


## Article

# Foreign Ownership, Agency Costs, and Long-Term Firm Growth: Evidence from Korea

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Received: 1 January 2019; Accepted: 11 March 2019; Published: 15 March 2019



**Abstract:** This study examines the link between foreign ownership and firm value in the context of dividend payouts and long-term firm growth. Consistent with prior studies, we find that foreign ownership is positively related to firm value. Next, we find that changes in foreign ownership are negatively related to changes in agency costs, which is linked to the improvement of future firm profitability. We also find a positive relationship between foreign ownership and dividend payouts. We further find that dividend payouts are negatively related to 3-year-ahead and 5-year-ahead sales (or earnings) growth as a proxy for long-term firm growth. However, for firms with high foreign ownership, we find a positive relationship between dividend payouts and long-term firm growth. These findings indicate that foreign ownership has a moderating effect on dividend payouts and long-term firm growth. Overall, our results suggest that foreign investors are expected to provide managers with an incentive to pursue long-term value for the sake of shareholders by monitoring and disciplining managers. Our study contributes to a better understanding of the value-increasing effects of foreign ownership on firm value by demonstrating that the reduction in agency costs due to the foreign ownership effect is associated with higher growth rates and thus higher firm value. Our study also contributes to the literature on the foreign ownership–firm value nexus by showing that foreign investors play a crucial role in ensuring sustainable firm growth.

**Keywords:** foreign ownership; firm value; agency costs; dividend payout; long-term firm growth

## 1. Introduction

The issue of whether foreign ownership affects firm value has attracted significant research interest from both academics and practitioners over the past few decades [1–4]. Although previous studies focus on examining the relationship between foreign ownership and firm value, they lack specific evidence concerning how foreign ownership affects firm value. In contrast to prior studies, we identify the channels through which foreign ownership increases firm value—agency costs and long-term firm growth. Specifically, we investigate the value effect of foreign ownership in the following three ways: (1) the relationship between changes in foreign ownership and changes in agency costs; (2) the relationship between foreign ownership and dividend payouts; and (3) the moderating effect of foreign ownership on the relationship between dividend payouts and long-term firm growth.

Large outside shareholders and directors have been recognized as subjects that monitor managers and execute oversight [5–8]. However, domestic institutional investors and outside directors in most Korean public firms do not effectively monitor their managers. This ineffective monitoring occurs because domestic institutional investors are mainly the affiliates of chaebol or business-related firms and also because outside directors are usually chosen on the basis of personal networking or social ties with either CEOs or controlling shareholders. Many Korean firms belong to

family-owned conglomerates, which are referred to as chaebol. The chaebol groups are dominant in the Korean economy [9]. Chaebols also have a significant influence on their affiliates' performance or profitability [10]. This indicates that domestic institutional investors and outside directors are not independent of CEOs or controlling shareholders.

On the other hand, foreign investors specialize in managerial monitoring and are recognized as ownership entities who are independent of managers and controlling shareholders [1,2,11]. Foreign investors protect minority shareholders against controlling shareholders by employing arm's-length monitoring [12]. Foreign investors also contribute to improving corporate governance by participating in firms' board of directors [13–15]. According to the Korea Supervisory Service (FSS), as of the end of 2016, foreign investors held approximately 35.1% of the total market capitalization of the Korean stock market. Foreign investors are classified into two types: individual and institutional investors. Most foreign investors are usually institutional investors. Specifically, foreign individual investors owned 3.6% of the total market capitalization of the Korean stock market. In the Korean stock market, foreign investors not only play a crucial role in corporate governance structure, but also serve as effective monitors of managerial actions [16].

Foreign institutional investors play a major role in monitoring and disciplining managerial actions, possibly leading to an improvement in corporate governance. Therefore, we predict that as foreign ownership increases, the monitoring of managers and controlling shareholders increases, resulting in a decrease in agency costs. The reduction in agency costs is associated with the improvement of a firm's profitability [17], implying its ability to increase dividend payouts. There may be a negative association between dividend payouts and earnings (or sales) growth because the equity needed to future investments decreases as dividend payout becomes high [18,19]. However, the increased profitability due to the decrease in agency costs can be linked to an increase in investment expenditures even though dividend payouts are high. Thus, the relationship between dividend payouts and future firm growth in the firms with high foreign ownership is expected to be positive. Based on this logic, we predict that, if investors (or markets) reasonably anticipate that firms with higher foreign ownership exhibit higher long-term firm growth, the effects of increased long-term firm growth may be incorporated into current firm valuation.

Using a sample of 8348 firm-year observations between 2001 and 2017, we first investigate the link between foreign ownership and firm value after controlling for previously identified determinants that affect firm value. Consistent with prior studies, we find that foreign ownership is positively and significantly related to firm value. Furthermore, we estimate change regressions to investigate the impact of changes in foreign ownership on changes in firm value. We find a positive relationship between changes in foreign ownership and changes in firm value, confirming our previous results using variable levels. Second, we examine the effect of changes in foreign ownership on changes in agency costs. We find that changes in foreign ownership are negatively and significantly related to changes in the expense ratio. We also find that changes in foreign ownership are positively and significantly associated with changes in asset utilization ratio. These findings suggest that foreign ownership is effective in reducing agency costs. Third, we explore whether foreign ownership is associated with dividend payouts. As expected, we find that foreign ownership is positively and significantly related to the level of dividends, indicating that firms with high foreign ownership pay more dividends. Our results suggest that the improved profitability due to the decrease in agency costs resulting from the monitoring effect of foreign investors is associated with higher dividend payouts. Finally, we investigate whether foreign investors affect a firm's long-term firm growth. Consistent with prior studies [19], we find that dividend payouts are negatively associated with long-term firm growth. Interestingly, however, for firms with high foreign ownership, we find a positive relationship between dividend payouts and long-term firm growth. This finding indicates that firms with higher foreign ownership have higher long-term firm growth even though they maintain a higher level of dividends.

Our study contributes to the literature by providing a better understanding of the value-increasing effect of foreign ownership on firm value. Prior studies document a direct and positive association

between foreign ownership and firm value [1,3,4]. To our knowledge, despite the significant importance of agency costs in foreign ownership–firm value nexus, prior studies have not attempted to provide empirical evidence that foreign ownership can be effective in mitigating agency costs. In contrast, using the actual measurement of agency costs, we provide evidence concerning a specific mechanism through which foreign ownership increases firm value.

Our study also contributes to the literature on the foreign ownership–firm value nexus by showing that foreign investors play a crucial role in ensuring sustainable firm growth. Our empirical results confirm that foreign investors are expected to facilitate a firm’s sustainable growth by reducing agency costs. Specifically, we find that changes in foreign ownership are negatively linked to changes in agency costs. We also show that the reduction in agency costs due to the foreign ownership effect is associated with higher growth rates and thus higher firm value.

