

Effects of Foreign Directors on Firm Performance

Empirical research in Japan

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Research Rationale

- + This research studies the globalizing of the boardroom and measures the effects of **Foreign Director** on Firm Performance.
- + Literature on globalization and corporate governance so far has largely focused on the globalization of foreign ownership aspect but not foreign directorship.
- + A lot of papers examined the effects of globalization on the ownership structure, (La Porta et al. 1999, René M. Stulz, 2005), the convergence of difference corporate systems (CL Ahmadjian and GE Robbins, 2005) due to the increase of foreign institutional ownership or the board diversity with focus on outside directors (Weisbach, M., 1988, etc).

Literature Review

- + Debates on the effects of foreign directors continue as available researches present different results.
- + Lars Oxelheim & Trond Randoy, 2003 confirmed a significantly higher value for firms that have outsider foreign board members. The research used data of Norway or Sweden listed firms having foreign American directors. They concluded that Anglo-American directors served as a catalyst for further globalization of a corporation and signals openness to foreign investors and a commitment to corporate transparency.
- + Masulis, Wang & Xie, 2012 used American firm data and suggested that foreign independent directors brought both benefits and costs to firms: Value is added through their international expertise and negotiation skills especially in cross-border acquisitions when targets are from the home regions of foreign director while their oversea location leads to monitoring deficiencies.
- + In Japan, no directly related papers but papers studying effects of outside directors provide evidence that having at least one outside director can improve board effectiveness & firm performance (Kato, Skinner and Kunimura (2009), Saito (2011))

Research Objectives & Scope

- + The research aims to find out empirical results about the effects of foreign directors on Firm performance
- + The study focuses on listed Japanese firms that have foreign directors (having foreign nationalities, not Japanese).
- + We constructed a database of all listed non-financial firms in Japan from 2004 to 2012 (nearly 38,000 observations)
- + Having obtained more than 1,300 firm – year observations having foreign director on board

Research Methodology

- + Effects of Foreign Director on Firm performance is empirically measured through the *Operating performance changes* after having the **first-foreign** director introduction on all-Japanese board. In our paper, the key focus is on the first introduction of foreign director(s)

Main hypothesis: ROA of the firm increases after the introduction of foreign director to the board
- + To be specific, we measure the changes of ROA before and after having the **first foreign director** introduced (measure both within-firm and across-firm variation by creating unique control group).
- + The changes in unadjusted ROA can be affected by macroeconomic trends, industry trends and previous firm performance, to control this, we adjusted ROA using Performance-matched method advocated by Barber and Lyon (1996).
- + The decrease or increase in profitability for firms can be affected by other factors due to firm characteristics which causes biases (ex. endogeneity problem). To deal with this, we built good control firms by using Propensity Score Matching with closest Performance matching for each introduction firm. Process of matching score also take into consideration of year & industry matching

Research Novelty & Contribution

- + Huge research efforts have been spent to collect the data and construct the database:
 - Going line-by-line to collect and check the data from 4 databases: Director Database, Financial QUEST, CGES and Foreign-Affiliated Firms in Japan.
 - Difficult and time-consuming to check the nationalities of foreign directors, their backgrounds and the stories of their presence on boards (ex. Who are they and why they are introduced)
- + The research contribution by using Japanese firms' data:
 - The impact would be more significant in Japan as corporate governance system in Japan regarded as "unique with bank-based, relationship-oriented, network, insider, stakeholder, more coordinated characteristics, seemingly deviating from the shareholder-orientation and liberal market principles" (Aoki, Miyajima, Jackson).

Overall, the research examines an "experience " that does not occur in the other advanced countries where big corporations with fully domestic board member to be introduced with a "foreigner" (ex. Sony, Toyota, Olympus.)
 - The nationality diversity of foreign directors on Japanese firm's board (with Korean, Chinese, American, European, etc) will be a perfect context to test and compare the effects of Asia-originated foreign directors and the Western counterparts.

