

FDI, INVESTMENT OBJECTIVES AND PERFORMANCE OF JAPANESE SUBSIDIARIES USING FINANCIAL DATA

BY :

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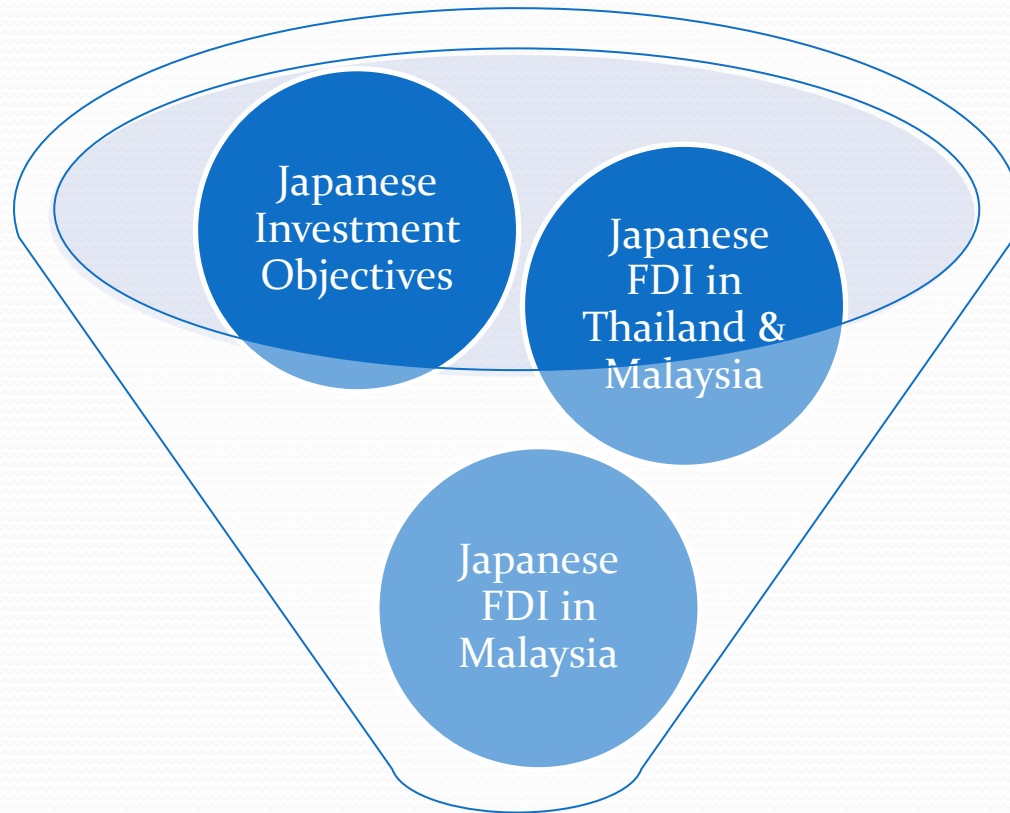
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Research Interest



Subsidiaries Performance

General Introduction

- 1) Research Question
 - How business performance can be improved?
- 2) Research Scope
 - Japanese main investment objectives, FDI and subsidiaries performance
- 3) Research Gaps
 - Few studies evaluate the effect of investment objectives & subsidiaries performance
 - Comparative studies including Malaysia & Thailand
- 4) Contribution from this research
 - Understanding the financial data that enhance business performance
 - Providing additional knowledge to existing literature

IDP Characteristics

Stage 1

- Level of FDI
 - countries with little or inward FDI and no outward FDI
- Type of L advantages:
 - Countries with limited L advantages. Have not fully developed created-asset L advantages.
- Motive of FDI received
 - primarily natural resources-seeking and market-seeking

Developing countries: Latin America, North America & Asian countries

Stage 2

- Level of FDI
 - countries with growing inward FDI and little outward FDI
- Type of L advantages:
 - Countries generic L advantages. Have not fully developed created-asset L advantages but some of them begin to invest in them.
- Motive of FDI received
 - natural resources seeking and market-seeking

Stage 3

- Level of FDI
 - countries with rising inward and outward FDI
- Type of L advantages:
 - Countries in which created-assets advantages are developed.
- Motive of FDI received
 - primary market-seeking and to a lesser extent strategic asset-seeking and natural resources seeking

Newly Industrialized countries: Latin America, Eastern Europe & South East Asian countries

