

Foreign Ownership, financial characteristics and firm value

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<Abstract>

After the Korean currency crisis, the Korean government has abolished the limit on foreign investments; foreign investments have been thriving since. This research attempts to define the financial characteristics of the firms who determine foreign ownership, and furthermore, whether foreign ownership enhance firm value.

The result shows that foreign investors tend to prefer firms with high market value of capital and dividend yield. It is also shown that foreign investors choose firms with high book value to market value over others, while the firms with high debt ratio and the portion of the largest stock holders are shunned. In addition, regression analysis using instrument variable has been done to determine whether foreign investors influence firm value. It has been shown that foreign ownership variable has significant positive impact on Tobin ' s Q of firm value variable. Therefore, foreign investments in domestic corporations positively contribute to firm value, as they monitor as an institutional investor and work to soothe agency problems by the managements or the large stock holders.

. Introduction

After the Korean currency crisis, compositions of stock holders in domestic firms are rapidly changing. In domestic stock market, the proportion of market value held by foreign investors reaches over 40%. There are several blue chip companies among those where foreign investors hold more than 50% of the stocks. There are still hot debates going on about whether the increase in the number of foreign investors contributes to domestic companies, and how. Those who view it positively claim that it improves firm value, by keeping the management transparent, while also serving as a brake on the management if it gets out of hand. Those who frown on it see it as a minus to firm value, as foreign investors use capital on buying treasury stocks or increasing dividend, and may try to merger domestic companies.

This research attempts to analyze financial characteristics of firms that foreign investors prefer, and also analyze whether the increase in foreign investments improve values of the firms. Foreign investors, who grew large in number after the Korean currency crisis, are evaluated to have contributed to liquidity of stock market and changed the governance structure of domestic firms. Moreover, an increase in needs of domestic stocks strengthened international competitiveness of domestic firms by reducing capital cost, and therefore, contributing to the development of domestic capital market and national economy. However, foreign investments tend to focus on indirect investing on securities, and fund managers decide whether they will purchase domestic stocks. Fund managers ' performances depend on

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the stock market indexes, and they are evaluated among themselves in order to determine their compensations. Foreign fund managers have an incentive to sell their stocks if the firms does not reach expected yield in a short period of time. Therefore, they tend to stick with myopic short-term investments, and focus on allocating corporate cash flows and dividend increase and stock repurchase, while shunning the firms' research efforts or facility investments for long-term growth. In some cases, foreign investments in stock market are conceived as detrimental by a few hedge funds.

This paper goes as follows – In chapter 2, past literature are reviewed. In chapter 3, sample variables and their methodologies are explained. In chapter 4, empirical results are reported. In the chapter, the research summaries and suggestions are followed.

. Literature Survey

Past researches that exist have two main parts. In the first one, analysis of financial characteristics or stocks of the firms foreign investors prefer, and in the second one, an analysis of causality between foreign investors as institutional investors and firms' returns.

Foreign investors' domestic portfolio disposition connects to home bias in international diversified investments. Their decision making should be understood in terms of information asymmetry between domestic and foreign investors. Foreign investors have tendency (home bias) to choose stocks they are more familiar with, such as ones from their home countries. Studies by Huberman (2001), and Ivkovich and Weisbenner (2005), claim that American investors usually prefer stocks of the firms which are geographically closer. Brennan and Cao (1997), took this home bias phenomena to an international level and created a theory model that takes into account the information asymmetry between domestic and foreign investors, and discovered that domestic investors are better informed about the market. Corvig Lau, and Ng (2002), found that investing in foreign funds depend on the domestic firm's export, exchange index stocks, and overseas listings, since foreign fund managers are relatively less informed than domestic fund managers. This, they claim, is attributable to information asymmetry between domestic and foreign investors. Kang and Stulz (1994), found that foreign investors in Japan tend to focus on large companies and those with large exports, and concluded that foreign investors choose large companies in which sufficient enough information has been out to the market, to overcome adverse information asymmetry. Similar to former, Falkenstein (1996) found that American mutual funds prefer stocks with high transparency and liquidity. Dahlquist and Robertson (2001) studied firms in Switzerland to find characteristics of the firms which foreign investors prefer. They found that in Switzerland, foreign investors prefer large companies with low dividend, and large cash holdings. Also, they found that foreign investors prefer firms with large exposure and international reputations with overseas listings, while they shunned firms with controlling shareholders.

