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The Effects of Cultural Distance on Cross-border Merger and Acquisition: Empirical Evidence from the International Electricity Industry

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16th Annual MOPAN Conference
Maynooth, 19, 06, 2009

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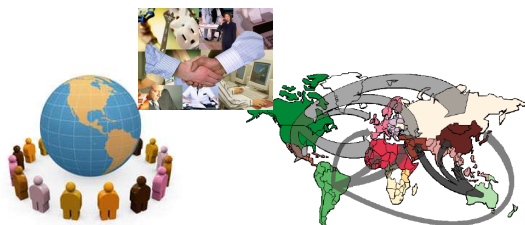
Outline

1. Introduction
2. Theoretical background and Hypotheses
3. Data and Method
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1. Introduction

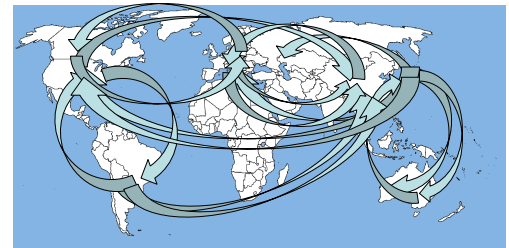
Cross-border merger and acquisition (M&As) is the major form of foreign direct investment (FDI).



National cultural distance (CD) and foreign direct investment location choice

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1. Introduction



Zhang et al. (2009) a sample of Chinese FDI in 33 countries in regions of Europe

Model: quadratic assignment procedure model

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1. Introduction

cultural distance (CD):

Kogut and Singh index (1988), compiled from Hofstede's four national cultural dimensions with the following formula.

$$CD_{ck} = \sqrt{\sum_{i=1}^4 (I_{ic} - I_{ik})^2}$$

It describes an absolute **cultural difference** between two nations

DiMaggio (1993) suggested that investors' and hosts' cultures need not be similar for a successful transaction to occur as long as each party has knowledge of the other, and allows for "cultural matching".

Cultural connection: how much knowledge a group has of another one.

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1. Introduction

Research question:

Does cultural distance influence the merger and acquisition location choice of firms in abroad market?

1. Introduction: country level analysis

As any analysis of investment trends would indicate, multinational enterprises often invest in a particular country or region, although individual investment decisions might vary (Knickerbocker, 1973).

Shifts in FDI destinations over time can be analyzed at the country level because the determinants under investigation affect all multinational enterprises uniformly (Freeman, 1978).

1. Introduction: why electricity industry

Why choose Electricity industry as studied industry

1. It is an industry of prime importance.
2. It was a relatively “clean” industry before the middle time of 1990s.
3. It represents some other modern industries.



2. Theoretical background and hypotheses

Hypotheses about cultural difference

The theory of familiarity argues that firms are more likely to invest in culturally similar markets (Shenkar, 2001).

- communication and information transfers would be more efficient and effective in a more similar cultural environment. Therefore, the investor firm’s managerial uncertainty is low and permit them to operate with less risk in their investment behavior.

Yoshino (1976) and Ozawa (1979) viewed Japan’s CD from Western nations as a constraint on Japanese FDI in the West. Davidson (1980) attributed the large US investment in Canada and the UK well beyond what their market size, growth, tariffs and proximity would have predicted to cultural similarity. Edwards and Buckley (1998) examined investments from Australia to Britain, and found the common language and familiar history and culture were important in explaining the location choice. Zhang (2001) found culture proximity between FDI sources and hosts would encourage FDI flows into China after regressing FDI flows to China during the period 1987-1996.

Hypothesis 1: firms prefer cross-border merger or acquisition of firms in the country where the national culture is similar to their own country’s.

2. Theoretical background and hypotheses

Argument to the contrary:

Dunning (1988), argued that larger cultural difference between home and host markets rather encouraged FDI as a way of overcoming transactional and market failures.

Hofstede (1989) suggested that cultural differences may be complementary and have a positive synergetic effect on investment and performance.

Hypothesis 1 alt: firms prefer cross-border merger or acquisition of firms in the country where the national culture is distant to their own country’s.

2. Theoretical background and hypotheses

Hypothesis about cultural connection

DiMaggio (1993) suggested that investors and hosts having enough knowledge of each other allow “cultural matching” between them, which then become the base of a successful transaction.

Individuals and corporations in a culture with enough knowledge of another are able to understand and respect another culture, and avoid the cultural misunderstanding. Thus, the cultural conflicts can be effectively reduced in the business operation process. Therefore,

Hypothesis 2: firms prefer cross-border merger or acquisition of firms in the country which they have more cultural connection with.