Our study sheds light on the important role of foreign investors in the relationship between dividend payouts and long-term firm growth. Theoretically, it is recognized that there is a negative relationship between dividend payouts and long-term growth rates [20]. Our study extends the existing literature by providing new evidence that the negative relationship between dividend payouts and long-term growth rates is weaker for firms with high foreign ownership. Our evidence suggests that foreign ownership has a moderating effect on the relationship.

The remainder of this paper is organized as follows: Section 2 reviews prior literature and develops our hypotheses; Section 3 describes the sample selection and variable definitions; Section 4 presents the results; and Section 5 concludes the paper.

## 2. Prior Literature and Hypothesis Development

### 2.1. Foreign Investors and Agency Costs

Under the separation of ownership and control in firms, managers may pursue self-interest and private rent-seeking behavior, thus causing agency problems with shareholders [5,21,22]. As a result, shareholders will bear costs associated with the monitoring of managers’ actions. Large outside shareholders, as well as outside directors, have been recognized as subjects that monitor managers and execute oversight. Grossman and Hart [5] and Shleifer and Vishny [6] argue that large outside shareholders actively monitor managers and possibly alleviate a free-ride problem, thus reducing agency costs. Likewise, prior studies claim that outside directors properly and effectively monitor managerial actions due to their reputational capital and their fear of shareholders’ litigation [23–25].

However, in the Korean governance system, the monitoring role of large outside shareholders (especially domestic institutional investors) and outside directors has been a controversial issue. Academics and practitioners are concerned about the efficacy of the monitoring of domestic institutional investors and outside directors and have further questioned their independence from managers and controlling shareholders (or founding families).

Foreign investors are generally recognized as important entities that have the source and ability to effectively monitor managerial decisions in emerging markets. Khanna and Palepu [1] and Douma et al. [2] point out that the reason that domestic institutional investors in emerging markets cannot effectively monitor managers is the lack of investors’ specializations and incentives. In a similar vein, Jeon et al. [16] emphasize the role of foreign investors as effective monitors in Korean stock markets. Mishra and Ratti [11] suggest that, unlike domestic institutional investors, foreign investors have the ability to influence a firm’s decision-making due to the lack of business affiliations with the firm. Unlike domestic institutional investors and outside directors, foreign investors can be effective monitors of managers on behalf of shareholders’ interests because they are more likely to demand higher corporate governance standards [26]. Accordingly, foreign investors are expected to play an important role in monitoring managers and controlling shareholders, thus mitigating agency problems. Therefore, we expect that higher foreign ownership will be associated with lower agency costs.

Based on the above discussion, we propose the first hypothesis as follows (stated in alternative form):

**Hypothesis 1 (H1).** *Ceteris paribus, changes in foreign ownership is negatively related to changes in agency costs.*

## 2.2. Foreign Investors and Dividend Payouts

Prior studies document mixed evidence on the relationship between institutional ownership and dividend payouts [8,15,16,27–30]. Specifically, Zeckhauser and Pound [27] find no significant differences in dividend payouts between firms with and without large shareholders. In a subsequent study, Eckbo and Verma [28] document a positive and significant relationship between institutional shareholdings and dividends, consistent with the agency view that institutional investors pressure firms to pay dividends to mitigate agency costs associated with free cash flows. Short et al. [29] find that institutional ownership has a significantly positive impact on dividend payouts. In another study, Grinstein and Michaely [8] find no evidence that firms with higher institutional stock holdings pay more dividends. However, these studies have focused on institutional investors, not foreign institutional investors, in relation to dividend payouts. Turning to the role of foreign investors in corporate dividend decisions, Baba [30] finds that firms with higher foreign ownership have a higher likelihood of paying dividends. Similarly, Jeon et al. [16] show that foreign investors with a higher proportion of shareholdings (more than 5%) are likely to exert significant influence over firms' payout decisions.

In the Korean stock market, foreign investors are expected to influence dividend decisions. Korea has a unique form of business conglomerates, known as chaebols. The family-run chaebols have dominated the Korean economy for several decades. The Economist describes the negative impact of chaebols on the Korean economy as “Nefarious schemes to pass on control to sons, avoid taxes and exploit company assets for the benefit of family members are widely discussed in private” [31]. Unlike developed countries such as the US and UK, Korea is characterized by relatively poor corporate governance, especially weak protection for minority shareholders. Controlling shareholders have a close relationship or social ties with managers and thus possibly have the power to expropriate minority shareholders by pursuing their private interests [32]. Moreover, domestic institutional investors play a limited role in monitoring managers and controlling shareholders. Given that the corporate governance system is weak in Korea, foreign investors are expected to pressure firms to improve corporate governance, especially the improvement of legal protection for minority shareholders; thus, foreign investors will create potential benefits for minority shareholders. Accordingly, better corporate governance due to the monitoring effect of foreign ownership will be more likely to be associated with a higher level of dividends in an effort to reduce expropriation by managers and controlling shareholders, consistent with the prediction of the La Porta et al.'s [33] outcome hypothesis. La Porta et al. [33] propose two competing hypotheses to explain the link between shareholder rights and corporate dividend policy, the outcome hypothesis and the substitute hypothesis. The outcome hypothesis proposes that the effectiveness of legal shareholders' protection enables minority shareholders to pressure firms to pay dividends. The substitute hypothesis predicts that firms will pay dividends to shareholders for the purpose of using their dividend policy as “a substitute for effective legal protection” (p. 27).

Based on the above reasoning, we expect that firms with higher foreign ownership will pay more dividends. We, therefore, formulate the second hypothesis as follows (stated in alternative form):

**Hypothesis 2 (H2).** *Ceteris paribus, there is a positive relationship between foreign ownership and dividend payouts.*

### 2.3. Foreign Investors and Long-Term Firm Growth

Higgins [34] defines sustainable growth rates as the maximum ones that can be accomplished with only reserve capital within a firm while maintaining its target capital structure without any additional stock issuance. He shows that sustainable growth rates are equal to the growth rate of stockholders' equity. Sustainable growth rates can be represented as retention ratios multiplied by return on equity (ROE). Thus, if dividend payouts are high, the equity required for future investments decreases, which consequently has a negative relationship between dividend payouts and growth rates. However, this theoretical relationship holds only if firms raise additional capital from outside sources while maintaining their current target capital structure. In other words, such a relationship can be changed according to different target capital structure. This is because as firms grow, their debt capacity can be improved.

Several studies, including Myers [20], Fama and French [35], and Ibbotson and Chen [18], find a negative relationship between dividend payouts and earnings growth rates. Farsio et al. [36] show that firms have lower earnings in the long-run when they pay a higher level of dividends without any consideration of their investment expenditures. Similarly, Gill et al. [37] show that firms experiencing high growth rates or those anticipating high future growth rates tend to pay low dividends to avoid external financing, indicating a negative relationship between dividend payouts and sales growth. In a more recent study, using a sample of Australian firms, Dempsey et al. [19] also find a negative association between dividend payouts and sales growth.