Stage 4

- Level of FDI
 - countries with very high inward and outward FDI
- Type of L advantages:
 - Countries with strong competitive L advantages in skill-intensive and created-assets.
- Motive of FDI received
 - primarily strategic asset-seeking and to lesser extent market seeking

Developed Countries: United States, Japan, EU countries, & other OECD countries

Stage 5

- Level of FDI
 - same as stage 4 but fluctuating net zero or positive level of inward and outward FDI
- Type of L advantages:
 - Countries with strong competitive L advantages in skill-intensive and created-assets
- Motive of FDI received
 - primarily strategic asset-seeking and to lesser extent market seeking

Study 1- Conceptual Framework



Study 1 - Hypotheses

- **Hypothesis 1:** There is a significant difference between Japanese investment objectives and location factors.
- **Hypothesis 2:** There is a significant difference between Japanese investment objectives and subsidiary performance.
- **Hypothesis 3:** There is a significant difference between Japanese location decision factors and subsidiary performance.

Variables for Study 1

Location Decisions

Subsidiary region & Country

- East Asia
- Southeast Asia
- North America
- West Europe
- Middle South America
- East Central Europe
- Oceania
- South Asia
- South Europe
- Middle East
- North Europe
- Africa

Investment Objectives

- ✓ Establishing overseas/production network
- ✓ Obtain a local market
- ✓ Establish an overseas distribution
- ✓ Information gathering
- ✓ Obtain labour
- ✓ Counter import to Japan
- ✓ Export to a third country
- ✓ R&D/product development
- ✓ A company with dealer/buyer-seller
- ✓ Favoured treatment by local government
- ✓ Natural resources
- ✓ Entering into new business
- ✓ Local controlling function
- ✓ Use of funds
- ✓ To avoid disputes

Subsidiary Performance

- Gain
- Breakeven
- Lost

Study 1 - Methodology

Analysis Unit: Japanese MNCs subsidiaries world wide

- 2003 = 3757
- 2009 = 2661

Sample

- Toyo Keizai Inc.
2003 & 2009
- -Asking top Japanese Managers in terms of financial profitability
- i.e: gain, breakeven or loss