And past researches on foreign ownership and corporate performances are done in relation with the causation between ownership structure or governance structure, and corporate

performances. These researches assume that in terms of agency theory, ownership and governance structure decides corporate performance. Whether it is institutional investors or foreign investors, and or whether certain share holder groups actively play in the management or not, corporate performance will improve with a monitoring function. Researches in this field point to institutional investors as those with capability and will to monitor firms. In accordance with the efficient monitoring hypothesis, McConnell and Servaes (1990, 1995) found that share holdings of institutional investors are in a positive close relationship with Tobin's Q, corporate performance index. Chaganti and Damanpour (1991) found that institutional investors' share holdings have positive impact on capital yield. Meanwhile, Pound (1988) found that institutional investors tend to vote in favor of the management at share holders' meetings, and claimed they are not being efficient monitors. Afterwards, Khanna and Palepu (1999) and Park (2001) found a direct causal relationship between foreign investors' share holdings and firm value, by analyzing the relationship between foreign ownership and corporate performance. In domestic literature, Kim Ju Hyun (1992) examined the empirical relationship between ownership structure and firm value. Kim Yong Sook and Lee Jae Chun (2000) found that the larger the proportion of institutional investors' share holdings, the higher firm value. Recently, Park Hun Joon, Shin Hyun Han, and Choi Whan Soo (2004) found that the larger foreign investors' share holdings, the lower agency cost such as perk expenses.

. Sample and Methodology

1. Sample

The sample in this paper consists of all firms listed on the Korea Stock Exchange in the year from 1991 to 2004. Financial and stock data on the sample firms are collected. Specifically, in order to determine the characteristics of domestic firms which foreign investors prefer, this paper examines how cross-sectional variations in financial characteristic variables affect the proportion of foreign ownership.

The sample excludes financial institutions and communication companies since these firms are regulated during the sample period, and their business styles may differ from those of other firms. Stock price, stock returns, and market returns data are from Korea Information Service (KIS) database, and accounting data are from Korea Listed Companies Association (KLCA) database. The variable definitions in this paper are shown in Table 2.

2. Methodology

This paper estimates the following regression models for the yearly, industry, and whole samples. And an instrumental-variable (IV) regression model is estimated to correct the endogeneity problem in which foreign ownership variable is used as an explanatory variable.

$$\text{Foreign} = \beta_0 + \beta_1 \text{Ln_MktCap} + \beta_2 \text{Div_Yield} + \beta_3 \text{Risk} + \beta_4 \text{BME} + \beta_5 \text{Current} + \beta_6 \text{Leverage} + \beta_7 \text{Largest} + \beta_8 \text{Cash_Holdings} + \sum_{99-03} \text{Yearly_Dummies}$$

$$\text{Tobins_Q} = \beta_0 + \beta_1 \text{Foreign} + \beta_2 \text{Sales} + \beta_3 \text{RnD_K} + \beta_4 \text{Adv_K} + \beta_5 \text{CapEx_K} + \beta_6 \text{Y_Sales} + \beta_7 \text{K_Sales} + \beta_8 \text{Lever} + \beta_9 \text{Growth} + \sum_{99-03} \text{Yearly_Dummies}$$

This paper uses a foreign ownership variable scaled by $\log(\text{Ratio}/(100-\text{Ratio}))$ as a dependant variable. Tobins_Q is a proxy variable for firm value, which is scaled by market value of assets to book value of assets. Explanatory variables are chosen, considering the test models of Himmelberg, Hubbard, Palia (1999), Dahlquist and Robertsson (2001), Habib and Ljungqvist (2005).

Accounting variables used as an explanatory variable are defined in Table 2.

3. Test Hypothesis

In this paper, the test hypothesis predicts the followings.