Foreign investors can affect the association between dividend payouts and sales (or earnings) growth as a proxy for long-term firm growth. Regarding firms with high foreign ownership, foreign investors are expected to provide managers with an incentive to pursue a long-term value for the sake of shareholders by monitoring and disciplining managers. Consequently, it can lead to a decrease in agency costs, which indicates an improvement in profitability [17,38]. The increased profitability can result in an increase in investment expenditures even though dividend payouts are high. Thus, the relationship between dividend payouts and long-term firm growth in the firms with high foreign ownership is expected to be positive.

Based on the above logic, we propose the following third hypothesis (stated in alternative form):

**Hypothesis 3 (H3).** *Ceteris paribus, there is a positive relationship between dividend payouts and long-term firm growth in firms with high foreign ownership.*

## 3. Data and Descriptive Statistics

### 3.1. Sample Selection

We obtain ownership and financial data from the Korea Investors Service–Value (KIS-Value) database between 2001 and 2017. The KIS-Value database is provided by the National Information and Credit Evaluation (NICE), which is a leading provider of credit ratings in Korea. The reason why we use Korean data for the period is as follows. As an independent authority, the Korean Accounting Standards Board (KASB) was founded in September 1999 to develop and issue accounting standards. Since July 2000, the KASB has amended corporate accounting standards for consecutive years, which has affected firms' financial statements more than ever before. Thus, to minimize the effect of modifying corporate accounting standards, we use the sample period between 2001 and 2017 (See [http://www.aossg.org/docs/Meetings/Meeting\\_Nov\\_2013/Agenda\\_paper\\_3.3\\_2013\\_Annual\\_AOSSG\\_Meeting.pdf](http://www.aossg.org/docs/Meetings/Meeting_Nov_2013/Agenda_paper_3.3_2013_Annual_AOSSG_Meeting.pdf)). Our sample covers non-financial companies that are listed on the Korea Exchange (KRX) and whose fiscal year ends in December. Sample selection bias is, however, not a serious concern since a majority of Korean firms have their fiscal year ending in December. We also delete firm-year observations with missing values. Finally, we winsorize all continuous variables



at the 1% and 99% levels to reduce the effects of outliers. Our final sample contains 8348 firm-year observations for 663 firms between 2001 and 2017.

### 3.2. Variable Descriptions

Following prior studies [3,4,39], we use Tobin's Q (Tobin\_Q) as a proxy for firm value. We use foreign ownership (Foreign\_Own) as a main explanatory variable. As predicted by Ferreira and Matos [3], we expect a positive relationship between foreign ownership and firm value.

We control for controlling shareholders' ownership (Control\_Own). The relationship between controlling shareholders' ownership and firm value is unclear. We control for firm size (Firm\_Size). The relationship between firm size and firm value is mixed. Berger and Ofek [40] and Ferreira and Matos [3] find that firm size is positively related to firm value, while Lang and Stulz [41] find that firm size is negatively related to firm value. We control for leverage (Leverage); its relationship with firm value is mixed. While Ferreira and Matos [3] find a positive relationship between leverage and firm value, Benson and Davidson [39] find a negative relationship. We use capital expenditures (Capital\_Expen) as a proxy for firms' growth opportunities. As predicted by Aggarwal et al. [4], we expect a positive relationship between capital expenditures and firm value. We control for the level of cash dividends (Dividend) and expect a positive relationship between dividends and firm value. We use return on assets (ROA) as proxy for firms' profitability. Based on Aggarwal et al. [4], we expect a positive relationship between profitability and firm value. We provide more detailed definitions for all variables in Appendix A.

### 3.3. Descriptive Statistics

Table 1 presents the descriptive statistics of our sample firms. The mean (median) Tobin\_Q is 1.1083 (0.9318). The distribution of Tobin\_Q is right-skewed. The mean (median) Foreign\_Own is 0.1110 (0.0471), indicating that foreign investors account for about 11.10% of total shares outstanding in our sample. Foreign\_Own has a right-skewed distribution. The mean (median) Control\_Own is 43.14% (42.93%), indicating that controlling shareholders constitute a large proportion of a firm's outstanding shares. The large proportion of controlling shareholders' ownership suggests that the shareholders can greatly influence corporate decision making in the Korean stock market. The mean (median) value of Firm\_Size is 26.7135 (26.4550). The mean (median) values of Leverage, Capital\_Expen, and Dividend are 42.18% (42.43%), 1.55% (0.07%) and 0.88% (0.59%), respectively. The mean (median) value of ROA is 0.0452 (0.0410). Turning to three proxies for agency costs, the mean (median) values of SGA\_Sales, Net\_SGA\_Sales, and Sales\_Asset are 0.1782 (0.1099), 0.1695 (0.1022), and 0.9220 (0.8488), respectively.

**Table 1.** Descriptive statistics.

Variables	N	Mean	Std. Dev.	25th	Median	75th
Tobin_Q	8348	1.1083	0.6452	0.7458	0.9318	1.2122
Foreign_Own	8348	0.1110	0.1428	0.0097	0.0471	0.1624
Control_Own	8348	0.4314	0.1686	0.3121	0.4293	0.5412
Firm_Size	8348	26.7135	1.4834	25.6731	26.4550	27.5130
Leverage	8348	0.4218	0.1982	0.2651	0.4243	0.5663
Capital_Expen	8348	0.0155	0.0802	−0.0100	0.0007	0.0254
Dividend	8348	0.0088	0.0107	0.0000	0.0059	0.0125
ROA	8348	0.0452	0.0616	0.0156	0.0410	0.0751
SGA_Sales	8348	0.1782	0.1764	0.0628	0.1099	0.2167
Net_SGA_Sales	8348	0.1695	0.1719	0.0599	0.1022	0.2041
Sales_Asset	8348	0.9220	0.5314	0.5891	0.8488	1.1606
Short_Debt	8348	0.7156	0.1950	0.5963	0.7539	0.8679
Firm_Age	8348	3.4646	0.6757	3.3322	3.6636	3.8918
Sales_Growth	8348	0.0840	0.3147	−0.0398	0.0493	0.1488
Stock_Volatility	8348	46.8924	19.2482	33.4774	43.2176	56.5658
R&D_Intensity	8348	0.0099	0.0208	0.0000	0.0012	0.0097
Retained_Asset	8348	0.2807	0.2840	0.1223	0.2847	0.4681
Asset_Growth	8348	0.0763	0.1928	−0.0155	0.0445	0.1291
Foreign_Dummy	8348	0.4994	0.5000	0.0000	0.0000	1.0000

Table 2 shows the Pearson correlations among main variables. As expected, we find a positive and significant correlation between Tobin\_Q and Foreign\_Own and. Tobin\_Q exhibits a significantly positive correlation with Firm\_Size, Capital\_Expen, Dividend, and ROA. We further find that Tobin\_Q is negatively and significantly correlated with Control\_Own.