Well-known non-Japanese Presidents & Directors in Japan



Story of Toyota's Board of Directors

After many years managing the company with Japanese-only board, Toyota introduced its first foreign director in 2007. The behind intention of the introduction is globalization goal:

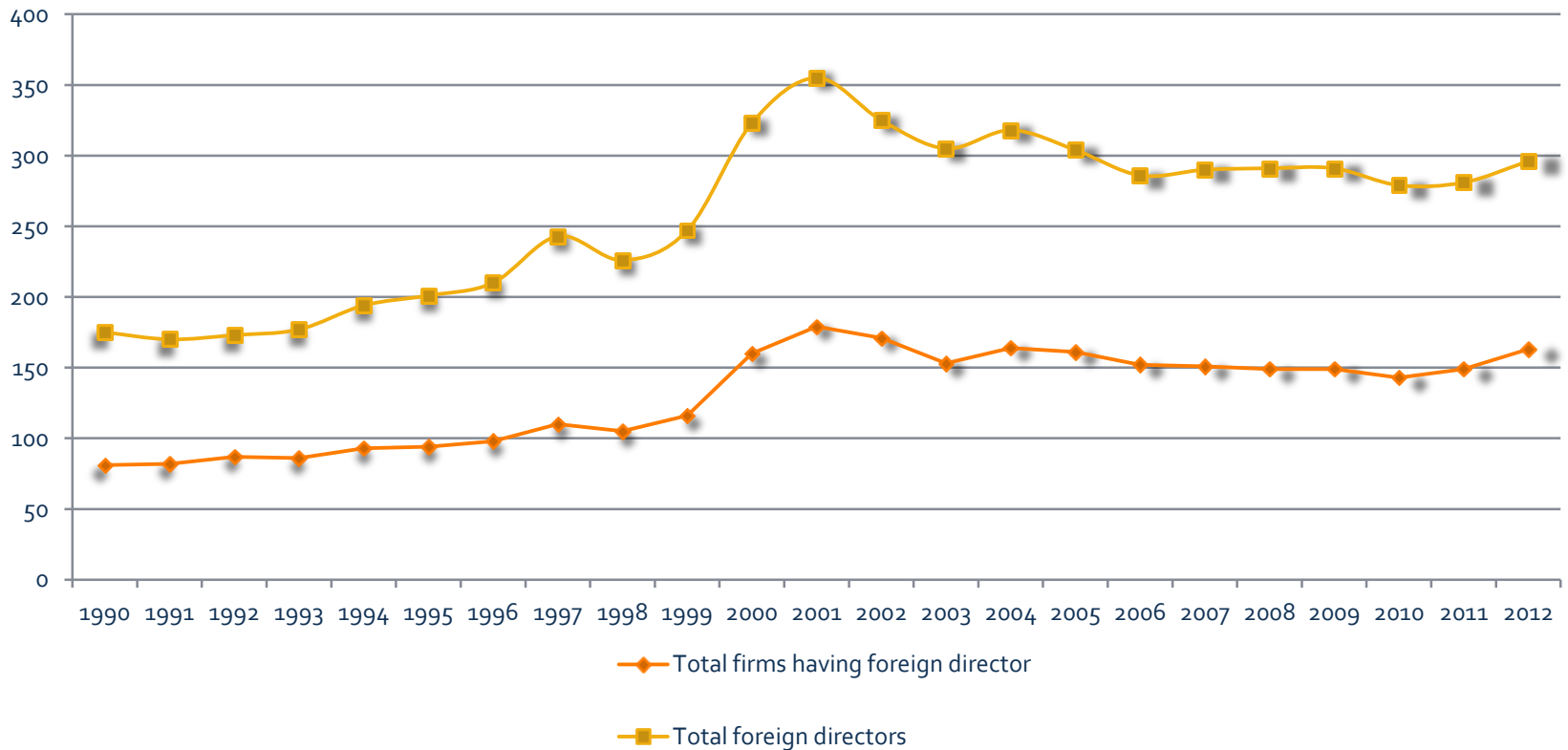
"What we're trying to do is to heighten the level of our management on a global scale," said Toyota spokesman