(Hypothesis 1): *Foreign investors choose familiar and recognized companies in which sufficient enough information has been out to the market.*

(Hypothesis 2): *Foreign investors prefer stocks of the firms which have low risks such as in financial distress risks.*

(Hypothesis 3): *Foreign investors shun stocks of the firms with controlling shareholders.*

. Empirical Results

Table 1 shows the distribution of foreign ownership by calendar year from 1998 to 2004 when the limit on foreign investments has been abolished in the Korean stock market. The average foreign ownership rises from 5.19% in 1998 to 9.91% in 2004. By industry, the average foreign ownership in the manufacturing sector is equal to 6.63%, where the manufacturing sector takes the portion of 77.2% of the whole industry. The average foreign ownership in the communication sector is 24.94%, where the sector has been regulated by the limits of 49% on foreign investments. Table 2 shows the definitions for variables used in this paper. The variables used in this paper are based on ones suggested by Himmelberg, Hubbard, Palia (1999), Dahlquist and Robertsson (2001), Habib and Ljungqvist (2005) Table 3 shows descriptive statistics of major variables of sample firms. Variables used in this paper are

grouped by ownership variable, accounting variable and firm value variables, showing the average, standard deviation, minimum and maximum values. Table 4 shows difference analysis in foreign ownership by accounting variable. The sample firms were divided in fifth, depending on the size of accounting variables. Wilcoxon Z-test difference analysis has been applied on small samples of Q1 (groups with the smallest accounting variables) and Q5 (groups with the largest accounting variables), as well as the average ratio of foreign ownership. It was shown that as the price of common stocks rise, foreign ownership follows the same pattern as well. The same pattern also followed when dividend yield changes. However, the risk variable of cash flow volatility rises, foreign ownership decreased in return.

Table 5 shows the result of regression analysis of foreign ownership and accounting variables, by calendar year. Those in which fixed effects such as industry effect are not controlled, but it reports that market value of common stocks Ln_MktCap, dividend yield Div_Yield, and book to market ratio of common stocks displays a very positive significant relationship with foreign ownership. In table 6, a regression analysis has been done with year dummies. In order to restrict industry effect, variables has been grouped by industry. Industries with restrictions or industrial uniqueness such as electricity, gas, waterworks, and communications, do not show a significant relationship with foreign ownership. However, in the manufacturing sector, as corporate decision making is made autonomously and takes the portion of 77.3% of the whole industry, the market value of common stocks Ln_MktCap, dividend yield Div_Yield, book to market value ratio of common stocks BME, and ownership ratio of the largest share holders, Largest, explained significantly foreign ownership variable, Foreign. It seems that the reason foreign investors prefer large firms is because large companies are superior in terms of firm recognition, and liquidity. This theory runs parallel with Huberman (1999), who claimed in a situation of information asymmetry, investors tend to invest on firms they are familiar with, and also firms with largest cachet of information. Also, it is found that foreign investors prefer stocks high dividend yield and high BME ratio, meaning they prefer value stocks. This result is in contrast to that of Dahlquist and Robertsson (2001), in which foreign investors in Swiss market preferred growth stocks. On the contrary, foreign investors shun away from firms with high debt ratio and controlling shareholders. This also fits in with the research conducted by Leus, Lins, and Warnock (2005).

Table 7 shows how foreign ownership variable affects firm value by adjusting endogeneity problem of foreign ownership variable, using instrumental variables. Foreign ownership's influence has been estimated, declaring Tobin's Q as dependent variables, total sales as controlling variables Sales, RnD_K (research and development expenses), Adv_K (advertising expenses), CapEx_K (capital expenses), Y_Sales (operating profits), K_Sales (tangible assets), Lever (debt ratio), and Growth (growth rate). Market value of common stocks Ln_MktCap, and ownership ratio of the largest shareholders, Largest, have been used as instrumental variables of foreign ownership ratio variables. In Table 7, in the manufacturing sector, which takes 77.3% of the whole industry, the coefficient estimate of foreign ownership variable Foreign, in relation to the proxy variable of firm value, Tobin's Q, is 0.05, and at 1% level, it was statistically very significant. This is evidence that shows as foreign ownership rises, Tobin's Q also rises, supporting the efficient monitoring hypothesis on