**Table 2.** Pearson correlations among main variables.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Tobin_Q	1.0000							
(2) Foreign_Own	0.2279 ***	1.0000						
(3) Control_Own	−0.1146 ***	−0.1475 ***	1.0000					
(4) Firm_Size	0.0571 ***	0.4503 ***	−0.0450 ***	1.0000				
(5) Leverage	−0.0003	−0.1184 ***	−0.1166 ***	0.1852 ***	1.0000			
(6) Capital_Expen	0.0607 ***	0.0188	0.0265	0.0425 ***	0.0526 ***	1.0000		
(7) Dividend	0.2915 ***	0.3134 ***	0.0481 ***	0.0251	−0.3487 ***	0.0198	1.0000	
(8) ROA	0.2435 ***	0.2880 ***	−0.0034 ***	0.1517 ***	−0.1751 ***	0.1162 ***	0.5000 ***	1.0000

Note: \*\*\* denotes significance at the 1% level (two-tailed test); All variables are defined in Appendix A.

## 4. Empirical Results

### 4.1. Foreign Ownership and Firm Value

#### 4.1.1. Results from the Baseline Regression

We test the relationship between foreign ownership and firm value using the following regression:

$$\begin{aligned} \text{Tobin\_Q}_{i,t} = & \beta_0 + \beta_1 \text{Foreign\_Own}_{i,t} + \beta_2 \text{Control\_Own}_{i,t} + \beta_3 \text{Firm\_Size}_{i,t} \\ & + \beta_4 \text{Leverage}_{i,t} + \beta_5 \text{Capital\_Expen}_{i,t} + \beta_6 \text{Dividend}_{i,t} + \beta_7 \text{ROA}_{i,t} \\ & + \sum_{i,t} \text{Year\_Dummy} + \sum_{i,t} \text{Industry\_Dummy} (\sum_{i,t} \text{Firm\_Dummy}) + \varepsilon_{i,t}, \end{aligned} \quad (1)$$

where the dependent variable, Tobin\_Q, is a proxy for firm value. The subscript  $i$  and  $t$  represent a firm  $i$  during the fiscal year  $t$ . The main variable of interest is Foreign\_Own. Regarding the pooled OLS and firm fixed-effects regressions as well as a dynamic-panel generalized method of moments (GMM) estimator suggested by Arellano and Bond [42], we use robust standard errors clustered at the firm level. In particular, the dynamic-panel GMM estimation method can mitigate potential endogeneity problems associated with time-varying omitted variables and simultaneity. With respect to the Fama–MacBeth [43] cross-sectional regression, statistical significance is based on the Newey and West [44] standard errors that correct the heteroscedasticity. We control for year and industry fixed effects in the pooled OLS regression and the dynamic-panel GMM estimation specification. We also include industry dummies in the Fama–MacBeth [43] cross-sectional regression and year dummies in the firm fixed-effect panel regression. All variables are defined in Appendix A.

Table 3 presents the results from four different regression specifications. We find that the coefficient on Foreign\_Own is positive and significant across four columns (1) through (4), consistent with our prediction that foreign ownership is positively related to firm value. This finding is consistent with Ferreira and Matos [3], who show that firms with high foreign ownership have high firm value. We also find that the coefficients on the control variables are fairly consistent in all columns. Specifically, the coefficient on Control\_Own is negative and significant, indicating that firms with higher controlling shareholders' ownership have lower firm value. Consistent with the finding in Lang and Stulz [41], we find a negative and significant coefficient on Firm\_Size in columns (1) and (3). These findings indicate that larger firms have lower firm value. The coefficient on Leverage is positive and significant in all columns except for column (4), indicating that firms with high leverage have high firm value. This finding is consistent with Ferreira and Matos [3]. We find a positive and significant coefficient on Capital\_Expen in columns (1) through (3), suggesting that firms with more investments have higher firm value. The coefficient on Dividend is positive and significant across all four columns, consistent with our prediction that firms with high dividend payout ratios have higher firm value. We also find

that the coefficient on ROA is positive and significant, indicating that firms with higher profitability have higher firm value. This finding is consistent with Aggarwal et al. [4] who document that firms with high profitability have high firm value.

**Table 3.** The relationship between foreign ownership and firm value.

Independent Variables	Dependent Variable = Tobin_Q			
	Four Different Estimation Specifications:			
	Pooled OLS (1)	Fama–MacBeth (1973) (2)	Firm Fixed Effects (3)	GMM (4)
Intercept	1.1967 *** (0.002)	1.0894 ** (0.015)	2.7630 *** (0.001)	1.4621 * (0.054)
Foreign_Own	0.8157 *** (<0.001)	0.6585 *** (<0.001)	0.5093 *** (0.001)	1.1049 *** (<0.001)
Control_Own	−0.2530 *** (0.008)	−0.2487 *** (<0.001)	−0.1823 * (0.085)	−0.4522 ** (0.020)
Firm_Size	−0.0321 ** (0.022)	−0.0204 (0.139)	−0.0837 ** (0.007)	−0.0422 (0.137)
Leverage	0.5618 *** (<0.001)	0.6985 *** (<0.001)	0.3758 *** (<0.001)	0.2119 (0.145)
Capital_Expen	0.2798 *** (0.003)	0.2937 *** (0.005)	0.2013 *** (0.006)	−0.3673 *** (<0.001)
Dividend	1.3842 *** (<0.001)	11.2760 *** (<0.001)	8.2010 *** (<0.001)	1.1946 *** (<0.001)
ROA	2.2375 *** (<0.001)	1.4036 *** (<0.001)	1.7457 *** (<0.001)	1.0844 *** (<0.001)
Year fixed effects	Yes	No	Yes	Yes
Industry fixed effects	Yes	Yes	No	Yes
Firm fixed effects	No	No	Yes	No
Adjusted R <sup>2</sup>	0.3097	0.4638	0.6608	
Number of observations	8348	8348	8348	6742

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively (two-tailed test). The *p*-values are in parentheses. For the columns (1), (3) and (4), we use robust standard errors clustered at the firm level. For the column (2), we use Newey and West [44] standard errors that correct the heteroscedasticity. In the analysis, we measure Firm\_Size as the natural logarithm of the book value of total assets. As a robustness check, we follow Dang et al. [45] and repeat our analysis using two alternative proxies for firm size: (i) the natural logarithm of total sales and (ii) the natural logarithm of market capitalization. The untabulated results show that our main results remain qualitatively similar to those reported in Table 3. All variables are defined in Appendix A.

