γ, δ and ζ are the coefficients.

$$\text{CBM\&A}_{(S,\,L)} = \alpha_{it} + \beta \text{CBM\&A}_{(S,\,L)it-1} + \gamma \text{GDP}_{it} + \delta \text{EMP}_{it} + \zeta \text{MC}_{it} + \mathcal{E}_{it} \qquad (2)$$

In Eq (2), GDP, EMP and MC are the values of gross domestic product, employment rate, and market capitalization, respectively. The error term in the above equation is expressed as $\mathcal{E}$.

4. Results and Discussion

Our investigations are based on the weekly data from 2008–1 to 2018–52 for two countries i.e., China and Australia. A linear regression model has been developed to run the analysis between our dependent and independent variables. This model estimates the effect of determinants of economic development variables on cross-border merger & acquisition deals in smaller and larger firms of developed and emerging countries separately.

4.1. Descriptive Statistics and Correlation Analysis

Table 1 shows the mean, standard deviation, no. of observations, and correlation coefficient for every individual variable for the sample of small-scale organizations.

As reported in Table 1, the total no. of observations is 1144 for each variable, the average value of cross-border mergers & acquisition deals is 2.182, and the standard deviation is 5.43. The mean value of Employment rate, GDP, and Market Capitalization is 1.827, 0.102, and 1.45, respectively. The standard deviation of Employment rate, GDP, and Market Capitalization is 0.011, 0.058, and 0.555, respectively. The maximum value of the correlation coefficient among all the variables is 0.644.

Table 2 expresses the value of mean, standard deviation, no. of observations, and correlation coefficient for every individual variable for the sample of large-scale organizations.

Table 2 shows the total no. of observations is 1144 for each variable, the average value of cross-border mergers & acquisition deals is 3.342, and the standard deviation is 3.431. The mean value of the Employment rate is 0.102, and the standard deviation is 0.058. GDP's mean value is 1.827, and the standard deviation is 0.011. The mean value of Market Capitalization is 1.452 and the standard deviation is 0.555. The maximum value of the correlation coefficient among all the variables is 0.644.

4.2. Regression Analysis

Table 3 provides the results of the regression analysis between the cross-border merger & acquisition and various economic development determinants based on 77 CBM&A deals of smaller firms between China and Australia. The panel regression model for smaller firms is as follows.

$$\text{CBM\&A}_{(S)it} = 1.104699 + 0.939863\text{CBM\&A}_{(S)it-1} + 0.241740\text{GDP}_{it} - 1.099970\text{EMP}_{it} + 0.253361\text{MC}_{\text{it}} + \mathcal{E}_{it} \qquad (1)$$

As shown in Table 3, GDP (0.0000, $p < 0.05$) and Market Capitalization (0.0000, $p < 0.05$) has a significant

Table 1: Correlation and Descriptive Stats of all Variables: Small Scale Firms

	CBMA	EMP	GDP	MC
CBMA	1.000000			
EMP	0.305774	1.000000		
GDP	0.407269	0.643924	1.000000	
MC	0.033864	–0.612877	–0.631380	1.000000
Mean	2.182023	1.826795	0.102404	1.452087
Std. Dev.	5.429892	0.011407	0.058693	0.555428
Observations	1144	1144	1144	1144

Table 2: Correlation and Descriptive Stats of All Variables: Large Scale Firms

	CBMA	EMP	GDP	MC
CBMA	1.000000			
EMP	0.247564	1.000000		
GDP	0.456295	0.643924	1.000000	
MC	−0.307887	−0.612877	−0.631380	1.000000
Mean	3.342306	0.102404	1.826795	1.452087
Std. Dev.	3.431235	0.058693	0.011407	0.555428
Observations	1144	1144	1144	1144

Table 3: Impact of GDP, EMP, and MC on CBM&A in Small Scale Firms

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	1.104699	2.069692	0.533750	0.5936
GDP	0.241740	0.045747	5.284269	0.0000
EMP	−1.099970	3.339281	−0.329403	0.7419
MC	0.253361	0.048948	5.176162	0.0000
CBMAS(−1)	0.939863	0.009454	99.41427	0.0000

