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Article

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Country-level governance quality, foreign ownership, and firm investment: evidence from WBES database

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ABSTRACT

This study investigates the effect of foreign ownership on firm investment and how the country-level governance quality adjusts the relationship between foreign ownership and firm investment. Using the 2016–2022 World Bank Enterprise Surveys (WBES) database, the results reveal that foreign-owned firms exhibit a higher likelihood of making investments than domestic-owned firms. Specifically, the odds of research and development (R&D)/fixed asset expenditures for foreign-owned firms are 56.6/67.0% higher than the odds for domestic-owned firms. In addition, the country-level governance quality significantly influences the relationship between foreign ownership and firm investment. Good governance quality can create a better environment for foreign-owned firms to invest and can lead to a significant positive impact on investment activities.

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1. Introduction

Investment is essential for long-term firm growth since it affects unit cost and profit (Eilon & Cosmetatos, 1982), increases the likelihood of exporting (Liu & Lu, 2015), reflects the competition ability (Akdoğan & MacKay, 2008), and improves firm performance (Ehie & Olibe, 2010; Tung & Binh, 2022; Yeh et al., 2010). At the country level, firm investment has a strong relationship with economic growth (De Long & Summers, 1991). On the other hand, several aspects of an economy are partially reflected through the response of firm investment to government policies and interventions, such as investor protection level through the investigation of investment and cash utilization (Ghosh & He, 2015), economic uncertainty (Chow et al., 2018; D'Mello & Toscano, 2020). Therefore, the long-term investment topic has received much attention in the literature on corporate finance.

Foreign ownership refers to the ownership of a firm by foreign investors and brings many benefits to existing firms. For example, foreign investors would increase the demand for stocks on the following day if the stock return goes up (Yang et al., 2020). In addition, the foreign sector significantly improves target firms' financial conditions and exports relative to domestic-acquired firms. Foreign acquisition improves target firms' output, employment, and wages (Wang & Wang, 2015) and increases labor productivity (Dimelis & Louri, 2002). In addition, Greenaway et al. (2014) showed that firms with foreign

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ownership perform better than other types of firms. Firms with foreign ownership behave differently in situations relevant to firm operations or activities, such as auditor choice (He et al., 2014) and corporate risk-taking (Boubakri et al., 2013), earning management (Han et al., 2022), information asymmetry (Choi et al., 2013). Recently, many studies have considered foreign ownership's impact on firm performance (Chari et al., 2012; Mishra, 2014; Nakano & Nguyen, 2013; Webster et al., 2022). Despite the fact that the critical role of ownership structure in investment decisions, such as ownership structure (Choi et al., 2011), institutional ownership (Cao et al., 2020; R L et al., 2020; Rong et al., 2017), bank ownership (Wang et al., 2020), few existing studies examine how foreign ownership affect firm investment choice.

Many studies have found that country-level governance quality affects several aspects of an economy and firms. For example, Hwang and Akdede (2011) found that governance helps to improve the public sector efficiency of an economy in general. Country-level governance quality also supports foreign direct investment toward to host country (Daude & Stein, 2007; Farooque & Yarram, 2010; Kuzmina et al., 2014). Besides, country-level governance quality also influences multiple firm-level dimensions, such as audit quality (Sarhan et al., 2019), financial report quality (Bonetti et al., 2016), debt maturity (Martins et al., 2017), stock market return prediction (Narayan et al., 2015), corporate environment disclosure (Gerged et al., 2023), firm behaviors (Agyemang et al., 2015). In terms of investment, several current studies have shown that country-level governance quality is a crucial variable in determining firm investment and investment efficiency (Alam et al., 2019; Chu et al., 2016; Farooq et al., 2022; Hillier et al., 2011; Pindado et al., 2015). Therefore, the interaction among firm investment, foreign ownership, and country-level governance quality is interesting to explore.

The main database is obtained from the World Bank Enterprise Survey (WBES). The WBES data are suitable for answering our research answer since the survey collects detailed questions about firm investment and ownership. Moreover, WBES data supports the selection of pooled cross-country firm-level data appropriate for capturing the variance in governance quality. The WBES dataset has been widely examined in corporate finance (e.g. Allison et al., 2023; Chavis et al., 2011; Lashitew, 2014; Liu & Xu, 2022; Presbitero et al., 2014; Xu et al., 2022). We also use the Worldwide Governance Indicators (WGI) database to measure country-level governance quality. The database reports the aggregate and individual governance indicators for six dimensions of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.