Year	No of directors	No of outside directors	No of foreign director	No of foreign outside director
2004	27	0	0	0
2005	26	0	0	0
2006	26	0	0	0
2007	30	0	1	0

* Jim Press, the first non-Japanese board member of Toyota surprisingly left the position in year 2008 to join Chrysler. No more foreign board in Toyota until 2013

Research Highlights

Foreign director in listed firms in Japan
(1990-2012)

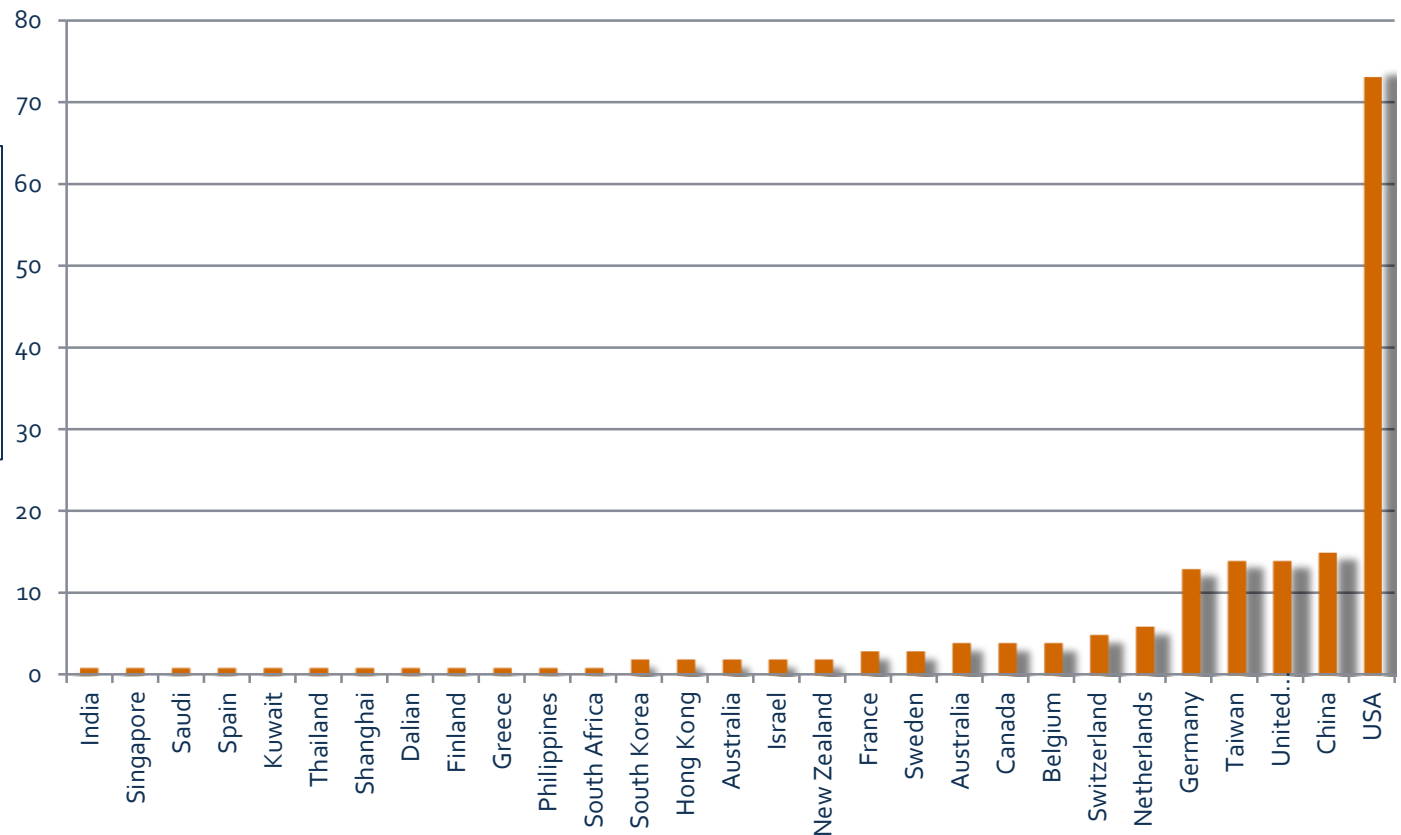


Research Highlights

Our database recorded at least 40 different nationalities of foreign directors in Japan

Nationality of Foreign directors in Japan (2004)

■ Number of directors



Top five nationalities
(2004~2012 aggregated)

1. American
2. Chinese
3. Taiwanese
4. English
5. German

Table 1: Summary statistics (2004~2012)

	All firms			Firms with foreign director			Firms without foreign director			Statistic for difference between firms with and without foreign director	
	Mean	Standard deviation	Median	Mean	Standard deviation	Median	Mean	Standard deviation	Median	t-Statistic	Z-Statistic
Assets (million yen)	179,970.70	901,394.20	25,651	468,743.80	1,548,210	40,010.50	167,674.80	861,076.40	25,278	11.98	8.33
Sales (million yen)	175,538.10	821,334.50	27,462.50	438,615.10	1,315,795.00	38,867	164,345.90	791,595.80	27,119	11.98	6.24
Subsidiaries	17.82	50.15	6	40.94	126.60	11	16.79	43.50	6	16.07	13.57
Number of affiliated firms	5.73	17.45	1	10.73	26.98	2.00	5.49	16.84	1	9.43	4.00