Adjusted R^2 = 0.9575; Durbin-Watson = 1.9209; Prob(*F*-statistic) = 0.0000.

positive effect whereas employment rate (0.7419, $p > 0.05$) has insignificant negative effect on cross border merger & acquisition deals. This indicates a higher impact of GDP and Market Capitalization on cross-border merger & acquisition deals as opposed to employment rates. Results indicate that due to a one-unit increase in GDP and market capitalization, Cross border merger & acquisition deals in small-scale firms will be increased by 0.242 and 0.253, respectively. An increase in one unit of employment rate will decrease the value of CBM&A deals. The value of cross-border merger deals has been positively affected by deals in the previous year.

This Table also illustrates that the proposed model is significant as a whole and predicts the significance of variables very well. The model is said to be fitted significantly as the *F* value is 0.0000 (Prob. < 0.05). The greater value of adjusted R^2 in the model (95.75%) indicates that its dependent variable is very well explained by the independent variables.

Table 4 provides the results of the regression analysis between the cross-border merger & acquisition and various economic development determinants based on 151 CBM&A deals of larger firms between China and Australia. The panel regression model for larger firms is as follows.

$$\begin{aligned} \text{CBM\&A}_{(\text{L})\,it} = {} & 1.829381 + 0.979409\text{CBM\&A}_{(\text{L})it-1} \\ & + 0.036978\text{GDP}_{it} - 2.855639\text{EMP}_{it} \\ & - 0.012792\text{MC}_{it} + \mathcal{E}_{it} \end{aligned} \quad (2)$$

As Table 4 shows, GDP has a significant positive effect (0.0212, $p < 0.05$) employment rate has insignificant negative effect (0.0629, $p > 0.05$) and market capitalization has positive but insignificant effect (0.5550, $p > 0.05$) on cross border merger & acquisition deals. It shows that the cross-border merger & acquisitions deals are highly affected by GDP in comparison with the other two variables. Results show that cross-border merger & acquisition deals in large-scale firms will be increased by 0.036 due to a one-unit increase in GDP. At the same time, employment rate and market capitalization will decrease the deal value by 2.855 and 0.012, respectively. As small scale firms, the value of cross border merger & acquisition deals in larger firms has also been positively affected by the deals in the previous year.

The results in Table 4 report the regression statistics of the sample. It shows that the proposed model is significant as a whole and works well regarding the joint significance of variables. *F* value is 0.0000 (Prob. < 0.05). In another way, the model is said to be fitted significantly. The greater value of adjusted R^2 (97.31%) indicates that the dependent variable in our model is very well explained by the independent variables.

Table 5 provides the results of the regression analysis constructed based on 53 Chinese and 24 Australian smaller acquirer firms among the cross-border merger & acquisition and GDP, Employment rate, and Market Capitalization.

Table 4: Impact of GDP, Emp, and MC on CBM&A in Large Scale Firms

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	1.829381	0.949520	1.926637	0.0543
GDP	0.036978	0.016023	2.307774	0.0212
EMP	−2.855639	1.533822	−1.861780	0.0629
MC	−0.012792	0.021666	−0.590438	0.5550
CBMAL(−1)	0.979409	0.006322	154.9233	0.0000

Adjusted R^2 = 0.9731; Durbin-Watson = 1.9798; Prob(*F*-statistic) = 0.0000.

Table 5: A Comparison of Developed and Emerging Host Countries: Small Scale Firms

Variables	China			Australia		
	Coefficient	*t*-Statistic	Prob.	Coefficient	*t*-Statistic	Prob.
C	−20.0139	−1.9042	0.0574	4.9054	3.4341	0.0007
GDP	0.35195	2.4907	0.0130	0.2147	4.3064	0.0000
EMP	34.0145	1.9341	0.0536	−7.4436	−3.2252	0.0014
MC	0.38396	5.0373	0.0000	0.0974	2.0185	0.0442
CBMAS(−1)	0.92219	66.9515	0.0000	0.9413	69.1601	0.0000

Adj. R^2 = 0.9377; Prob(*F*-statistic) = 0.0000. Adj. R^2 = 0. 9600; Prob(*F*-statistic) = 0.0000.