This paper contributes to the literature on corporate investment from several perspectives. This study aims to navigate the role of foreign ownership in firm investment in an international setting rather than the other firm-specific characteristics, such as debt (Aivazian et al., 2005b, 2005a; Vo, 2019; Phan, 2018) or cash flow issues (Gilchrist & Himmelberg, 1995; Hovakimian & Hovakimian, 2009; Kadapakkam et al., 1998). Second, this study captures the direct effect of foreign ownership on investment instead of the indirect effects on investment (Koo & Maeng, 2006; Tran, 2020). Third, this study considers neither the impact of country-level governance on investment (Alam et al., 2019; Farooq et al., 2022; Hillier et al., 2011; Pindado et al., 2015) nor firm ownership (Martins et al., 2017; Saona & San Martín, 2016) in isolation. This study aims to answer several questions: How firm investment responds to foreign ownership? How does the relationship between firm investment and foreign ownership change across countries with different level of governance qualities? What are the policy implications based on the empirical results?

The rest of this paper is structured as follows. Section 2 briefs a literature review of country-level governance quality, foreign ownership, and firm investment. Section 3 describes the model and data used in this study. Section 4 reports the results and robustness checks. Section 5 concludes.

2. Literature reviews

2.1. Foreign ownership and firm investment

The investment decisions can be considered as an outcome of resolving the conflict of interests between agents, which can be explained by the agency theory (Jensen & Meckling, 1976) and asymmetric information theory (Myers & Majluf, 1984). According to agency theory, conflicts of interest between managers and shareholders exist because managers may not act in the best firm's owners' interests. Managers may deny profitable projects due to concerns about potential losses or negative impacts on

their current positions or reputations. On the other hand, shareholders may be aggressively looking for higher returns by investing in the negative-NPV projects. Therefore, the difference in investment views and risk appetite is significant and influences the final decisions. Asymmetric information theory suggests that shareholders and managers can behave differently in investment decision-making that depends on how much information they have about the project and the market. The level of information is much more relevant to the agents' private connection, education, and experiences, whereas investment decision is also a function of decision makers' personality.

Many studies have examined the relationship between the type of shareholders and investment issues, such as insider, family, institutional, and state ownership. For example, Hadlock (1998) obtained listed firms in the Value Line Investment Survey for the first quarter of 1976 to test the role of insider ownership. This study showed a significant correlation between insider holding and the sensitivity of firm investment and cash flow. Similarly, Cho (1998) investigated the relationship between insider ownership and firm investment. Using a cross-section of Fortune 500 manufacturing firms in 1991, the findings showed that ownership significantly affects firm investment. Specifically, the positive effect has been found for ownership levels below 7% and above 38%, while the negative effect for levels ranging from 7% to 38%. Regarding family ownership and firm investment, Chen and Hsu (2009) used the dataset of 369 listed firms in Taiwan. Family ownership adversely affects R&D investment. Liu et al. (2022) explored the impact of heterogeneous foreign institutional investors on innovation in Chinese listed firms from 2009 to 2020. Empirical results indicated that foreign institutional investors from regions with high cultural distance are associated with a significant increase in the corporate innovation of Chinese firms.

Foreign ownership may enhance firm investment by bringing opportunities to obtain more debt, debt with lower cost, and debt with longer-term maturity, which can finance investment projects. First, foreign investors can help firms reduce financial constraints (Harrison et al., 2004) and allow firms to easily obtain more longer-term debt (Li et al., 2009). Second, foreign ownership can bring additional advantages by allowing firms to access capital at a lower cost. For instance, Tran (2021) provided evidence that firms with a higher proportion of foreign ownership can access debt with lower costs by using the sample of 405 firms listed during the 2009–2017 period to investigate the relationship between foreign ownership and the cost of debt in Vietnam. Third, a high proportion of foreigners' shareholding may signal a good firm since foreign-owned firms performed better than domestic firms (Greenaway et al., 2014; Kimura & Kiyota, 2007). Moreover, foreign investors also demand better corporate governance (Ferreira & Matos, 2008; John et al., 2008) that promote transparency and disclosure of accurate and reliable financial information. Therefore, foreign-owned firms have more advantages of debt accessibility for their investment.