foreign investors. In Table 8, an analysis has been applied to include Foreign2 variable, a squared value of Foreign, by studying relationship between foreign ownership ratio variable, and firm value variable, and by considering nonlinearities possibility. The coefficient estimate of foreign ownership variable Foreign, in relation to Tobin's Q, is still 0.05, which is statistically very significant at 1% level, but the coefficient estimate of Foreign2 was not significant and is not different from 0 statistically. In Table 7 and Table 8, controlled variables such as Sales(total sales), CapEx_K(capital expenses), Y_Sales(operating profits), K_Sales(tangible assets), and Lever(debt ratio) show significant coefficient estimates, but such was not the case with RnD_K(research and development expenses), Adv_K(advertising expenses), and Growth(growth rate).

V. Conclusions

After Korean currency crisis, the government has lifted the limit on foreign investments beginning on May 25th, 1998, and foreign investments have been thriving ever since. This research defines financial characteristics of firms with large proportion of foreign ownership, and empirically analyzes whether foreign investments improve firm value.

The result shows that foreign investors prefer firms with large market value of capital, and high dividend yield. Also, they choose value firms with high book to market value ratio, while shunning away from firms with high debt ratio and high ownership ratio of the largest shareholders. Also, a regression analysis has been done to determine whether foreign investors positively affect firm value by using instrumental variable on foreign ownership. It was shown that foreign ownership variable has a consistently positive impact on Tobin's Q of firm value variable. Therefore it is interpreted that foreign investments in domestic firms contribute to monitoring functions as institutional investors, soothe the agency problems by management or the largest shareholders, and finally, contribute to improvement of firm value.

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[Table 1] The Distribution of Foreign Ownership in Korea

(A) By year							
	1998	1999	2000	2001	2002	2003	2004
Mean	5.19	5.47	4.88	5.40	6.14	8.20	9.91
St. D.	10.85	10.34	10.16	11.27	12.12	14.27	16.03
Min	0	0	0	0	0	0	0
Max	78.80	67.13	68.21	65.14	86.06	92.43	92.97
Obs	398	404	427	451	484	505	507
(B) By industry							
	Manuf.	Ele. Gas, Water	Constr	Sale	Trans	Comm	Others
Mean	6.63	11.13	6.24	5.70	5.87	24.94	7.85
St. D.	12.62	9.49	13.94	10.77	11.39	18.83	15.64
Min	0	0.23	0	0	0	1.37	0
Max	92.97	30.51	73.24	50.86	58.49	48.95	61.41
Obs	2,454	36	227	242	109	14	56

[Table 2] The Variable Definitions

Variable	Definition
(A) Ownership Variable	
Ratio	= Foreign ownership ratio. The portion of foreigners' ownership of total number of common stocks outstanding
Foreign	= $\log(\text{Ratio}/(100-\text{Ratio}))$
Largest	= Ownership ratio of the largest shareholder
(B) Accounting Variable	
MktCap	= Total number of common stocks outstanding \times stock price at year - end (=market capitalization of common stocks)=(firm size)
Ln_MktCap	= $\log(\text{mktcap})$
Div_Yield	= $(\text{Cash dividend} + \text{Stock dividend}) / \text{Market capitalization of common stocks}$
Risk	= Volatility of cash flows (Variance over the past 5 years of EBIT and depreciation)
BME	= $(\text{book value of common stocks}) / (\text{market value of common stocks})$ (higher BME=value firms, lowerBME=growth firms)
Current	= Current asset / Current Liabilities
Leverage	= Total debt / Total capital
Cash_Holdings	= Cash and cash equivalents / (Total asset – Cash and cash equivalent).
(C) Firm Value variable	
Tobins_Q	Market value of assets/ Book value of assets
Sales	$\log(\text{total sales})$
RnD_K	R&D expenses / Tangible assets
Adv_K	Advertising expenses / Tangible assets
CapEx_K	Capital expenses / Tangible assets
Y_Sales	Operating profit / Total sales
K_Sales	Tangible asset / Total sales
Lever	Book value of debt / Market value of asset
Growth	Average growth rate of total sales over the past 3 years