R&D (million yen)	5,398.25	31,003.31	434	22,107.17	73,774.81	1,343	4,546.35	26,797	416	15.95	14.24
Market-to-book ratio	0.72	1.35	0.42	1.21	2.76	0.64	0.70	1.25	0.42	13.46	15.80
Free cash flow (%)	0.31	21.73	1.94	-3.48	41.81	2.31	0.47	20.43	1.93	6.49	1.02
Industry ROA (%)	4.74	1.34	4.69	5.07	1.31	4.81	4.72	1.34	4.69	9.36	8.93
Leverage (%)	20.95	17.25	17.64	19.08	14.42	16.34	21.01	17.33	17.69	2.67	2.56
ROA (%)	5.47	10.53	4.42	5.56	17.48	5.29	5.46	10.13	4.39	0.32	2.90
TobinQ	1.24	1.33	0.99	1.70	2.72	1.16	1.22	1.23	0.99	12.92	16.78
Listing duration	23.76	19.62	16	22.10	19.50	15	23.83	19.62	16	3.17	3.84
Employee number	3,540.52	14,926.95	629	9,800.91	32,249.66	1,081	3,274.72	13,653.32	620	15.69	8.23
Board member's average age	56.53	5.71	58	55.24	6.18	56.00	56.58	5.68	58	7.90	8.19
Institutional Ownership	13.02	14.71	7.38	20.88	18.46	16.71	12.69	14.43	7.14	19.86	17.01
Foreign ownership	8.02	11.28	3.28	26.91	23.22	22.22	7	9.69	3.02	66.56	35.55
Minority ownership	21.36	13.09	19.50	17.63	11.73	15.40	21.52	13.12	19.60	10.57	12.31
Equity ownership	9.56	16.85	2.26	7.69	13.41	0.75	9.64	16.98	2.35	4.12	13.17
Cross ownership	6.88	8.17	4.21	3.61	5.93	0.06	7.02	8.22	4.43	14.89	18.23
Outside director ownership	0.08	1.27	0	0.11	0.89	0	0.08	1.29	0	0.57	4.13
CEO tenure	6.91	8.50	4	6.09	8.31	3	6.95	8.51	4	3.60	5.49
CEO ownership (%)	7.28	12.95	0.77	6.31	11.88	0.17	7.32	12.99	0.81	2.62	10.64