Source

- Testing difference :
 - Kruskal Wallis
 - Cross-tabulation

Analysis

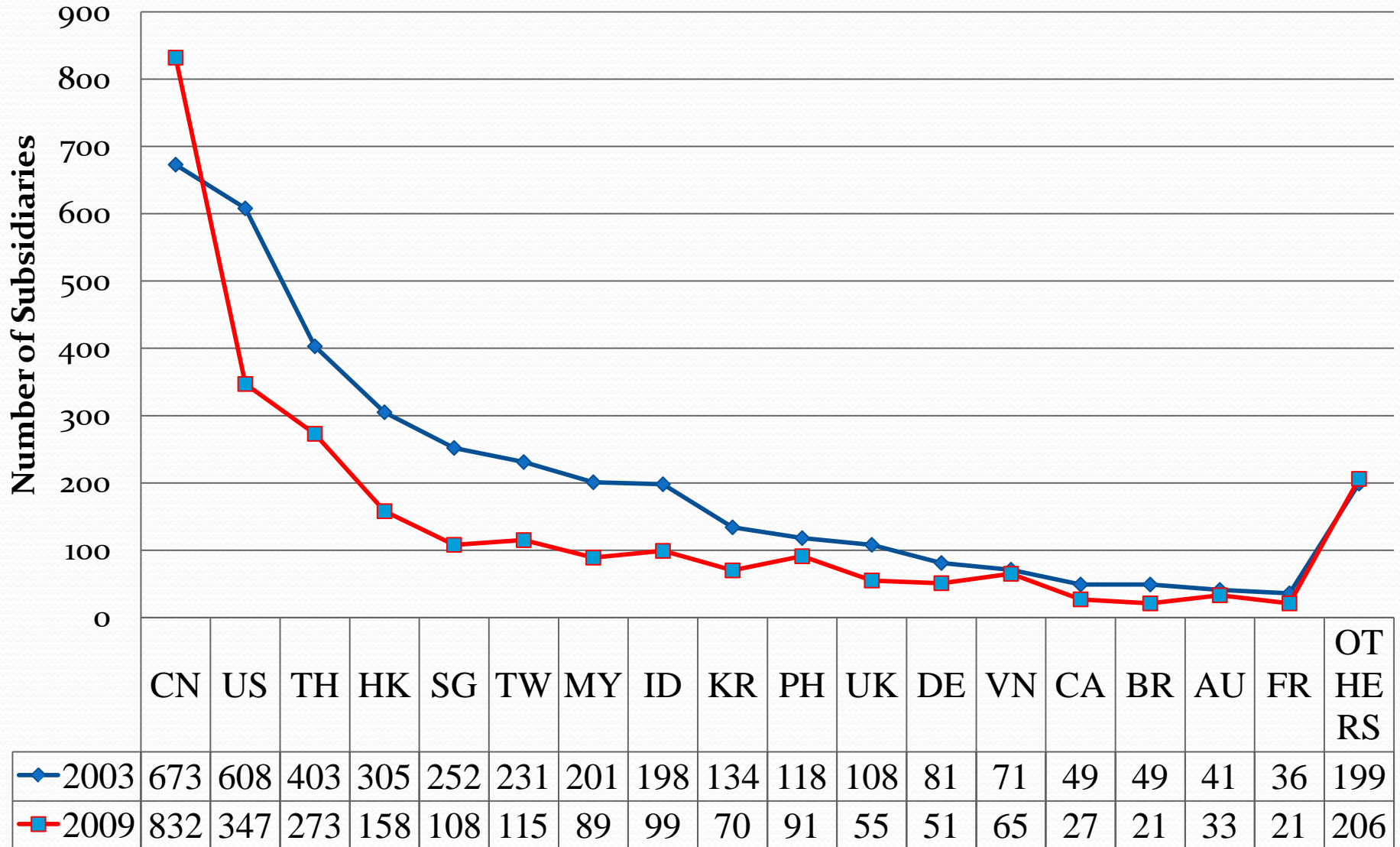
Study 1 - Findings

Descriptive Statistics

Investment Objectives	No. of Cases 2003	No. of Cases 2009	Subsidiary Region	No. of Cases 2003	No. of Cases 2009
Establishing overseas/production network	640	650	East Asia	1343	1180
Obtain a local market	1071	343	Southeast Asia	1243	720
Establish an overseas distribution	338	302	North America	655	374
Information gathering	398	289	West Europe	277	146
Obtain labour	307	258	Middle South America	74	67
Counter import to Japan	233	143	East Central Europe	20	51
Export to a third country	186	140	Australia	50	37
R&D/product development	130	118	South Asia	38	34
A company with dealer/buyer-seller	121	111	South Europe	37	23
Favoured treatment by local government	79	87	Middle East	7	13
Natural resources	55	72	North Europe	5	12
Entering into new business	76	74	Africa	8	4
Local controlling function	56	54	Total	3757	2661
Use of funds	57	17			
To avoid disputes	10	3			
Total	3575	2661			

Study 1 - Findings

Number of Japanese Subsidiaries by Country in 2003 and 2009



Study 1 - Findings

Table 1.1: Kruskal-Wallis Results for the Location Factor and Subsidiary Investment Objectives

Location	Year	Chi-Square	df	Sig
Subsidiary	2003	195.19	14	0.000
Country	2009	125.85	14	0.000
Subsidiary	2003	174.80	14	0.000
Region	2009	118.91	14	0.000

Study 1 - Findings

Table 1.2: Kruskal-Wallis Results for Japanese Investment Objectives, Locational Factors, and Subsidiary Performance

	Year	Mean	Chi-Square	df	Sig
Investment Objectives	2003	2.36	35.55	14	0.001
	2009	2.41	499.99	14	0.000
Location					
Subsidiary Region	2003	2.36	98.51	11	0.000
	2009	2.41	49.45	11	0.000
Subsidiary Country	2003	2.36	213.83	42	0.000
	2009	2.41	140.73	39	0.000

Study 1 - Findings

- Hyperlink :
- [Fulbright Presentation 1-Crosstab Table for Investment Objectives and Subsidiary Performance.docx](#)
- [Fulbright Presentation 1- Crosstab Sub Countries- Objectives-performance.docx](#)

Study 1 - Findings

- **Hypothesis 1:** There is a significant difference between Japanese investment objectives and location factors. **Supported**
- **Hypothesis 2:** There is a significant difference between Japanese investment objectives and subsidiary performance. **Supported**
- **Hypothesis 3:** There is a significant difference between Japanese location decision factors and subsidiary performance. **Supported**