[3] The Descriptive Statistics of Sample Firms

	Mean	St. D.	Min	Max	Obs
(A) Ownership Variable					
Ratio (%)	6.59	12.61	0	92.97	3,176
Foreign	-7.24	6.17	-18.42	2.58	3,176
Largest	0.28	0.18	0	0.95	2,669
(B) Accounting Variable					
MktCap(mil.)	359,857	2,607,367	10	68,576,744	3,176
Ln_MktCap	17.24	1.94	9.22	24.95	3,176
Div_Yield	0.039	0.077	0	1.058	3,176
Risk	0.010	0.336	5.5E - 10	15.88	3,176
BME	3.117	11.444	0.001	166.66	3,176
Current	1.59	1.32	0.001	12.94	3,176
Leverage	2.67	30.74	-245.01	1,291.3	3,176
Cash_Holdings	0.056	0.085	3.7E - 6	1.17	3,176
(C) Firm Value Variable					
Tobins_Q	1.097	0.426	-5.983	7.042	3,176
Sales	19.02	1.55	10.35	24.77	3,176
RnD_K	0.019	0.161	-2.487	5.283	3,176
Adv_K	0.033	0.166	0	7.080	3,176
CapEx_K	-0.276	5.760	-240.15	8.25	3,176
Y_Sales	-0.304	12.301	-579.55	175.27	3,176
K_Sales	0.648	1.615	0.0005	65.71	3,176
Lever	0.48	0.29	0	0.99	3,176
Growth	0.132	0.992	-0.616	45.458	3,176

[Table 4] Difference Analysis of Foreign Ownership by Financial Characteristics

	Group Mean by Accountin Variable					Mean	Diff.	Obs
	Q1	Q2	Q3	Q4	Q5			
MktCap(mil.)	3,561	13,844	28,799	69,909	1,681,092	359,857		3,176
Ratio	1.51	2.17	3.42	5.65	20.17	6.59	<.0001	3,176
Div_Yield	0	0.0004	0.019	0.042	0.135	0.039	<.0001	3,176
Ratio	0.68	5.37	12.42	8.97	5.52	6.59	<.0001	3,176
Risk	2.7E - 7	2.0E - 6	8.9E - 6	0.00004	0.052	0.010	<.0001	3,176
Ratio	13.92	8.33	5.47	3.52	1.17	6.59	<.0001	3,176
BME	0.130	0.373	0.700	1.326	13.042	3.117	<.0001	3,176
Ratio	16.83	7.27	4.04	3.21	1.63	6.59	<.0001	3,176
Current	0.54	0.92	1.25	1.70	3.54	1.59	0.951	3,176
Ratio	6.49	6.27	6.39	6.45	7.34	6.59	<.0001	3,176
Leverage	-3.20	0.62	1.03	1.67	13.20	2.67	<.0001	3,176
Ratio	7.73	8.12	7.93	6.12	3.06	6.59	<.0001	3,176
Largest	0.04	0.17	0.27	0.38	0.55	0.28	0.043	2,669
Ratio	5.48	6.27	5.63	6.65	5.76	6.59	0.095	3,176
Cash_Holdings	0.002	0.012	0.030	0.059	0.179	0.056	0.095	3,176
Ratio	5.81	5.76	5.80	7.26	8.31	6.59	0.095	3,176