The analysis is run separately to empirically evaluate the comparison between the industrialized and developing host countries to assess the impact of independent variables on the cross-border merger & acquisitions by using the sample of smaller-scale firms.

In Table 5, for Chinese small scale firms, all the independent variables i.e., GDP (0.0130, $p < 0.05$), Employment rate (0.0536, $p \leq 0.05$) and Market Capitalization (0.0000, $p < 0.05$) show a significant positive impact on cross border merger & acquisition deals. On the other side, all the independent variables GDP (0.0000, $p < 0.05$), Employment rate (0.0014, $p < 0.05$) and Market Capitalization (0.0442, $p < 0.05$) show a significant positive impact on cross border merger & acquisition deals in Australian small scale firms.

The regression statistics on the right side of Table 5 illustrate the significance of the proposed model as the *F* value is 0.0000 (Prob. < 0.0000). Additionally, this model is able to demonstrate a larger portion of the dependability of proposed economic variables on cross-border merger & acquisition deals as the value of adjusted *R* square is 93.77 percent. The other side of the Table also reports the significance of the model as its *F* value is 0.0000 (Prob. < 0.05). Moreover, the greater value of adjusted *R* squared (96.00 percent) shows that our model is very well expressed by our independent variables.

To analyze the impact of independent variables on the cross border merger & acquisitions by comparing the host countries China and Australia by using the sample of large scale firms, Table 6 shows the results of regression analysis of 131 Chinese and 20 Australian large scale acquirer firms among the cross border merger & acquisition deals and proposed determinants of economic variables.

For Chinese large scale firms, Table 6 shows, GDP (0.0473, $p < 0.05$) and Employment rate (0.0134, $p < 0.05$) have significant negative effect whereas Market Capitalization (0.1379, $p > 0.05$) has insignificant negative impact on cross border merger & acquisition deals. And for Australian firms, the independent variables GDP and Market Capitalization have insignificant positive effects, whereas Employment Rate has an insignificant negative effect on cross-border merger & acquisition deals.

Table 6 reports the overall significance of both models as the *F* value is 0.0000 (Prob. < 0.05). The larger value of adjusted *R* square, 96.25 percent for Chinese firms and 96.94 percent for Australian firms, indicate that our independent variables determine a larger value in the model.

4.3. Discussion

The results show that GDP affects cross-border mergers & acquisitions positively in both developed and emerging countries, whereas the Employment rate has a negative impact upon the dependent variable. Cross-border merger & acquisition is positively influenced by Market Capitalization

Table 6: A Comparison of Developed and Emerging Host Countries: Large Scale Firms

Variables	China			Australia		
	Coefficient	*t*-Statistic	Prob.	Coefficient	*t*-Statistic	Prob.
C	12.70014	2.480808	0.0134	1.779510	1.316883	0.1885
GDP	−0.121284	−1.987598	0.0473	−2.582547	−1.165358	0.2445
EMP	−21.21254	−2.480103	0.0134	0.076533	1.860295	0.0635
MC	−0.035120	−1.485636	0.1379	0.002728	0.057188	0.9544
CBMAS(−1)	0.964005	91.29587	0.0000	0.975626	94.42242	0.0000
Adj. R^2 = 0.9625; Prob(*F*-statistic) = 0.0000.				Adj. R^2 = 0. 9694; Prob(*F*-statistic) = 0.0000.		

in small-scale firms, but it has a negative impact on large-scale organizations. GDP and Market Capitalization positively impacts cross-border merger & acquisition deals in small-scale organizations. Contrary to this employment rate has a negative effect on the CBM&A deals. All the proposed independent variables in the model except employment rate have a significant effect on cross-border merger & acquisition deals in small-scale organizations. In large-scale organizations, GDP has a positive impact on cross-border merger & acquisition deals, whereas employment rate and market capitalization have negative effects. Employment and market capitalization has insignificant values, and only GDP shows a significant impact on the dependent variable.