Foreign ownership also enhances firm investment since it often involves the transfer of advanced technologies, managerial expertise, and innovative practices to the domestic firms. These benefits can enhance the firm's capabilities, improve productivity, and drive innovation in product development, processes, and services that stimulate investments in research and development.

Finally, foreign owners can provide valuable market knowledge, networks, and distribution channels in international markets that help firms facilitate market expansion, increase market share, and create opportunities for further investment.

Few studies have shown the indirect effect of foreign ownership on investment by capturing the interaction between foreign ownership and cash flow. Koo and Maeng (2006) examined whether an increase in foreign ownership affects investment. Using data from Korean firms, the authors found that the cashflow sensitivity of investment is lower in firms with high foreign ownership than in those with low foreign ownership. On the contrary, Tran (2020) used the dataset of 621 firms over the 2007–2017 period to show that foreign ownership positively affects investment but negatively affects the cashflow-investment relation in Vietnam. In an international setting, Chen et al. (2017) tested the effect of foreign ownership on investment and the relationship between Tobin's Q and investment in 506 firms in 64 countries from 1981 to 2008. The results showed that foreign ownership has a negative effect on investment and strengthens the relationship between Tobin Q and investment.

Overall, based on the theoretical review, we believe that foreign ownership directly affects firm investment. Foreign-owned firms will invest more than domestic firms since foreign-owned firms have

additional advantages to obtain more debt, debt with lower cost, more financial resources from foreign investors, more experiences, and technological adoption.

Hypothesis 1: The foreign ownership has positive effect on firm investment

2.2. Country-level governance quality, foreign ownership, and firm investment

On the one hand, country-level governance quality is essential for foreign investment inflow and foreign investor preferences. Countries with good governance provide a stable and predictable business environment and contribute to political stability and policy consistency, which is highly valued by foreign investors. Indeed, many studies have documented that better country-level governance quality attracts more foreign direct investment inflow (Agyemang et al., 2019; Farooque & Yarram, 2013; Kuzmina et al., 2014) since foreign investors demand higher country-level governance quality of the countries where they invest to avoid high levels of investment costs. Aggarwal et al. (2005) confirmed that U.S. investors would invest more in countries with stronger accounting standards, shareholder rights, and legal frameworks. Agyemang et al. (2016) investigated how country-level governance influences the prevalence of foreign ownership in African economies. They found that the higher regulatory quality would increase foreign ownership. Bhatta et al. (2022) used a natural experiment to test how country governance impacts foreign investors' choices. The results provided that governance reforms incorporating more stringent sanctions for non-compliance lead to higher foreign ownership. On average, the effect is up to 2.8% increased foreign ownership post-regulatory reform of 2004 in India.

On the other hand, country-level governance quality also affects corporate investment. Firms are reluctant to invest in tangible assets and R&D in an economy with high financial volatility and uncertainty. Indeed, the increase in official government turnover reduces firm investment in China (An et al., 2016), the uncertainty negatively affects investment efficiency in Europe (Akron et al., 2022), corruption decreases investment efficiency in developing countries (O'Toole & Tarp, 2014). Farooq et al. (2022) used the 2007–2016 panel data from 12 Asian economies to investigate the relationship between country governance and investment. The findings suggested that the countries with good governance situations subsequently enjoy a positive industrial investment. Hillier et al. (2011) investigated how country-level corporate governance facilitates firm-level investment in research and development (R&D). Using the data from nine European Union countries, Japan, and the United States, they showed that the better country-level corporate governance (effective investor protection, developed financial systems, and strong corporate control mechanisms) weakens the relationship between investment and internal funds.

Some studies focus on the interaction among country-level governance, foreign investors, and corporate decisions. For example, Chen et al. (2022) examined the relationship between foreign investors and firm excess perks in China. Using the dataset of 39 entities from 2010 to 2018, this study showed that foreign ownership and firm excess perks are negatively correlated. In addition, foreign investors from countries with good governance quality would have greater monitoring effects. Boubakri et al. (2016) examined the effect of country-level governance on the relationship between foreign ownership and the geographic distance of newly privatized firms. Using the dataset of 462 firms from 47 countries over the period 1995 to 2010, they found that country governance quality significantly impacts the level of information that foreign investors would get from distant firms.

Overall, based on two streams of literature review, we believe that country-level governance quality encourages both foreign ownership and investment since countries with better governance quality provide a stable and safe business environment, transparent investment climate, and quick and efficient investment procedures.

Hypothesis 2: Country-level governance quality strengthen the relationship between foreign ownership and firm investment.