[5] Regression Analysis of Foreign Ownership by Calendar Year

	1998	1999	2000	2001	2002	2003	2004	Total (98-03)
Ln_MktCap	2.03 (12.42)**	1.72 (12.02)**	1.94 (12.76)**	1.99 (14.55)**	1.88 (12.83)**	1.93 (12.46)**	2.08 (14.87)**	1.89 (32.90)**
Div_Yield	22.06 (6.69)**	12.94 (2.69)**	7.28 (2.29)*	14.51 (4.97)**	7.72 (2.04)*	9.36 (1.33)	20.44 (3.69)**	11.68 (6.84)**
Risk	-175.1 (-0.22)	-3.00 (-0.13)	-4.94 (-0.80)	-4.29 (-0.54)	-3.86 (-0.39)	-1.09 (-0.03)	0.23 (0.17)	-1.02 (-0.41)
BME	0.04 (2.19)*	0.11 (3.85)**	0.05 (3.11)**	0.07 (2.51)*	0.03 (0.56)	0.08 (0.75)	-0.23 (-1.31)	0.05 (5.11)**
Current	0.27 (1.06)	0.55 (2.15)	-0.33 (-1.10)	0.12 (0.64)	0.10 (0.43)	-0.08 (-0.39)	0.29 (1.72)	0.11 (1.19)
Leverage	0.01 (1.05)	-0.006 (-1.64)	0.006 (0.48)	-0.009 (-0.34)	-0.02 (-0.94)	-0.08 (-0.53)	-0.03 (-0.26)	-0.005 (-2.21)*
Largest	0.89 (0.54)	-3.04 (-1.74)	-2.93 (-2.06)*	-2.73 (-2.15)	-1.70 (-1.41)	-1.93 (-1.62)	.	-1.98 (-3.59)**
Cash_Holdings	3.38 (1.29)	-3.96 (-0.79)	2.50 (0.40)	-4.23 (-1.78)	-1.30 (-0.36)	6.78 (1.88)	3.52 (1.32)	0.92 (0.66)
Const.	-44.44 (-15.1)	-37.68 (-12.99)	-40.04 (-13.55)	-41.79 (-16.07)	-39.71 (-13.86)	-40.51 (-12.77)	-44.60 (-16.11)	-40.28 (-36.23)
R ²	0.33	0.27	0.32	0.36	0.30	0.33	0.39	0.30
F	26.58	21.27	28.53	32.67	25.55	27.56	44.34	155.01
N	398	404	427	451	484	505	507	2.669

[Table 6] Regression Analysis of Foreign Ownership by Industry

	Manuf.	Ele. Gas Water	Const.r..	Sale	Trans	Comm	Others
Ln_MktCap	1.86 (27.62)**	0.24 (1.10)	2.43 (7.11)**	1.95 (7.79)**	2.78 (7.26)**	1.85 (1.80)	1.98 (5.49)**
Div_Yield	10.82 (5.87)**	7.14 (0.26)	-1.59 (-0.17)	17.75 (1.56)	32.25 (6.18)**	57.82 (0.72)	0.63 (0.11)
Risk	-6.00 (-0.76)	-110609 (-1.71)	-79.57 (-1.47)	-60.82 (-1.39)	-1736 (-0.64)	5431249 (0.87)	-0.92 (-0.18)
BME	0.05 (3.96)**	-5.66 (-0.72)	0.06 (0.62)	0.05 (2.13)*	0.31 (2.41)*	-1.07 (0.20)	0.09 (2.79)**
Current	0.04 (0.47)	0.48 (0.16)	-0.64 (-0.49)	0.22 (0.47)	2.21 (1.79)	-3.65 (-0.72)	0.67 (0.73)
Leverage	-0.006 (-2.26)*	-0.38 (-0.36)	0.007 (0.26)	0.03 (0.65)	0.01 (0.95)	2.08 (1.11)	0.35 (1.13)
Largest	-1.66 (-2.62)**	-1.11 (-0.48)	0.62 (0.26)	-6.97 (-3.62)**	-0.07 (-0.02)	0.59 (0.14)	5.21 (0.79)
Cash_Holdings	2.60 (1.61)	0.80 (0.07)	-2.02 (-0.83)	0.94 (0.17)	7.31 (0.41)	25.42 (0.69)	-12.99 (-1.03)
Year99	0.31 (0.66)	-0.07 (-0.09)	2.23 (1.77)	0.32 (0.23)	1.90 (0.70)		0.86 (0.29)
Year00	0.24 (0.54)	-0.04 (-0.06)	2.67 (1.93)	-0.90 (-0.66)	1.83 (1.71)		-0.47 (-0.14)
Year01	0.19 (0.45)	-0.004 (-0.003)	-0.24 (-0.19)	0.005 (0.004)	0.95 (0.38)		0.16 (0.05)
Year02	0.48 (1.14)	-0.09 (-0.09)	1.33 (0.94)	-0.96 (-0.74)	0.79 (0.30)		0.11 (0.04)
Year03	0.50 (1.19)	-0.59 (-0.60)	2.18 (1.69)	-0.41 (-0.32)	2.71 (0.98)		-0.92 (-0.31)
Const.	-39.88 (-31.04)	-5.18 (-0.83)	-50.56 (-7.28)	-40.48 (-8.13)	-61.64 (-10.73)	-45.85 (-1.75)	-41.45 (-5.55)
R ²	0.29	0.85	0.44	0.40	0.60	0.99	0.66
F	71.20	11.52	15.47	11.13	16.59	5.08	6.53
N	2,065 (77.3%)	27 (1.0%)	191 (7.1%)	205 (7.6%)	93 (3.4%)	11 (0.4%)	45 (1.6%)