#### 4.1.2. Results from Change Regressions

We estimate the pooled regression with changes in variables to examine the impact of changes in foreign ownership ( $\Delta$ Foreign\_Own) on changes in firm value ( $\Delta$ Tobin\_Q). We use change regressions to control for time-invariant effects that can affect firm value. Due to missing values in variable changes, our sample size is reduced to 7497 observations.

Table 4 reports the results of the pooled regression with changes in variables. We find that the coefficient on  $\Delta$ Foreign\_Own is positive and significant across all three columns, indicating that changes in foreign ownership are positively related to changes in firm value. The coefficient on  $\Delta$ Control\_Own is negative and significant in columns (2) and (3), suggesting that changes in controlling shareholders' ownership is negatively related to changes in firm value. In column (3), we find a negative and significant coefficient on  $\Delta$ Firm\_Size. The coefficients on  $\Delta$ Leverage,  $\Delta$ Capital\_Expen,  $\Delta$ Dividend, and  $\Delta$ ROA are positive and significant. Taken together, these results confirm our previous findings on the basis of variable levels.



**Table 4.** The relationship between changes in foreign ownership and changes in firm value.

Independent Variables	Dependent Variable = $\Delta$ Tobin_Q		
	(1)	(2)	(3)
Intercept	0.0111 *** ( $<0.001$ )	0.0158 *** ( $<0.001$ )	0.0318 *** ( $<0.001$ )
$\Delta$ Foreign_Own	1.0410 *** ( $<0.001$ )	1.0190 *** ( $<0.001$ )	0.9065 *** ( $<0.001$ )
$\Delta$ Control_Own		−0.3363 *** (0.002)	−0.2663 *** (0.009)
$\Delta$ Firm_Size			−0.1801 *** ( $<0.001$ )
$\Delta$ Leverage			0.5218 *** ( $<0.001$ )
$\Delta$ Capital_Expen			0.0516 (0.312)
$\Delta$ Dividend			4.9053 *** ( $<0.001$ )
$\Delta$ ROA			1.3154 *** ( $<0.001$ )
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.1150	0.1178	0.1580
Number of observations	7497	7497	7497

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively (two-tailed test). The  $p$ -values are in parentheses. We use robust standard errors clustered at the firm level. All variables are defined in Appendix A.

#### 4.2. The Effect of Changes in Foreign Ownership on Changes in Agency Costs

We test the first hypothesis (H1) that changes in foreign ownership is negatively associated with changes in agency costs using the following regression:

$$\begin{aligned} \Delta \text{Agency\_Costs}_{i,t} = & \beta_0 + \beta_1 \Delta \text{Foreign\_Own}_{i,t} + \beta_2 \Delta \text{Control\_Own}_{i,t} + \beta_3 \Delta \text{Short\_Debt}_{i,t} \\ & + \beta_4 \Delta \text{Firm\_Size}_{i,t} + \beta_5 \Delta \text{Leverage}_{i,t} + \beta_7 \Delta \text{Sales\_Growth}_{i,t} + \beta_8 \Delta \text{Firm\_Age}_{i,t} \\ & + \sum_{i,t} \text{Year\_Dummy} + \sum_{i,t} \text{Industry\_Dummy} + \varepsilon_{i,t}. \end{aligned} \quad (2)$$

When we take first differences ( $\Delta$ ), our sample size is reduced from 8348 to 7497 observations. We use three alternative proxies for agency costs, i.e., the expense ratio (SGA\_Sales), net SGA\_Sales, and the asset utilization ratio (Sales\_Asset). Specifically, we follow Singh and Davidson III [38] and measure the expense ratio as the ratio of selling, general, and administrative (SG&A) expenses to total sales. A lower expense ratio indicates higher agency costs. Following Ang et al. [17] and Singh and Davidson III [38], we also calculate the asset utilization ratio as the ratio of total sales to total assets. A higher utilization ratio indicates lower agency costs and more efficient asset utilization. We include both year and industry fixed effects in Equation (2). All variables are defined in Appendix A.

Table 5 reports the results of the pooled OLS regressions using three proxies for agency costs. In columns (1) and (2), we find that the coefficient on  $\Delta$ Foreign\_Own is negative and significant, suggesting that firms with higher changes in foreign ownership have lower changes in expense ratios. Column (3) shows that the coefficient on  $\Delta$ Foreign\_Own is positive and significant, indicating that firms with higher changes in foreign ownership have higher changes in asset utilization ratios. These findings are consistent with our first hypothesis (H1) that firms with higher changes in foreign ownership have lower changes in agency costs.

Regarding control variables, the coefficient on  $\Delta$ Control\_Own is negative and significant in column (3), indicating that firms with higher changes in controlling shareholders' ownership have greater changes in agency costs. The coefficient on  $\Delta$ Short\_Debt is positive and significant in column (3), suggesting that firms with a higher proportion of short-term debt have lower changes in agency

costs. We find a negative and significant coefficient on  $\Delta$ Firm\_Size in column (3). This finding indicates that higher changes in firm size is associated with greater changes in agency costs. The coefficient on  $\Delta$ Sales\_Growth is negative and significant in columns (1) and (2), while the coefficient is negative and significant in column (3). These results indicate that firms with larger changes in sales growth have lower changes in agency costs. In a similar vein, we find that changes in firm age is negatively related to changes in agency costs.

**Table 5.** The effect of changes in foreign ownership on changes in agency costs.

Independent Variables	Dependent Variables:		
	$\Delta$ SGA_Sales (1)	$\Delta$ Net_SGA_Sales (2)	$\Delta$ Sales_Asset (3)
Intercept	0.0054 *** (<0.001)	0.0049 *** (<0.001)	0.0086 *** (0.005)
$\Delta$ Foreign_Own	−0.0359 ** (0.036)	−0.0347 ** (0.044)	0.1181 ** (0.036)
$\Delta$ Control_Own	−0.0079 (0.687)	−0.0074 (0.702)	−0.1348 ** (0.030)
$\Delta$ Short_Debt	−0.0047 (0.594)	−0.0036 (0.674)	0.1041 *** (<0.001)
$\Delta$ Firm_Size	−0.0112 (0.347)	−0.0084 (0.475)	−0.4308 *** (<0.001)
$\Delta$ Leverage	0.0429 * (0.054)	0.0382 * (0.079)	0.0418 (0.531)
$\Delta$ Sales_Growth	−0.0528 *** (<0.001)	−0.0508 *** (<0.001)	0.1970 *** (<0.001)
$\Delta$ Firm_Age	−0.0521 *** (<0.001)	−0.0487 *** (<0.001)	0.1843 *** (<0.001)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.1119	0.1065	0.2785
Number of observations	7497	7497	7497

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively (two-tailed test). The *p*-values are in parentheses. We use robust standard errors clustered at the firm level. As a robustness check, following Dang et al. [45], we repeat our analysis using two alternative proxies for firm size: (i) the natural logarithm of total sales and (ii) the natural logarithm of market capitalization. The results, not reported for the sake of brevity, show that our main results are robust to these alternative proxies. All variables are defined in Appendix A.