Study 1 - Conclusion

- Based on the locational aspect, China, America, and Thailand were the most favourable countries of Japanese MNCs.
- With rapid economic growth in Asia & intra-regional trade - FDI by Japanese MNCs are also increasing
- Majority Asian nations consist of developing countries with huge market potentials, such as China and other ASEAN countries
- Japanese MNCs investing into the Asian region prefer to choose 'obtaining a local market' during the early stages of entering into host countries
- they revise to new investment objectives after a certain period of maintaining the firm's profitability

Study 2

SURVIVAL AND FINANCIAL PERFORMANCE OF JAPANESE SUBSIDIARIES IN MALAYSIA AND THAILAND



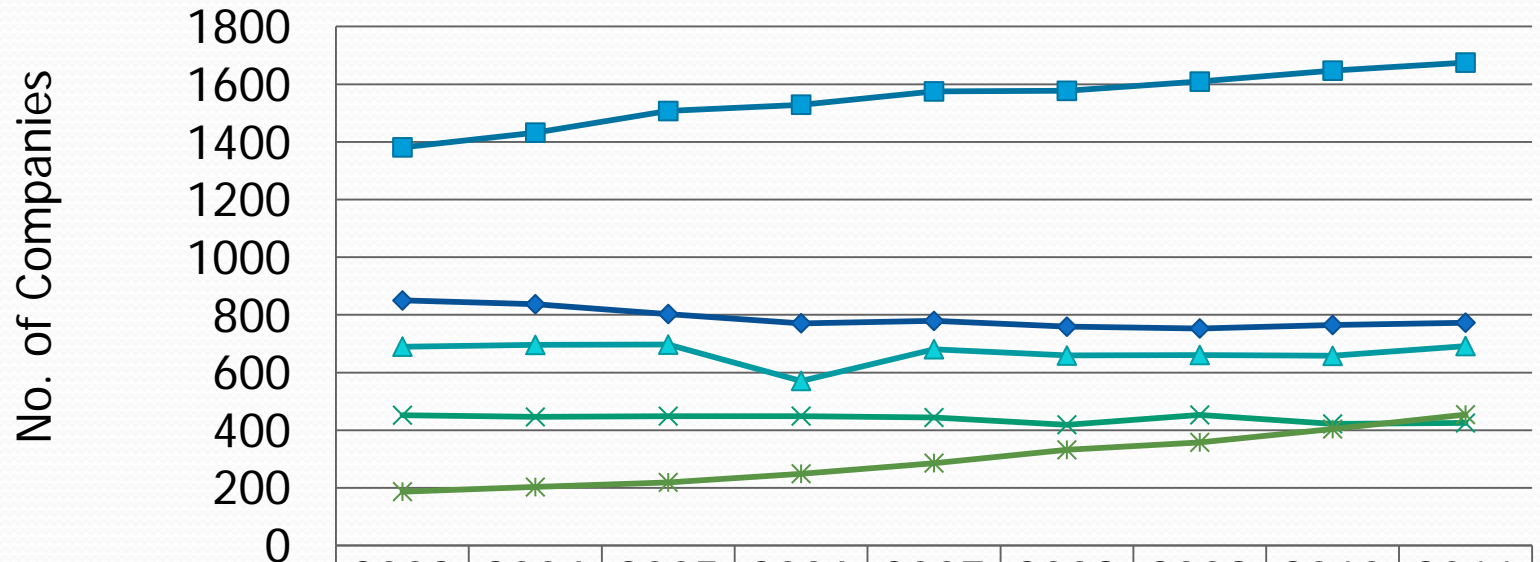
Study 2

- *In the second study, we select two countries between the highest Japanese FDI and examine its performance using financial data (ROE, ROA, PRMA and SOLR).*
- *We extend this research with ownership characteristic (based on wholly owned and joint venture) and parent financial performance in order to analyze the relationship between parent and subsidiary data.*

Study 2

- Figure 2.1: Japanese FDI in ASEAN 5 Countries from 2003-2011

FDI in ASEAN 5 COUNTRIES (SUBSIDIARIES)



	2003	2004	2005	2006	2007	2008	2009	2010	2011
◆ Malaysia Subsidiaries	850	837	803	771	779	759	753	765	773
■ Thailand Subsidiaries	1381	1432	1507	1529	1575	1577	1609	1647	1675
▲ Indonesia Subsidiaries	690	696	697	571	681	659	661	658	692
✕ Philippines Subsidiaries	452	446	449	449	444	419	453	422	425
* Vietnam Subsidiaries	187	203	219	249	286	332	358	404	454

Study 2 - Hypotheses

- **Hypothesis 1a:** There is a significant difference in performance between wholly owned subsidiaries and joint venture subsidiaries.
- **Hypothesis 1b:** In the case of developing countries, joint venture entry mode performs better than wholly owned subsidiary.
- **Hypothesis 2:** Parent financial ratios has significant impact on subsidiary performance
- **Hypothesis 3:** The parent characteristics are negatively correlated to subsidiary's performance.