3. Data and model description

3.1. Data

Our dataset is obtained from the World Bank Enterprise Survey (WBES), the Worldwide Governance Indicators (WGI), and the World Bank Development Indicators (WBDI). The WBES uses standardized

survey instruments to collect data on a representative sample of firms operating in manufacturing and service industries worldwide. The WBES data are suitable for answering our research answer since the survey collects detailed questions about firm investment and ownership. Moreover, WBES data supports the selection of pooled cross-country firm-level data appropriate for capturing the variance in governance quality. However, the limitation of WBES is that these data are cross-sectional; we only observe one point in time rather than the variation of firm investment/firm ownership over the periods. Despite its drawbacks, WBES dataset has been widely examined in corporate finance (Allison et al., 2023; Chavis et al., 2011; Lashitew, 2014; Liu & Xu, 2022; O'Toole & Tarp, 2014; Presbitero et al., 2014; Xu et al., 2022).

The Worldwide Governance Indicators (WGI) are publicly available the governance indicators for over 200 entities since 1996. There are six dimensions of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. Raw scores range between -2.5 and 2.5 . A higher score implies better performance in each indicator.

The WBES are firm-level surveys conducted since the 1990s. As of 2023, over 180,000 interviews in 154 economies have taken place. The dataset used in this study was aggregated from the raw individual country datasets conducted from 2016 to 2022. We use data from 2016 because the data collected on research and development in 2015 and from 2016 have different structures. The information in 2015 is the total amount of research and development, while the yes/no answers have applied since 2016 in most economies. After excluding all missing observations, the final sample consists of firm-level 21,718 observations in 88 countries over the 2016–2022 period.

3.2. Model description

Model 1 aims to investigate the effect of foreign ownership in firm investment:

$$\text{Investment}_{i,j} = \beta_0 + \beta_1 \text{Foreign}_{i,j} + \beta_{2-5} (\text{Firm_Control})_{i,j} + \beta_{6-9} (\text{Country_Control})_j + \varepsilon_i$$

Model 2 aims to investigate the effect of country-level governance on the relation between firm investment and foreign ownership

$$\text{Investment}_{i,j} = \beta_0 + \beta_1 \text{Foreign}_{i,j} + \beta_2 \text{Foreign}_{i,j} * \text{CGI}_j + \beta_{3-6} (\text{Firm_Control})_{i,j} + \beta_{7-10} (\text{Country_Control})_j + \varepsilon_i$$

The dependent variable in this study is firm investment (Investment), which is receive the value of 1 if firm invested in research and development or bought new asset last year. Firm investment gets the value of 0 if firm did not spend on research and development or bought new asset last year. The firm-level independent variable of interest is foreign ownership (Foreign), which get the value of 1 if firm has foreign ownership and of 0 if firm does not have foreign ownership. The other firm-level controlled variables are firm age (AGE) is the natural logarithm of years, firm size (SIZE) is the natural logarithm of the number of full-time workers, firm sales (SALE) is the natural logarithm of total annual sales, free cash flow (CFL) get the value of 1 if firm has checking and/or saving accounts and of 0 if firm does not have checking and/or saving accounts. The country-level independent variable of interest is country governance quality (CGI), which is obtained from World Bank Governance Indication (WBGI). The other country-level controlled variables are GDP growth rate (GDP), private credit provided by banks (CREDIT), inflation (INF), and foreign direct investment inflow (FDI).

The most important coefficients in our model are β_1 in model 1 and β_2 in model 2 since they reflect the influence of foreign ownership on firm investment and the impact of country-level governance quality on the relationship between firm investment and foreign ownership. To capture the influence of country-level governance quality on firm-level predictor—outcome relationship, many studies have added the interaction term between country-level governance quality to firm-level independent variable (Ernstberger & Grüning, 2013; Pindado et al., 2015; Zeng, 2019).

3.3. Methodology

We employ logistic regression to test the influence of foreign ownership on firm investment in Model 1. Logistic regression is appropriate for this study because the dependent variable is binary. The dependent variable has a value of 1 if a firm spent on research and development/new fixed assets last year; it is 0 otherwise. The value of the dependent variable from logistic regression can be interpreted as the predicted probability of an event occurring which lies between 0 and 1. In our study, the estimated value of firm investment was defined as the probability of being a foreign-owned firm. The regression results can be interpreted in terms of the change in odds. A value >1 indicates that as the predictor increases, the odds of the outcome occurring also increase, and vice versa. The logistic regression model has been widely used in corporate finance studies (Kim & Gu, 2009; Larimo, 2003; Loughran, 2008; Wood, 2006) when the dependent variable is dichotomous.