#### 4.3. The Effect of Foreign Ownership on Dividend Payouts

To test the second hypothesis (H2) that foreign ownership is positively associated with the level of dividends, we estimate the following regression:

$$\begin{aligned}
 \text{Dividend}_{i,t} = & \beta_0 + \beta_1 \text{Foreign\_Own}_{i,t} + \beta_2 \text{Control\_Own}_{i,t} + \beta_3 \text{ROA}_{i,t} \\
 & + \beta_4 \text{Capital\_Expen}_{i,t} + \beta_5 \text{R\&D\_Intensity}_{i,t} + \beta_6 \text{Firm\_Size}_{i,t} \\
 & + \beta_7 \text{Leverage}_{i,t} + \beta_8 \text{Stock\_Volatility}_{i,t} + \beta_9 \text{Retained\_Asset}_{i,t} \\
 & + \Sigma_{i,t} \text{Year\_Dummy} + \Sigma_{i,t} \text{Industry\_Dummy} + \varepsilon_{i,t}.
 \end{aligned} \tag{3}$$

We use the level of dividends (Dividend) as a dependent variable. The main variable of interest is Foreign\_Own. We use robust standard errors clustered at the firm level. We control for year and industry fixed effects. All variables are defined in Appendix A.

Table 6 presents the results of the pooled OLS regression, Fama–MacBeth [43] cross-sectional regression, firm fixed-effect panel regression, and Tobit model using the level of dividends as a dependent variable. Furthermore, to address endogeneity issues, we also use the dynamic panel GMM estimation method proposed by Arellano and Bond [42]. In all columns (1) through (5), we find a positive and significant coefficient on Foreign\_Own, supporting our second hypothesis (H2) that firms

with high foreign ownership tend to pay more dividends. These findings are consistent with the outcome hypothesis suggested by La Porta et al. [33].

**Table 6.** The effect of foreign ownership on dividend payouts.

Independent Variables	Dependent Variable = Dividend				
	Pooled OLS (1)	Fama–MacBeth (1973) (2)	Firm Fixed Effects (3)	Tobit Model (4)	GMM (5)
Intercept	0.0268 *** (<0.001)	0.0283 *** (<0.001)	0.0428 *** (0.003)	0.0117 (0.115)	0.0595 *** (0.001)
Foreign_Own	0.0131 *** (<0.001)	0.0130 *** (<0.001)	0.0166 *** (<0.001)	0.0108 *** (<0.001)	0.0119 *** (0.003)
Control_Own	0.0024 (0.136)	0.0022 *** (<0.001)	−0.0007 (0.678)	0.0046 ** (0.014)	−0.0018 (0.372)
ROA	0.0393 *** (<0.001)	0.0434 *** (<0.001)	0.0261 *** (<0.001)	0.0846 *** (<0.001)	0.0215 *** (<0.001)
Capital_Expen	0.0002 (0.895)	−0.0009 (0.652)	0.0012 (0.250)	0.0045 *** (0.005)	−0.0012 (0.336)
R&D_Intensity	0.0030 (0.774)	0.0018 (0.776)	−0.0088 (0.283)	−0.0112 (0.434)	−0.0092 (0.440)
Firm_Size	−0.0008 *** (<0.001)	−0.0009 (<0.001)	−0.0013 ** (0.019)	−0.0004 * (0.081)	−0.0020 *** (0.004)
Leverage	−0.0068 *** (<0.001)	−0.0068 (<0.001)	−0.0064 *** (<0.001)	−0.0049 *** (0.009)	−0.0054 *** (0.008)
Stock_Volatility	−0.0000 *** (<0.001)	−0.0001 *** (<0.001)	−0.0000 *** (<0.001)	−0.0001 *** (<0.001)	−0.0000 (0.258)
Retained_Asset	0.0040 *** (<0.001)	0.0025 ** (0.014)	0.0029 *** (0.001)	0.0122 *** (<0.001)	−0.0021 (0.225)
Year fixed effects	Yes	No	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	No	Yes	Yes
Firm fixed effects	No	No	Yes	No	No
Adjusted R <sup>2</sup>	0.4225	0.4947	0.6981		
Number of observations	8348	8348	8348	8348	6742
Number of left-censored obs.				2290	
Number of uncensored obs.				6058	

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively (two-tailed test). The *p*-values are in parentheses. For the columns (1), (3), (4), and (5), we use robust standard errors clustered at the firm level. For the column (2), we use Newey and West [44] standard errors that correct the heteroscedasticity. Following Dang et al. [45], we also repeat our analysis using two alternative proxies for firm size: (i) the natural logarithm of total sales and (ii) the natural logarithm of market capitalization. The untabulated results show that our main results remain robust to these alternative proxies. All variables are defined in Appendix A.

Turning to control variables, we find a positive and significant coefficient on Control\_Own in columns (2) and (4). The coefficient on ROA is positive and significant across columns (1) to (5), indicating that firms with higher profitability pay more dividends. We find no relationship between capital expenditures and dividend payouts, except for column (4). Similarly, we find that the coefficient on R&D\_Intensity is not significant. The coefficient on Firm\_Size is negative and significant in all columns except for column (2), indicating that larger firms tend to pay fewer dividends. We find a negative and significant coefficient on Leverage in columns (1), (3), (4), and (5). These findings indicate that firms with higher leverage pay fewer dividends. The coefficient on Stock\_Volatility is negative and significant in columns (1) through (4), suggesting that firms with higher stock volatility tend to have a lower level of dividend payouts. We find a positive and significant coefficient on Retained\_Asset across columns (1) to (4), indicating that firms with higher retained earnings pay more dividends.

#### 4.4. The Effect of Foreign Ownership on the Relationship between Dividend Payouts and Long-Term Firm Growth

To test the third hypothesis (H3) that dividend payouts is positively related to long-term firm growth in firms with high foreign ownership, we estimate the following regression:

$$\begin{aligned} \text{Long-Term\_Growth}_{i,t+k} = & \beta_0 + \beta_1 \text{Dividend}_{i,t} + \beta_2 \text{Dividend} * \text{Foreign\_Dummy}_{i,t} \\ & + \beta_3 \text{Foreign\_Dummy}_{i,t} + \beta_4 \text{Firm\_Size}_{i,t} + \beta_5 \text{Leverage}_{i,t} \\ & + \beta_6 \text{ROA}_{i,t} + \beta_7 \text{Capital\_Expen}_{i,t} + \beta_8 \text{R\&D\_Intensity}_{i,t} \\ & + \beta_9 \text{Firm\_Age}_{i,t} + \beta_{10} \text{Asset\_Growth}_{i,t} \\ & + \sum_{i,t} \text{Year\_Dummy} + \sum_{i,t} \text{Industry\_Dummy} + \varepsilon_{i,t}, \end{aligned} \quad (4)$$

where  $\text{Long-Term\_Growth}_{i,t+k}$  is the annually compounded growth in sales (or earnings) for firm  $i$  from year  $t$  to year  $t + k$ . To capture long-term firm growth (Long-Term\_Growth), we follow Dempsey et al. [19] and use 3-year-ahead and 5-year-ahead sales growth as each dependent variable. We further use 3-year-ahead and 5-year-ahead earnings growth as an alternative dependent variable. The main variable of interest is an interaction term,  $\text{Dividend} * \text{Foreign\_Dummy}$ . We use robust standard errors clustered at the firm level. We control for year and industry fixed effects. All variables are defined in Appendix A.