Study 2 – Conceptual Framework & Variables

Independent Variables

FDI ENTRY MODE

- Wholly Owned Subsidiaries
- Joint Venture Subsidiaries

DOMESTIC VARIABLES

Profitability Ratio

- Parent Return on Shareholder Fund (ROE)
- Parent Return on Capital Employed (ROC)
- Parent Return on Assets (ROA)
- Parent Profit Margin (PRMA)

Operational Ratio

- Parent R&D per Operating Value (RDOP)

Structure Ratio

- Parent Solvency Ratio (SOLR)

Parent Characteristics

- Parent Age
- Parent No. of Workers

Dependent Variables

MNC's Subsidiary Performance

ROE

ROA

PRMA

SOLR

Study 2 - Methodology

Analysis Unit: Japanese MNCs subsidiaries in Malaysia & Thailand

- Data from 2003 -2009
- Malaysia = 609 cases
- Thailand = 1085 cases

Sample

- Single Database :
ORBIS Database

Source

- Testing difference :
 - Mann-Whitney
 - Multiple Regression

Analysis

Study 2 – Analysis & Findings

	Parent	Subsidiaries
Return on Assets (ROA)		
Malaysia	1.90	5.16
Thailand	2.23	7.51
R&D/Operating Revenue (RDOP)		
Malaysia	4.76	-
Thailand	2.87	-
Profit Margin (PRMA)		
Malaysia	5.26	4.36
Thailand	4.96	7.48
Return on Capital Employed (ROC)		
Malaysia	6.55	14.85
Thailand	7.59	21.42
Solvency Ratio (SOLR)		
Malaysia	42.35	53.84
Thailand	36.93	50.74
Return on Shareholder Fund (ROE)		
Malaysia	8.23	14.48
Thailand	10.98	21.21
Age		
Malaysia	68.34	21.83
Thailand	65.26	19.56
No. of Employees		
Malaysia	125462	1187
Thailand	54166	1011
Ownership	Wholly owned	Majority owned
Malaysia	133	476
Thailand	182	903

Study 2 – Analysis & Findings Mann-Whitney Test

		Malaysia				Thailand			
		N	Mean Rank	Sum of Ranks	Asymp. Sig (2-tailed)	N	Mean Rank	Sum of Ranks	Asymp. Sig (2-tailed)
Subsidiary Profit Margin %	Wholly Owned	95	250.23	23772.00	0.161	176	472.46	83152.50	0.012
	Majority Owned	370	228.58	84573.00		873	535.59	467572.50	
	Total	465				1049			
Subsidiary ROA	Wholly Owned	96	236.40	22694.00	0.813	181	441.39	79891.00	0.000
	Majority Owned	370	232.75	86117.00		899	560.45	503849.00	
	Total	466				1080			
Subsidiary Return on Shareholder Funds %	Wholly Owned	94	214.96	20206.00	0.247	176	438.70	77210.50	0.000
	Majority Owned	363	232.64	84447.00		868	539.49	468279.50	
	Total	457				1044			
Subsidiary Solvency Ratio %	Wholly Owned	96	282.50	27120.00	0.000	181	477.79	86480.50	0.006
	Majority Owned	369	220.12	81225.00		889	547.25	486504.50	
	Total	465				1070			

Study 2 – Analysis & Findings

Regression Coefficient

- Regression Coefficients for Malaysia
- Regression Coefficients for Thailand
- [Fulbright Presentation 1-Regression Coefficients for Malaysia and Thailand.docx](#)

Study 2 - Hypotheses

- **Hypothesis 1a:** There is a significant difference in performance between wholly owned subsidiaries and joint venture subsidiaries. **Partially Supported**
- **Hypothesis 1b:** In the case of developing countries, joint venture entry mode performs better than wholly owned subsidiary. **Partially Supported**
- **Hypothesis 2:** Parent financial ratios has significant impact on subsidiary performance. **Supported**
- **Hypothesis 3:** The parent characteristics are negatively correlated to subsidiary's performance. **Supported**

Study 2 – Discussion & Conclusion

- Malaysia wholly owned subsidiaries have a better performance than the joint venture entry mode- but the statistic test does not show any significant difference
- Thailand indicates that majority ownership performs better than wholly owned subsidiaries
- The varied findings for Malaysia and Thailand may related to the local ownership restrictions that differ among countries
- Japanese parent company's financial performances are significantly influenced the subsidiaries financial performance in Malaysia and Thailand.