However, binary logistic regression has some weaknesses if the model includes the interaction term. In Model 2, the significant coefficient for the interaction term between CGI and Foreign on the logistic regression will not necessarily mean that there is an interaction effect of these variables when considering the predicted probabilities. For example, as Karaca-Mandic et al. (2012) explained, the positive significant for Foreign and Foreign*CGI only implies that the effect of adding interaction term is to make the curve for Foreign firms more steeply sloped in the middle range of CGI. It is difficult to interpret the regression results in economic meaning. Therefore, several researchers suggest using other methodologies to test the interaction effect in the models with binary outcomes, such as marginal effect (Karaca-Mandic et al., 2012), and ordinary least squared (Gomila, 2021). The marginal effect test predicts the probabilities of outcomes for each level of the explanatory variable while holding the other variables at their mean. Finally, we also use both OLS regression and marginal effect test to see how the level of CGI affects the relation between foreign ownership and firm investment.

4. The results and discussions

4.1. Data description

Table 1 shows the statistical descriptions of all variables. The mean value of R&D investment and capital expenditures is 0.2247 and 0.3229, respectively, which shows that 22.47% of enterprises in the sample have new funds for R&D and 32.29% of firms that bought new assets in the previous year. Secondly, the ratio of firms with foreign ownership is not too high, only 10.44% of firms. However, the mean value of CFL demonstrates that 88.17% of firms have cash in saving accounts. Firm age, size, and sales also range wide spread.

4.2. Foreign ownership and firm investment

Table 2 shows the results of binary logistic and OLS regression on the effect of foreign ownership on firm investment. First, the results show that foreign ownership significantly influences firm investment

Table 1. Statistical description.

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
R&D	21,718	0.2247	0.4174	0	1
Asset	21,718	0.3229	0.4676	0	1
Foreign	21,718	0.1044	0.3058	0	1
AGE	21,718	2.9917	0.7901	0	5.3982
SIZE	21,718	3.5582	1.4213	0	10.3090
SALE	21,718	17.1050	2.9117	6.9078	32.0529
CFL	21,718	0.8817	0.3230	0	1
GDP	21,718	3.8280	4.2036	-11.3250	10.5078
CREDIT	21,718	52.6420	33.175	0	163.7250
INF	21,718	4.3783	3.8415	-2.4310	21.9969
FDI	21,718	2.2205	4.0802	-40.0870	60.1882
CGI	21,718	-0.0521	0.8012	-1.5275	1.7812

Notes: R&D is research and development investment; Asset is new asset bought last year; Foreign is foreign ownership; AGE is firm age; SIZE is firm size; SALE is firm sales; CFL is cash flow; GDP is GDP growth; CREDIT is private credit provided by banks (% of GDP); INF is inflation; FDI is foreign direct investment inflow (% of GDP); CGI is country-level governance index.

Table 2. Foreign ownership and firm investment.

	OLS regression		Logistic regression	
	R&D (1)	Asset (2)	R&D (3)	Asset (4)
Foreign	0.0841*** (8.206)	0.1120*** (10.352)	1.5660*** (8.610)	1.6700*** (10.534)
AGE	0.0095** (2.646)	−0.0029 (−0.693)	1.0540* (2.202)	0.9800 (−0.982)
SIZE	0.0393*** (15.921)	0.0134*** (4.828)	1.3010*** (16.692)	1.0810*** (5.636)
SALE	0.0078*** (6.520)	0.0190*** (13.779)	1.0480*** (5.998)	1.0970*** (13.736)
CFL	0.0672*** (10.555)	0.0261** (3.005)	2.0350*** (10.031)	1.1800** (3.176)
GDP	−0.0265*** (−35.123)	−0.0326*** (−38.004)	0.8620*** (−30.672)	0.8540*** (−35.149)
CREDIT	0.0016*** (14.973)	0.0012*** (10.770)	1.0080*** (14.198)	1.0050*** (9.971)
INF	−0.0026** (−3.249)	−0.0062*** (−6.809)	0.9800*** (−3.471)	0.9680*** (−6.773)
FDI	−0.0013 (−1.432)	0.0013 (1.441)	0.9930 (−1.688)	1.0070 (1.854)
Intercept	−0.1120*** (−5.858)	0.0083 (0.364)		
Obs	21,718	21,718	21,718	21,718

Notes: R&D is research and development investment; Asset is new asset bought last year; Foreign is foreign ownership; AGE is firm age; SIZE is firm size; SALE is firm sales; CFL is cash flow; GDP is GDP growth; CREDIT is private credit provided by banks (% of GDP); INF is inflation; FDI is foreign direct investment inflow (% of GDP); CGI is country-level governance index. Columns (1) and (2) report the regression for OLS estimation. Columns (3) and (4) report the regression for logistic estimation.