Table 7 presents the results of the pooled OLS regressions using the 3-year-ahead and 5-year-ahead sales growth. Regarding the  $\text{Sales\_Growth}(t + 3)$  and  $\text{Sales\_Growth}(t + 5)$  using each dependent variable, columns (1) and (2) show a negative and significant coefficient on Dividend, indicating that firms with a higher level of dividends tend to have lower long-term sales growth (or firm growth). These results are consistent with Dempsey et al. [19], who find a negative relationship between dividend payouts and 3-year-ahead and 5-year-ahead sales growth. Interestingly, we find a positive and significant coefficient on  $\text{Dividend} * \text{Foreign\_Dummy}$ . This finding indicates that the relationship between dividend payouts and long-term firm growth is positive in firms with high foreign ownership, consistent with our third hypothesis (H3). In addition, we find a negative and significant coefficient on  $\text{Foreign\_Dummy}$ , suggesting that firms with higher foreign ownership have lower long-term firm growth. With respect to the  $\text{Earnings\_Growth}(t + 3)$  and  $\text{Earnings\_Growth}(t + 5)$  using each dependent variable, columns (3) and (4) show that there is a negative and significant association between Dividend and  $\text{Earnings\_Growth}(t + 3)$  and  $(t + 5)$ . We further find that the coefficient on  $\text{Dividend} * \text{Foreign\_Dummy}$  is positive and significant, supporting our third hypothesis (H3). Moreover, we find that the coefficient on  $\text{Foreign\_Dummy}$  is negative and significant in column (3). Overall, these findings are consistent with our third hypothesis (H3) that dividend payouts are positively related to long-term firm growth in firms with high foreign ownership.

With respect to control variables, the coefficient on  $\text{Firm\_Size}$  is negative and significant in columns (1) and (2), but is not significant in columns (3) and (4). Similarly, we find inconsistent results regarding the relationship between leverage and long-term firm growth. The coefficient on  $\text{Capital\_Expen}$  is positive and insignificant, while the coefficient on  $\text{R\&D\_Intensity}$  is positive and significant in columns (1) through (3). These results indicate that firms with higher R&D intensity have higher long-term firm growth. We find a negative and significant coefficient on  $\text{Firm\_Age}$  across all columns (1) to (4), suggesting that older firms have lower long-term firm growth. The coefficient on  $\text{Asset\_Growth}$  is positive and significant in columns (1) and (2), indicating that firms with higher asset growth rates have higher long-term firm growth.

**Table 7.** The effect of foreign ownership on the relationship between dividend payouts and long-term firm growth.

Independent Variables	Dependent Variables:			
	Sales_Growth (t + 3) (1)	Sales_Growth (t + 5) (2)	Earnings_Growth (t + 3) (3)	Earnings_Growth (t + 5) (4)
Intercept	0.3448 *** (<0.001)	0.3100 *** (<0.001)	0.4888 *** (<0.001)	0.4006 *** (0.001)
Dividend	−1.8303 *** (<0.001)	−1.5415 *** (<0.001)	−5.7676 *** (<0.001)	−3.6407 *** (<0.001)
Dividend *	1.7523 *** (<0.001)	1.5020 *** (0.001)	2.9481 *** (0.007)	1.8983 ** (0.020)
Foreign_Dummy	−0.0167 ** (0.030)	−0.0151 ** (0.036)	−0.0419 ** (0.026)	−0.0205 (0.135)
Firm_Size	−0.0062 ** (0.016)	−0.0050 ** (0.038)	−0.0005 (0.921)	−0.0046 (0.230)
Leverage	−0.0413 ** (0.011)	−0.0424 *** (0.009)	0.1103 *** (0.009)	0.0911 *** (0.001)
ROA	−0.0625 (0.183)	−0.0402 (0.365)	−0.8124 *** (<0.001)	−0.4760 *** (<0.001)
Capital_Expen	0.0485 (0.104)	0.0377 (0.103)	0.0009 (0.992)	0.0285 (0.609)
R&D_Intensity	0.5737 *** (0.004)	0.3684 ** (0.038)	0.6494 * (0.073)	0.2984 (0.291)
Firm_Age	−0.0162 *** (<0.001)	−0.0171 *** (<0.001)	−0.0236 *** (0.010)	−0.0272 *** (<0.001)
Asset_Growth	0.1202 *** (<0.001)	0.0564 *** (<0.001)	0.0115 (0.749)	−0.0361 (0.112)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.1175	0.1830	0.0568	0.0848
Number of observations	6032	4751	4765	3658

Note: \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively (two-tailed test). The *p*-values are in parentheses. We use robust standard errors clustered at the firm level. As a robustness check, following Dang et al. [45], we repeat our analysis using two alternative proxies for firm size: (i) the natural logarithm of total sales and (ii) the natural logarithm of market capitalization. The untabulated results show that our main are qualitatively similar to those reported in Table 7. All variables are defined in Appendix A.

## 5. Conclusions

In this study, we investigate the foreign ownership–firm value relationship in the context of dividend payouts and long-term firm growth. Our findings can be summarized as follows. First, we find that foreign ownership is positively related to firm value, consistent with prior studies. Second, we find that changes in foreign ownership are negatively associated with changes in agency costs, which is linked to the improvement of future firm profitability. Third, we find that foreign ownership is positively associated with dividend payouts. Taken together, these findings suggest that a firm's improved profitability due to the reduction in agency costs is more likely to be associated with an increase in dividend payouts. Finally, for firms with high foreign ownership, we find that dividend payouts are positively associated with long-term firm growth, indicating that foreign ownership has a moderating effect on dividend payouts and long-term firm growth. This result implies that as foreign ownership increases a firm's long-term growth rates, the effects of increased long-term growth rate in the future may be incorporated into firm valuation in the current year.