Comparison between firms having foreign directors and firms not

- + Firms with foreign directors have bigger size (ex. Larger assets and number of employee)
- + Firms with foreign directors have relatively larger ROA and TobinQ
- + Firms with foreign directors have significant larger foreign ownership ratio and invest more in R&D activities

Table 2: Summary statistics for foreign directors (2004~2012)

	Presence of foreign directors on the board (dummy)	Number of foreign directors on the board (person)	Percent of foreign director on board (%)	Total number of foreign directors	Total number of firm having foreign directors	Number of foreign directors having representative right	Number of firms having first introduction
Year	Mean	Mean	Mean				
All	0.041	0.076	0.702	2490	1333	194	65
2004	0.044	0.088	0.796	313	157	31	14
2005	0.036	0.072	0.649	263	131	25	11
2006	0.039	0.077	0.715	287	145	26	5
2007	0.042	0.078	0.734	300	161	30	7
2008	0.041	0.083	0.755	316	158	28	3
2009	0.041	0.071	0.665	262	152	33	8
2010	0.043	0.079	0.750	279	151	19	2
2011	0.041	0.073	0.659	255	144	13	4
2012	0.040	0.063	0.599	215	134	20	11

Changes in ROA after the first-introduction of Foreign directors(2004~2012)

- Starting from listing date, we choose companies having first-introduction of foreign director(s). We only study the cases in which foreign directors work at the firm of introduction more than two continuous years from the appointment date.
- We also consider firms which used to introduce foreign directors more than five-years ago as first-introduction as the appearance of foreign director in board after such a long-time of absence would create effects on the performance of the firms.
- To measure the difference of operating performance before and after having foreign directors, we calculate changes in ROA.
- The changes in unadjusted ROA can be affected by macroeconomic trends, industry trends and previous firm performance, to control this, we adjusted ROA using Performance-matched method advocated by Barber and Lyon (1996)
- In details, adjusted ROA is Industry and performance-adjusted ROA, defined as ROA minus median ROA for a counter group matched by same industry code and by prior ROA performance (+/-10% ROA cut-off). The counter sample for each introduction is selected from no-appointment firms based on industry & performance (in average, 4 controls for each treatment firm)

Table 4: Changes in ROA after the first-introduction of Foreign directors - Performance-matched method

TREATMENT FIRMS				
Year	Obs	ROA	(t- or Z- statistic) (1)	Industry-and performance- adjusted OROA (t- or Z- statistic) (2)
Mean				
[-3 to 0]	39		3.185 (0.9595)	3.386(0.8317)
[-2 to 0]	44		5.331 (0.7481)	6.060(1.2846)
[-1 to 0]	64		2.458 (0.8265)	5.136(1.1895)
[-1 to +1]	61		-1.729 (1.6495)	0.821(0.2787)
[-1 to +2]	33		-1.809 (1.163)	2.430(1.0657)
[-1 to +3]	24		-4.276 (1.4717)	3.617(1.2284)
[-1 to +4]	13		-5.659 (1.096)	1.406(1.0593)
[-1 to +5]	10		-5.681 (0.825)	3.682(1.9605)*
Median				
[-3 to 0]	39		0.521 (0.265)	0.714(0.377)
[-2 to 0]	44		0.694 (0.807)	1.046(0.559)
[-1 to 0]	64		-0.038 (0.655)	0.198(0.375)
[-1 to +1]	61		0.272 (0.762)	0.256(0.02)
[-1 to +2]	33		1.035 (0.483)	0.272(0.966)
[-1 to +3]	24		0.597 (1.009)	2.150(1.410)
[-1 to +4]	13		-1.155 (0.943)	1.014(0.943)
[-1 to +5]	10		-0.536 (0.459)	3.630(1.682)

Notation*, ** and *** indicate significance at the 10, 5 and 1% levels, respectively.