*, **, *** shows significance at 10%, 5% and 1% respectively.

(research and development and capital expenditures). The coefficients for Foreign are significantly positive in all estimations. Holding the other variables at the fixed values, the odds of corporate spending in research and development for foreign firms (Foreign = 1) over the odds of corporate investment for the other firms (Foreign = 0) is 1.566. Regarding percent change, the odds for foreign firms are 56.6% higher than the odds for local firms. In terms of capital expenditures, the odds for foreign firms are 67% higher than the odds for local firms. The possible explanation for the higher odds ratio for foreign firms is that firms with foreign ownership have more advantages in conducting, processing innovation, and adopting foreign technologies (Guadalupe et al., 2012; Vishwasrao & Bosshardt, 2001). Firms with foreign investors' participation also may access debt at a lower cost (Tran, 2021) to fund their investments.

For the other controlled variables (AGE, SALE, GDP, CREDIT, INFL, FDI), we do not observe significant differences in the odds ratio between the investment of foreign firms and local firms. However, holding the other variables at fixed values, we will see a 27.1/22% increase in the odds of firm spending in research and development/buying new assets for a one-unit increase in firm size (logarithm of the full-time workers). For example, holding the other variables at fixed values, firms would increase 30.1/8.1% in the odds of firm spending on research and development/buying new assets if firm size increases on a unit (the number of full-time workers increases from 5 to 15 persons).

4.3. Country governance, foreign ownership, and firm investment

In this section, we test how country-level governance quality adjusts the relationship between foreign ownership and firm investment in three ways. Firstly, we run a linear regression of Model 2 to capture the coefficient for the interaction term between Foreign and CGI. The significant coefficients will show the influence of CGI on the firm investment—foreign ownership relation. Secondly, we use margins to predict the probabilities for each level of CGI while holding the other variables at their mean to see how the probability of firm investment decision changes according to each level of CGI increase. Thirdly, we divide the sample into four subsamples based on the level of CGI and explore how firm investment responds to foreign ownership in different countries with different quality of governance.

Table 3 shows the result of the OLS regression of firm investment on the interaction term between country-level governance quality and foreign ownership. The significant coefficient for the interaction

Table 3. Country-level governance index, foreign ownership, and firm investment.

	OLS regression		Logistic regression	
	R&D (1)	Asset (2)	R&D (3)	Asset (4)
Foreign	0.0785*** (7.904)	0.1060*** (10.003)	1.535*** (7.868)	1.667*** (10.105)
Foreign*CGI	0.0469*** (4.208)	0.0456*** (4.099)	1.064 (1.051)	1.226*** (3.481)
AGE	0.0022 (0.609)	−0.0117** (−2.866)	0.9970 (−0.104)	0.9330** (−3.204)
SIZE	0.0404*** (16.541)	0.0148*** (5.376)	1.3310*** (17.643)	1.0930*** (6.257)
SALE	0.0077*** (6.501)	0.0189*** (13.857)	1.0530*** (6.389)	1.1010*** (14.112)
CFL	0.0357*** (5.536)	−0.0123 (−1.397)	1.5940*** (6.504)	0.9470 (−1.024)
GDP	−0.0243*** (−32.646)	−0.0300*** (−35.514)	0.8760*** (−27.128)	0.8650*** (−32.050)
CREDIT	−0.0011*** (−6.950)	−0.0020*** (−11.540)	0.9940*** (−7.096)	0.9900*** (−12.175)
INF	−0.0000 (−0.013)	−0.0031*** (−3.423)	0.9980 (−0.269)	0.9800*** (−3.991)
FDI	0.0013 (1.522)	0.0043*** (4.773)	1.0070 (1.820)	1.0220*** (5.667)
CGI	0.1460*** (21.231)	0.1770*** (24.257)	2.3840*** (22.440)	2.3200*** (23.627)
Intercept	0.0595** (2.836)	0.2140*** (8.842)		
Obs	21,718	21,718	21,718	21,718