Study 2 – Discussion & Conclusion

- However,
 - not all the profitability predictors from the parent companies will enhance the performance of their subsidiaries in the host country
 - The parent company's ROA and PRMA indicate a negative value and a significant result for Malaysia and Thailand respectively
- For Malaysia and Thailand, parent age indicates a negative significant relationship with a subsidiary's financial performance
 - These results show that company profitability changes systematically with a firm's age where in the early stages, firms realise substantial profitability increase, while mature firms face a slow decline in profitability (Warusawitharana, 2012).

Study 3

FOREIGN DIRECT INVESTMENT AND PERFORMANCE OF JAPANESE SUBSIDIARIES IN MALAYSIA



Study 3

- *The previous study presented that parent financial data have influence on subsidiaries financial performance. Moreover, the parent's 'R&D per operating value'; 'profit margin' and 'solvency ratio' are the best indicators for subsidiaries in Malaysia and Thailand.*
- *In the third study, we are focusing on Japanese FDI in single country and measure entry mode, domestic variables, and international variables towards subsidiary's performance using categorical data.*

Study 3

- Table 3.1: Foreign Direct Investment Statistics in Malaysia

Country	Composition ratio 2009	2006	2007	2008	2009
		Amount (Million RM)	Amount (Million RM)	Amount (Million RM)	Amount (Million RM)
Japan	31.8	4412	6523	5595	7041
China	24.7	1885	2952	119	5478
United States	10.6	2477	3020	8669	2345
Total (Inc. Others)		20228	33426	46099	22145

Study 3 - Hypotheses

- **Hypothesis 1:** In the case of developing countries, joint venture entry mode performs better than wholly owned subsidiary.
- **Hypothesis 2:** The higher the MNCs financial performance, the better the subsidiary's performance.
- **Hypothesis 3:** The greater a MNC's international experience in the host country, the higher subsidiary performance.

Study 3 – Conceptual Framework & Variables

Independent Variables

FDI ENTRY MODE

- Wholly Owned Subsidiaries
- Joint Venture Subsidiaries

DOMESTIC VARIABLES

- Parent Solvency Ratio
- Parent Return on Equity (ROE)
- Parent Net Sales/Employees
- Parent Net Profit Ratio
- Parent Depreciation Expenditure/Net Sales
- Parent R&D per Operating Value
- Parent Age
- Parent Growth Average
- Parent Overseas Sales