Our study sheds light on the role of foreign investors in a firm's sustainable growth by showing the value-increasing effects of foreign ownership on firm value. In the Korean corporate governance system, corporate insiders (especially controlling shareholders) have exerted a significant influence on managerial decisions. Corporate governance is highly concentrated for controlling shareholders [46]. Controlling shareholders have an incentive to expropriate gains from minority shareholders for the pursuit of their private interests [47,48]. Controlling shareholders may pressure managers to give up potentially value-enhancing long-term projects. Foreign investors are expected to discipline managers and controlling shareholders to seek a value-enhancing long-term strategy. On the other hand, domestic institutional investors may not effectively monitor and discipline corporate insiders,



e.g., CEOs and controlling shareholders. Domestic institutional investors are mostly chaebol-affiliated and are heavily influenced by controlling shareholders in chaebols. This is due to the fact that controlling shareholders take control over chaebol affiliates through cross-shareholdings [48] and pyramid ownership structures [49,50]. Likewise, outside directors are usually selected based on personal ties with CEOs or controlling shareholders and, thus, their monitoring role is limited. In contrast, foreign investors are recognized as having a weak tie with corporate insiders; thus, they may not be influenced by corporate insiders. That is, foreign investors can serve as effective, external monitors of corporate insiders [3] and influence the strategic decision-making activities of firms [51]. Based on the above discussion, foreign investors as important corporate governance and ownership entities are expected to have a significant impact on a firm's sustainable growth.

Our study holds important implications for policy decision makers, stakeholders, and regulators in emerging markets. In the situation in which domestic institutional investors are recognized as ineffective monitors in the corporate governance system, foreign investors can help improve corporate governance and investor protection in emerging markets. Emerging markets are heavily dependent on foreign capital inflows to develop their economic growth, implying that foreign investors can exert an influence on corporate policies. In particular, policy decision makers and regulators in emerging markets are concerned that foreign investors are more likely to seek short-term profits, which will adversely affect a firm's long-term prospect. Some commentators and news media sources also claim that foreign investors demand an extremely high level of dividends. Given the negative views toward foreign investors, we highlight the important role of foreign investors in the Korean stock markets, one of the leading emerging markets, by showing that foreign investors have the potential to enhance firm value, which possibly suggests that the benefits from foreign ownership outweigh the negative views.

Our study has at least five limitations as follows. First, we study the value-increasing avenues of foreign ownership in the Korean stock market. Many Korean firms have unique ownership structures, such as family business conglomerates known as chaebols. Thus, one should carefully interpret our findings when applied to firms in the developed countries. Second, we use foreign ownership as a main explanatory variable, but do not consider specific types of foreign investors, i.e., transient or dedicated institutional investors, due to the limitation of data availability. Bushee [52,53] classifies the U.S. institutional investors into transient, dedicated, and quasi-indexing institutions based on their past investment patterns or behaviors. Therefore, further research should examine the value effects of foreign ownership on firm value using specific types of foreign investors. Third, as an additional analysis, it is worthwhile to investigate the relationship among foreign institutional ownership, agency costs, and firm value in the context of corporate social responsibility (CSR). For example, Li et al. [54] provide evidence against an over-investment hypothesis as the finding shows the negative relationship CEO power and CSR activities. They also emphasize the value-enhancing role of CSR by showing that CSR is positively related to firm value. Based on their study, it can be predicted that if foreign institutional ownership encourages firms to engage in more CSR and thus increases corporate image, their firm value increases. Fourth, we cannot definitively rule out the possibility of omitted variable bias in the foreign ownership–firm value relationship. In our empirical analysis, due to the limitation of data availability, we are not able to control for variables capturing corporate governance mechanisms, such as CEO compensation incentives [55], market competition [56], mutual monitoring among the executives [57], and CEO tournaments [58]. Thus, further research should consider these omitted variables that can affect the association between foreign ownership and firm value. Fifth, as Li [59] points out, the issue of endogeneity has been one of the main concerns in empirical corporate finance. This endogeneity bias may distort the estimated coefficients from a regression analysis. Thus, in our empirical analysis, to address endogeneity concerns, we employ the fixed effect model and the dynamic-panel GMM estimator. Our empirical results are robust to these econometric specifications that can be effective in mitigating endogeneity concerns. However, one cannot completely address the endogeneity issue. Therefore, further research should consider alternative specifications, e.g., an instrumental variable (IV) specification, to overcome endogeneity problems.

**Author Contributions:** Y.M.C. designed the paper, collected the data, developed the hypotheses, and performed the empirical analysis. K.P. summarized the literature review, contributed to the hypothesis development, conducted the empirical analysis, and finalized the manuscript. All authors discussed the contributions and wrote the paper.

**Funding:** This research received no external funding.

**Acknowledgments:** We gratefully acknowledge the comments and suggestions of three anonymous referees.

**Conflicts of Interest:** The authors declare no conflict of interest.

## Appendix A. Variable Definitions

Variables	Definition
Tobin_Q	Tobin's Q, calculated as the book value of total assets plus the market value of equity minus the book value of equity, divided by the book value of total assets.
Foreign_Own	Sum of common and restricted stock owned by the foreign investors, divided by shares outstanding at the fiscal year end.
Control_Own	Sum of common and restricted stock owned by the controlling shareholders, divided by shares outstanding at the fiscal year end.
Firm_Size	Natural logarithm of the book value of total assets.
Leverage	Total debt divided by total assets.
Capital_Expen	Capital expenditures divided by total assets.
Dividend	Cash dividends divided by total assets.
ROA	Return on total assets, calculated as the earnings before interest and tax (EBIT) divided by total assets.
SGA_Sales	Selling, general, and administrative (SG&A) expenses divided by total sales.
Sales_Asset	Net sales divided by total assets.
Short_Debt	Proportion of short-term debt, measured as the ratio of short-term debt that matures in one year to a firm's total debt.
Sales_Growth	Change in net sales from the previous year, divided by lagged net sales.
Firm_Age	Natural logarithm of 1 plus the number of years since establishment of a firm.
Stock_Volatility	Standard deviation of daily stock price returns multiplied by the square root of the number of trading days in a year.
R&D_Intensity	Research and development (R&D) expenses divided by total sales.
Retained_Asset	Retained earnings divided by total assets.
Asset_Growth	Change in total assets from the previous year, divided by the lagged total assets.
Foreign_Dummy	An indicator variable equal to one if a firm's foreign ownership is more than the yearly median foreign ownership and zero otherwise.
Sales_Growth (t + k)	$\left[ \left( \frac{Sales_{i,t+k}}{Sales_{i,t}} \right)^{\frac{1}{k}} \right] - 1$ , where $k = 3$ and $5$ for 3- and 5-year-ahead periods.
Earnings_Growth (t + k)	$\left[ \left( \frac{Earnings_{i,t+k}}{Earnings_{i,t}} \right)^{\frac{1}{k}} \right] - 1$ , where $k = 3$ and $5$ for 3- and 5-year-ahead periods.

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