3 Data and Method

The sample

cross-border merger and acquisition data in the electricity industry in 2001 and 2008. The 38 countries are selected in the sample.

Table 1. the 38 countries included in the sample

Country	Country	Country	Country
1 Argentina	11 Finland	21 Netherlands	31 Switzerland
2 Australia	12 France	22 New Zealand	32 Thailand
3 Austria	13 Germany	23 Norway	33 Turkey
4 Belgium	14 Guatemala	24 Peru	34 U.K.
5 Brazil	15 Hungary	25 Poland	35 U.S.A
6 Canada	16 Indonesia	26 Portugal	36 Czech Re.
7 Chile	17 Ireland	27 Russia	37 Italy
8 China	18 Japan	28 Singapore	38 Jamaica
9 Denmark	19 Malaysia	29 Spain	
10 El Salvador	20 Mexico	30 Sweden	

3 Data and Method

Model

Multiple regression quadratic assignment procedure (**MRQAP**): specifically designed for the analysis of relational data in sociomatrices and able to deal with autocorrelation in dyadic data (Krackhardt,1988).

3 Data and Method

Dependent Variable: FDI relations between countries via cross-border M&A. Measured by total cross-border M&A times from one country to another.

Two Independent Variables: cultural difference, which is measured by Kogut and Singh index. Cultural connection, which is measured by previous investment experience.

3 Data and Method

Control Variables:

Demand difference:

Measured by the electricity consumption difference between two countries.

Resource difference:

Measured by the electricity capacity difference between two countries.

Efficiency difference:

Measured by the difference of GDP per capita between two countries.

Incorruption difference:

Measured by difference of Corruption Perception Index (CPI) between two countries.

4. Estimation results

Table 2.1. Correlations of Independent and Dependent Variable in 2001.

Variables	1	2	3	4	5	6
1 Demand difference						
2 Efficiency difference	0.00					
3 Resource difference	0.99 ***	0.01				
4 Incorruptness diff.	0.05	-0.21	0.03			
5 Cultural difference	0.00	0.00	0.00	0.00		
6 Cultural connection	0.08	-0.02	0.08 **	0.07 *	-0.13 ***	
7 FDI	0.11 **	-0.01	0.10 **	0.07 **	-0.13 ***	0.50 ***

Table 2.2. Correlations of Independent and Dependent Variable in 2008.

Variables	1	2	3	4	5	6
1 Demand difference						
2 Efficiency difference	-0.03					
3 Resource difference	0.99 ***	-0.02				
4 Incorruptness diff.	-0.05	-0.17	-0.03			
5 Cultural difference	0.00	0.00	0.00	0.00		
6 Cultural connection	-0.01	0.00	-0.01	0.11 ***	-0.12 **	
7 FDI	0.09 *	0.01	0.10 *	0.05	-0.10 **	0.36 ***

* p < 5%; ** p < 1%; *** p < 0.1%

4. Estimation results

Table 3.1. Results of Regression Analysis of the Models of 2001

	Model 1	Model 2	Model 3
1 Demand difference	0.10189 **	0.10189 ***	0.06618 **
2 Efficiency difference	0.00082	0.00082	0.00554
3 Resource difference			
4 Incorruption diff.	0.06804 **	0.06804 **	0.03731 *
5 Culture difference		-0.1314 ***	-0.0675 **
6 Culture connection			0.48729 ***
Adjusted R-sqr	0.01	0.031	0.262

← H1 supported
← H1 alt rejected
← H2 supported

Table 3.2. Results of Regression Analysis of the Models of 2008

	Model 1	Model 2	Model 3
1 Demand difference	0.09467 *	0.09467 *	0.09707 *
2 Efficiency difference	0.01845	0.01845	0.01257
3 Resource difference			
4 Incorruption diff.	0.0623 *	0.0623 *	0.02148
5 Culture difference		-0.1002 **	-0.0573 *
6 Culture connection			0.35054 ***
Adjusted R-sqr	0.011	0.02	0.139

← H1 supported
← H1 alt rejected
← H2 supported

* p < 5%; ** p < 1%; *** p < 0.1%

5. Conclusions

Three main findings:

First, firms prefer to cross-border merger or acquire firms in the country where the national culture is similar to their own country's.

Second, firms prefer to cross-border merger or acquire firms in the country which they have more cultural connection with.

Third, the influence of cultural difference and cultural connection on FDI became weaker from 2001 to 2008. the electricity demand influence became stronger.

The results indicate that even though firms do consider cultural factors when they choose their FDI location, they tend to take into account more economic factors. It implies an industry globalization trend and the improvement of global investment environment in the electricity industry.

Questions