[Table 7] The Impact of Foreign Ownership on Firm Value (1)
 -Instrument Variable Regression-

	Manuf.	Ele. Gas Water	Constr.	Sale	Trans.	Others	Total
Foreign	0.05 (8.44)**	-0.002 (-0.08)	0.004 (0.86)	0.07 (3.49)**	0.04 (1.71)	0.07 (0.49)	0.05 (9.18)**
Sales	-0.04 (-3.64)**	0.02 (1.28)	0.02 (2.02)*	-0.08 (-2.21)*	-0.10 (-1.32)	0.12 (0.88)	-0.03 (-3.01)**
RnD_K	0.16 (1.77)	6.06 (1.73)	0.17 (0.68)	2.51 (1.69)	-0.24 (-0.18)	0.34 (0.61)	0.45 (5.08)**
Adv_K	0.19 (1.74)	1.74 (0.32)	-0.09 (-0.76)	-0.19 (-1.65)	6.07 (1.33)	-0.22 (-0.14)	0.02 (0.43)
CapEx_K	0.01 (2.13)*	-0.02 (-1.14)	0.001 (0.24)	-0.0009 (-0.22)	0.03 (0.21)	0.11 (2.63)*	0.01 (5.27)**
Y_Sales	0.02 (4.15)**	-0.19 (-0.79)	0.002 (0.66)	0.33 (2.35)*	-0.58 (-0.99)	0.0002 (0.04)	-0.002 (-2.36)*
K_Sales	-0.13 (-2.71)**	0.03 (2.99)**	-0.007 (-1.70)	-0.03 (-0.35)	-0.007 (-0.08)	0.01 (0.30)	-0.03 (-4.04)**
Lever	-0.32 (-6.39)**	-0.31 (-3.27)**	-0.34 (-5.74)**	-0.33 (-1.55)	-0.20 (-0.57)	-1.58 (-1.42)	-0.39 (-8.33)**
Growth	-0.01 (-0.45)	0.23 (1.08)	0.006 (0.83)	4.8E-7 (0.00)	0.14 (2.37)	0.10 (0.85)	0.0005 (0.01)
Year99	0.01 (0.38)	-0.01 (-0.41)	-0.04 (-1.58)	-0.02 (-0.15)	0.18 (1.24)	-0.15 (-0.21)	0.01 (0.59)
Year00	-0.06 (-1.91)	-0.08 (-2.73)	-0.06 (-2.44)	0.006 (0.04)	-0.001 (-0.01)	-1.06 (-1.59)	-0.06 (-2.03)
Year01	-0.05 (-1.83)	-0.07 (-2.27)	-0.06 (-2.32)	-0.13 (-0.87)	0.04 (0.30)	-0.11 (-0.17)	-0.06 (-2.15)
Year02	-0.11 (-3.54)	-0.08 (-2.78)	-0.09 (-3.38)	-0.04 (-0.29)	0.08 (0.52)	-0.56 (-0.87)	-0.12 (-3.72)
Year03	-0.08 (-2.71)	-0.05 (-1.50)	-0.09 (-3.39)	-0.07 (-0.45)	0.06 (0.41)	-0.57 (-0.91)	-0.10 (-3.12)
Const.	2.63 (9.52)	0.64 (1.13)	0.77 (2.80)	3.46 (4.09)	3.67 (2.22)	0.19 (0.06)	2.43 (9.90)
Adj.R ²	0.22	0.77	0.47	0.17	0.35	0.47	0.21
F	44.63	7.58	13.21	4.06	4.67	3.86	54.73
N	2.065 (77.3%)	27 (1.0%)	191 (7.1%)	205 (7.6%)	93 (3.4%)	45 (1.6%)	2669 (100%)