To compare the influence of determinants of economic development on cross-border mergers & acquisitions between emerging and developed countries, we evaluated the country-wise effect in small and large-scale acquirer firms separately. The result shows that all the independent variables have a significant and positive impact on cross-border merger & acquisition deals in small-scale acquirer firms of emerging countries. GDP and Market capitalization have significant positive whereas employment rate has a significant negative impact on cross border merger & acquisition deals in small Australian scale acquirer firms, for large-scale acquirer firms of emerging and developed countries. All the independent variables have a negative but significant impact on CBM&A deals in Chinese large-scale acquirer firms. GDP and Market capitalization have positive whereas employment rate has a negative impact on cross border merger & acquisition deals in Australian large scale acquirers. All the independent variables have an insignificant impact upon cross-border merger & acquisition deals.

Empirical findings show that the coefficients of variable GDP have a positive impact on CBM&A which means whether the country is emerging or developed if the economy is growing, it attracts the small and large entities to do merger and acquisition deals. It supports the study of Ji (2016), along with other researchers, that mergers increase when the economy is booming. The coefficients of Market Capitalization affect positively in small scale acquirer firms, but for large-scale organizations, it only shows a positive impact in respect of Australian firms. That means small-scale firms tend to be more acquirers in both developed and emerging countries, while large-scale firms are weak performers in emerging nations. These findings are aligned with the study of Erel et al. (2012) that firms used to be more acquirers in countries with good stock markets. Coefficients of Employment rate has a negative effect on CBM&A deals in large scale firms of both emerging and developed countries and large scale firms of only developed countries. This can be explained in a way that the countries with good employment rates discourage being acquirers. They believe that if they are involved in mergers or acquisition activities, the turnover rate might increase as Sun et al. (2018b) assumed that mergers & acquisitions cause uncertainty in organizations, and turnover rate increases in post-merger periods.

5. Conclusion

The linear regression model used in this study is to empirically investigate the impact of GDP, employment rate, and market capitalization on cross-border merger and acquisition deals by using a dataset of 228 small and large scale companies from China and Australia indulging in merger & acquisition deals across the border. We concluded that the economic development of a country plays a vital role in internationalization as it has a significant impact on merger & acquisition deals across the border. GDP has a positive effect on CBM&A deals in both emerging and developed countries except in the large-scale acquirer firms of China as a host country. Market Capitalization effect positively in small scale acquirer firms, but for large scale organizations, it only shows a positive impact in respect of Australian firms. Most of the companies are likely to implicate cross-border mergers & acquisitions in those countries where GDP is higher, and the stock market is showing an upright trend, particularly in small-scale organizations. The employment rate seems to have a negative effect on CBM&A deals in large-scale firms of both emerging and developed countries except the small-scale firms of emerging countries.

The significance of our study is to fill the research gap on the effect of cross-border mergers & acquisitions by various economic variables by keeping in view the scale effect of organizations that involves in cross-border mergers & acquisition deals. This study enhances the understanding of how mergers & acquisitions affect by various determinants of economic factors. It offers a significant implication for the potential institutional investors, practitioners, and policymakers to strategically analyze the implementation of cross-border mergers & acquisitions. Policymakers and, ultimately, investors could use this to encourage firms the implementation of the "going out" strategy. This study also contributes to the existing literature of international business and investment and delivers new evidence on the scale effect of cross-border M&A and its link with macroeconomic variables. Additionally, literature provided for developed and emerging markets enriches the consideration of international strategies in the business circle by filling the institutional gaps in the financing area. Moreover, this study provides room for future researchers to evaluate industrial as well as the country-wise impact on cross-border mergers & acquisitions.

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