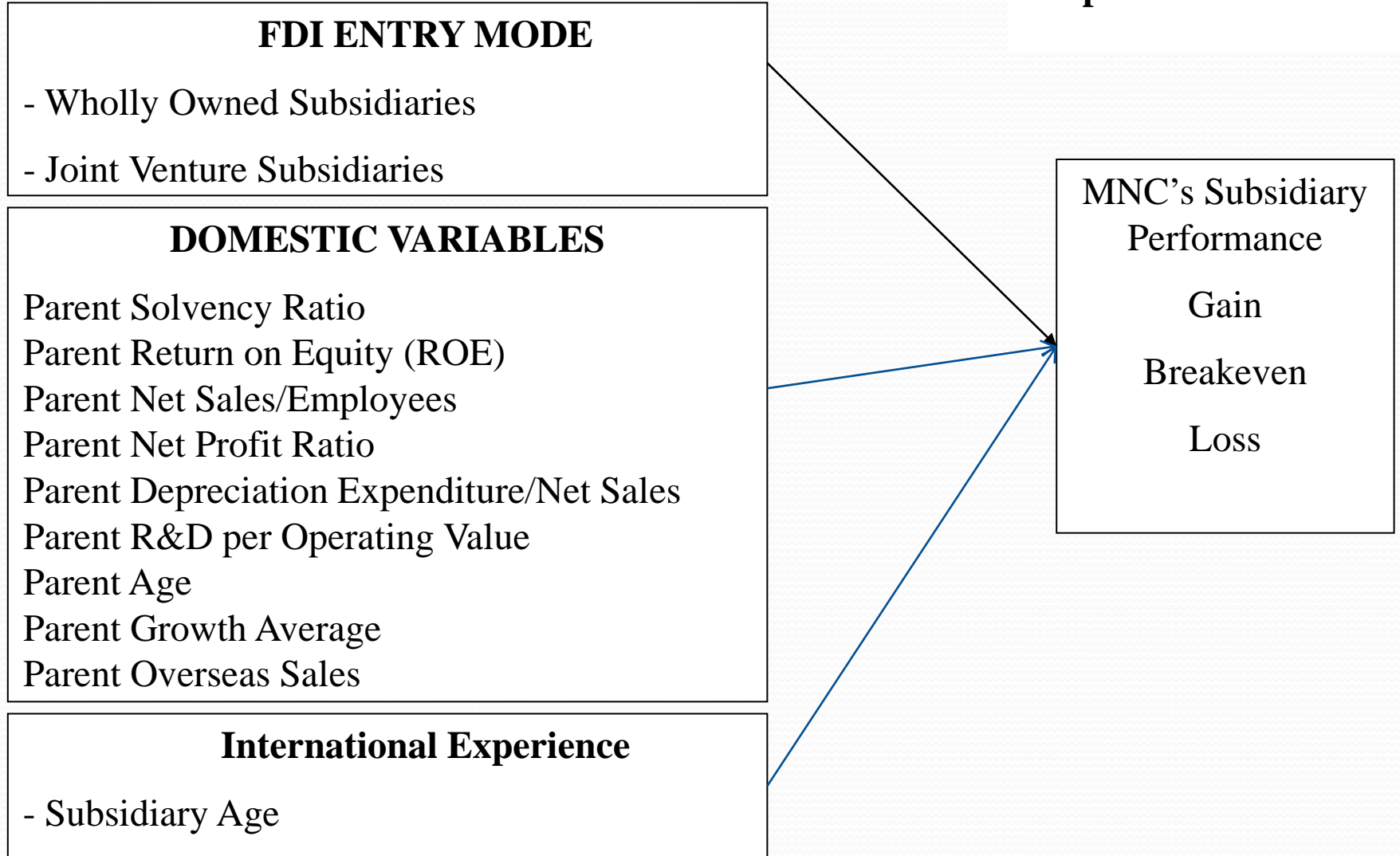
International Experience

- Subsidiary Age

Dependent Variables

MNC's Subsidiary Performance

- Gain
- Breakeven
- Loss



Study 3 - Methodology

Analysis Unit: Japanese MNCs subsidiaries in Malaysia

- Data from 2005 - 2009
- Malaysia = 270 cases

Sample

- Multiple Database :
 - Toyo Keizai Inc
 - Nikkei Zaimu Database
 - Eol DB Tower online

Source

- Testing difference :
 - Pearson Chi-Square
 - Levene's Test
 - Logistic Regression

Analysis

Study 3 – Analysis & Findings

Performance Breakdown by Entry Mode

Ownership	Performance			Performance Mean	No. of cases
	1 Loss	2 Breakeven	3 Gain		
Wholly	4.2%	7.7%	31.8%	2.63	114
Joint Venture	2.7%	12.2%	41.4%	2.69	147
Totals	6.9%	19.9%	73.2%		261
Test				Significance	
Pearson Chi-Square				0.246	
Levene's Test				0.073	

Independent Variables	Manufacturing		Service	
Included	Model 1	Model 2	Model 1	Model 2
Constant	12.799 ^a (11.976) ^b	14.791 (12.896)	-1.312 (1.856)	-18.630 (5033.843)
Parent Overseas Sales	-3.993** (1.754)	-4.038** (1.749)		
Parent Net Sales/Employee	0.023** (0.010)	0.023** (0.010)		
Parent Net Profit Ratio	0.920** (0.345)	0.980** (0.384)		
Parent ROE	-0.107 (0.059)	-0.119 (0.069)	0.055 (0.080)	0.051 (0.112)
Parent Depreciation Expenditure/ Net Sales	1.255 (0.739)	1.214 (0.702)		
Parent R&D per operating value	-1.784** (0.634)	-1.751** (0.587)		
Subsidiary Age	0.611** (0.194)	0.587** (0.203)	0.292** (0.140)	0.211 (0.139)
Parent Solvency Ratio	0.091 (0.057)	0.074 (0.056)		
Parent Age	-0.327 (0.309)	-0.339 (0.335)		
Parent Growth Revenue Average	-0.0044 (0.127)	0.013 (0.142)		
Entry Mode (Wholly owned)		-0.473 (1.282)		17.782 (5033.843)
Number of cases	179	179	91	91
Log likelihood	26.631	25.832	19.327	16.735
Chi-square	69.822**	65.642**	7.047**	9.639**