Table 5: Changes in ROA after the first-introduction of Inside and Outside foreign directors(2004~2012)

Mean	First foreign outside director introduction		First foreign inside director introduction		Treatment Difference	
	Obs	Industry-and performance-adjusted ROA	Obs	Industry-and performance-adjusted ROA	Difference in adjusted-ROA changes	t- or Z-statistic
[-3 to 0]	11	2.399	28	3.623	-1.225 (0.13)	
[-2 to 0]	14	6.901	31	4.834	2.067 (0.222)	
[-1 to 0]	22	2.970	41	6.356	-3.387 (1.687)*	
[-1 to +1]	22	0.681	41	0.853	-0.171 (0.027)	
[-1 to +2]	13	4.766	29	1.343	3.423 (0.673)	
[-1 to +3]	8	2.395	17	4.256	-1.862 (0.278)	
[-1 to +4]	2	-1.427	11	1.921	-3.348 (0.903)	
[-1 to +5]	2	2.698	8	3.927	-1.230 (0.248)	
Median						
[-3 to 0]	11	0.714	28	-0.224	0.939 (0.468)	
[-2 to 0]	14	0.739	31	0.968	-0.230 (0.025)	
[-1 to 0]	22	-3.042	41	0.423	-3.464 (1.687)*	
[-1 to +1]	22	-0.138	41	0.824	-0.962 (0.317)	
[-1 to +2]	13	0.605	29	0.110	0.496 (0.911)	
[-1 to +3]	8	0.667	17	2.289	-1.622 (0.466)	
[-1 to +4]	2	-1.427	11	1.324	-2.751 (0.2363)	
[-1 to +5]	2	2.698	8	3.630	-0.932 0	

Notation*, ** and *** indicate significance at the 10, 5 and 1% levels, respectively.

Table 6: Logit regression of the probability of introduction of foreign directors

➤ Dependent variable is the introduction dummy, equals one when firm first introduced foreign directors

➤ Firm-years subsequent to the introduction year are dropped

➤ In parentheses are robust standard errors corrected for clustering at firm level

Dependent variable=	Introduction of foreign directors
Log_total asset	0.860 *
Log_totalsale	0.526
Market_to_book_ratio	-1.048 **
Free cash flow (%)	0.499
Log_total_debt	0.062
Industry_ROA	0.05
Log_CEO_tenure	-0.004
Log_board_age	0.003
Log_employee_number	-0.027
Foreign_ownership	0.253
Institutional_ownership	-0.260
Ouside_director_ownership	2.897
Listing_duration	0.183
Indusry dummy	0.23
Year dummy	-3.791 **
Pseudo R2	1.637
Number of obs	0.274
	0.422
	0.045 ***
	0.015
	0.002
	0.017
	-0.003
	0.049
	-0.028
	0.02
	Yes
	Yes
	0.176
	10372

Research Results up to now

- + Firms with big size, high foreign-ownership ratio and engage more in R&D activities tend to have foreign directors on board.
- + Firms having not-good performance tend to introduce their first foreign directors to the board.
- + There is a slightly statistically significant difference in the operating performance of firms having first foreign director introduction. The performance fluctuates after the introduction year but gradually gets on rise in the next five years.
- + Two-thirds of introduced foreign directors are inside directors. Firms with first inside foreign director introduction operates better than counterparts with first outside director introduction in the long-run, however it is not a statistically significant difference. This result goes against the effects of outside directors in Japan. So, it might be better that assigned foreign directors in Japan are not all “complete outsiders” to the organization and she/he can perform better if having work experience at the firm

Current progress

- + We applied the Propensity Score Matching to find control firm for each foreign-director introduction firms
- + We are collecting data on the stock-performance of the date of FD appointment-annoucement to measure the abnormal return
- + We are working in details to build up case studies of prominent foreign directors, focusing on their background, origin and their performance
- + We intend to classify the foreign directors based on their country origin to examine the performance in that aspect

**Thank you very much for your
attention!**