[Table 8] The Impact of Foreign Ownership on Firm Value (2)
 -Instrument Variable Regression-

	Manuf.	Ele. Gas Water	Constr.	Sale	Trans.	Others	Total
Foreign	0.05 (8.29)**	-0.01 (-0.35)	0.003 (0.60)	0.08 (3.78)**	0.04 (1.85)	0.13 (0.69)	0.05 (9.27)**
Foreign2	-0.0005 (-0.60)	-0.001 (-2.01)	-0.0007 (-0.87)	0.0005 (1.45)	0.0002 (0.79)	0.001 (0.57)	0.00007 (1.03)
Sales	-0.04 (-3.67)**	0.02 (0.88)	0.02 (1.99)*	-0.08 (-2.18)*	-0.10 (1.24)	0.13 (0.83)	-0.03 (-2.91)**
RnD_K	0.16 (1.76)	6.66 (1.77)	0.16 (0.62)	2.59 (1.76)	-0.28 (-0.21)	0.32 (0.52)	0.45 (5.10)**
Adv_K	0.19 (1.70)	7.11 (1.09)	-0.08 (-0.74)	-0.22 (-1.86)	6.04 (1.34)	-0.12 (-0.07)	0.02 (0.42)
CapEx_K	0.01 (2.10)*	-0.03 (-1.35)	0.0003 (0.07)	-0.002 (-0.46)	0.03 (0.22)	0.11 (2.35)*	0.01 (5.27)**
Y_Sales	0.02 (4.13)**	-0.06 (-0.26)	0.002 (0.67)	0.34 (2.39)*	-0.56 (-0.96)	0.001 (0.20)	-0.002 (-2.39)*
K_Sales	-0.03 (-2.71)**	0.04 (3.39)**	-0.006 (-1.61)	-0.03 (-0.41)	-0.004 (-0.05)	0.03 (0.44)	-0.03 (-4.05)**
Lever	-0.32 (-6.32)**	-0.27 (-2.66)*	-0.34 (-5.74)**	-0.33 (-1.56)	-0.19 (-0.54)	-1.18 (-0.84)	-0.39 (-8.40)**
Growth	-0.01 (-0.43)	0.15 (0.68)	0.006 (0.85)	-0.0001 (-0.01)	0.15 (2.48)*	0.08 (0.55)	0.00003 (-0.00)
Year99	0.01 (0.37)	-0.01 (-0.63)	-0.04 (-1.67)	-0.03 (-0.22)	0.19 (1.32)	-0.06 (-0.08)	0.02 (0.62)
Year00	-0.06 (-1.90)	-0.08 (-2.78)	-0.07 (-2.52)	-0.007 (-0.05)	0.003 (0.02)	-1.03 (-1.40)	-0.06 (-2.03)
Year01	-0.05 (-1.83)	-0.05 (-1.68)	-0.06 (-2.31)	-0.13 (-0.90)	0.04 (0.31)	-0.10 (-0.14)	-0.06 (-2.15)
Year02	-0.11 (-3.54)	-0.06 (-2.13)	-0.09 (-3.43)	-0.06 (-0.40)	0.07 (0.52)	-0.50 (-0.70)	-0.11 (-3.70)
Year03	-0.08 (-2.71)	-0.04 (-1.14)	-0.09 (-3.43)	-0.08 (-0.53)	0.07 (0.49)	-0.55 (-0.80)	-0.10 (-3.10)
Const.	2.65 (9.47)	0.75 (1.23)	0.77 (2.79)	3.48 (4.12)	3.52 (2.13)	0.17 (0.05)	2.41 (9.83)
Adj.R ²	0.22	0.75	0.46	0.17	0.36	0.41	0.22
F	41.22	6.45	12.19	3.94	4.48	3.04	51.68
N	2,065 (77.3%)	27 (1.0%)	191 (7.1%)	205 (7.6%)	93 (3.4%)	45 (1.6%)	2,669 (100%)