Study 3 – Analysis & Findings

Multinomial Logistic Regression

- [Fulbright Presentation 1-Multinomial Logistic Regression for Manufacturing and Services.docx](#)

Study 3 - Hypotheses

- **Hypothesis 1:** In the case of developing countries, joint venture entry mode performs better than wholly owned subsidiary. **Rejected**
- **Hypothesis 2:** The higher the MNCs financial performance, the better the subsidiary's performance. **Partially Supported**
- **Hypothesis 3:** The greater a MNC's international experience in the host country, the higher subsidiary performance. **Supported**

Study 3 – Discussion & Conclusion

- We evaluated the data using binary and multinomial logistic regression to examine the relationship between parent financial data against subsidiary performance s in host country.
- For using binary logistic regression, five out of ten of the independent variables were significant with subsidiary performance, while only four significant variables were found in multinomial logistic regression in the case of Malaysia.
- We used both binary and multinomial logistic regression to test the relationship between entry mode and firm's performance. However, none of the results revealed a statistically significant relationship between these two variables

Study 3 – Discussion & Conclusion

- Parent's net sales per employee and parent's net profit ratio show positive value and significant towards the subsidiary performance
- Parent overseas sales and parent R&D per operating value variables have negative implication towards subsidiary performance
- The international experience measured by subsidiary age variable was significant for manufacturing and service sector in binary logistic regression analysis.
 - international experiences give the ability to the parent company to develop product differentiation and at the same time improve subsidiary's host market competitiveness.
 - (Warusawitharana, 2012) found that average profitability changes systematically with firm's age. In early stage, firms realize substantial profitability increase, while mature firms face slow decline in profitability.

Conclusions of 3 studies

Investment Objectives

Locational Factor

Financial Data

Japanese FDI

Entry Mode

Malaysia & Thailand

Japanese MNCs

Malaysia

Conclusions

- Selecting the right location and investment objectives/motives are vital for Japanese MNCs in the decision-making process, to ensure the survival and competitiveness of their subsidiaries in the host country.
- The alterations made by Japanese MNCs were important decisions that ensured that they would maintain their profitability for global competitiveness, and chances of future survival.
- Our empirical results show that Japanese MNCs outward investment fell into stage 3 of the IDP paradigm

Conclusions

- By using the ORBIS database, we looked for more details to investigate firm's performance using financial data from the parent and subsidiary's side
- findings showed that less than 25% of Japanese MNCs were wholly owned between 2003 and 2009, whilst majority-owned subsidiaries accounted for more than 75% within the same period in the two ASEAN countries
- empirical tests confirmed that there is a consistent association between entry mode and firm's performance
- We found that parent operating revenue, R&D expenditure, and profit margin, are all important indicators for subsidiary financial performance in both countries

Conclusions

- Previous researchers have used a variety of variables to measure firm performance, with mixed findings
- By running two different types of logistic regression, 5/10 of the independent variables were significant.
 - We found ‘parent’s overseas sales’, ‘parent R&D per operating value’, ‘parent net sales per employees’, ‘parent net profit ratio’, and ‘subsidiary age’ significantly influenced Japanese MNCs subsidiary performance in Malaysia
- We finally concluded that some of the parent firm’s features, which strengthened or weakened, contributed to the success of a subsidiary.

Contribution and Implications

- For academicians:
 - clearly focuses on testing the extent to which the theoretical argument is present in the IDP approach, and is valid for countries positioned at different stages along the path
 - This effort would clearly lead to a better understanding of different motivations, and hence, location factors behind the FDI carried out by MNCs
 - parent characteristics, such as parent age, also supports the empirical findings on industry lifecycle, the theoretical model of industry lifecycle and dynamics, and empirical patterns of firm and industry dynamics, which collectively suggest that the shape of size distribution should change as an industry ages

Contribution and Implications

- For decision makers:
 - this study reveals that managers' knowledge of development stage of the host country can be useful for achieving the objectives set out by their firms.
 - have increased the understanding and exposure of the current situation regarding Japanese subsidiary performance in enhancing and maintaining their investment in Malaysia and Thailand

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List of Companies

- [Fulbright Presentation 1-List of companies.docx](#)

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Thank You