Notes: R&D is research and development investment; Asset is new asset bought last year; Foreign is foreign ownership; AGE is firm age; SIZE is firm size; SALE is firm sales; CFL is cash flow; GDP is GDP growth; CREDIT is private credit provided by banks (% of GDP); INF is inflation; FDI is foreign direct investment inflow (% of GDP); CGI is country-level governance index. Columns (1) and (2) report the regression for OLS estimation. Columns (3) and (4) report the regression for logistic estimation.

*, **, *** shows significance at 10%, 5% and 1% respectively.

term between Foreign and CGI indicates that the level of governance quality adjusts the effect of foreign ownership on firm investment. The positive sign effect suggests that foreign firms in countries with better governance quality would invest more in both research and development and new assets. It could be explained that countries with better governance quality would attract more foreign investment (Fazio & Talamo, 2008; Mengistu & Adhikary, 2011) and promote private investment (Aysan et al., 2007). Moreover, firms in those countries with higher governance quality tend to hire Big Four auditors (Sarhan et al., 2019), which can provide better audit quality, in turn, allow firms to enhance better quality of their financial reports (Alzeban, 2019), be easier to access external financing (Ding et al., 2016) for their investment (Vo, 2019).

We also use margins to predict the probabilities for each level of CGI while holding the other variables at their mean values. The results are shown in Table 4. In our sample, the average CGI ranges from −1.528 to 1.781, while the score of the six dimensions of the governance index ranges from −2.5 to 2.5. Therefore, we will predict the probability for the values of CGI from −2 to 2 in increments of 0.2 while holding Foreign at its mean value of 0.1044. The Margin column gives the predicted probability.

The value of CGI increases the probability of a firm deciding on investment from a probability of 0.1007 to a probability of 0.3267. On average, each 0.2 score increase in CGI is associated with a 0.0113 higher probability of firm spending on research and development and with a 0.0197 higher probability of firm spending on buying new assets. However, the marginal effects are different among the levels of CGI. For the negative-CGI countries, a 0.2 score increase in CGI is associated with the 0.0088 higher probability of firm spending on research and development and 0.0162 higher probability of firm spending on tangible assets. For the positive-CGI countries, a 0.2 score increase in CGI is associated with a 0.0138 higher probability of firm spending on research and development and a 0.0231 higher probability of firm spending on tangible assets. In other words, the increase in CGI influences firm investment is more pronounced in countries with positive governance index scores.

Table 5 shows the logistic regression results of subsamples. Group 1 consists of firms in the country with a negative score of CGI. Group 2 consists of firms in the country with a positive score of CGI. The regression results show that firm investment and foreign ownership relation varies according to the level

Table 4. Marginal effects of CGI.

CGI level	R&D			Asset		
	Margin	z-Statistics	p-Value	Margin	z-Statistics	p-Value
−2.0	0.1007	9.54	0	0.1434	10.11	0
−1.8	0.1075	10.65	0	0.1557	11.37	0
−1.6	0.1148	12.03	0	0.1689	12.96	0
−1.4	0.1225	13.78	0	0.1829	15.00	0
−1.2	0.1306	16.07	0	0.1978	17.72	0
−1.0	0.1391	19.17	0	0.2136	21.46	0
−0.8	0.1481	23.55	0	0.2303	26.90	0
−0.6	0.1576	30.05	0	0.2479	35.31	0
−0.4	0.1676	40.03	0	0.2664	49.24	0
−0.2	0.1781	54.15	0	0.2857	72.06	0
0.0	0.1891	63.86	0	0.3058	90.80	0
0.2	0.2005	55.67	0	0.3267	75.31	0
0.4	0.2126	42.31	0	0.3483	54.62	0
0.6	0.2251	32.66	0	0.3706	41.69	0
0.8	0.2381	26.33	0	0.3934	33.80	0
1.0	0.2517	22.05	0	0.4168	28.70	0
1.2	0.2657	19.02	0	0.4404	25.22	0
1.4	0.2803	16.80	0	0.4644	22.75	0
1.6	0.2953	15.11	0	0.4885	20.94	0
1.8	0.3108	13.79	0	0.5127	19.61	0
2.0	0.3267	12.75	0	0.5368	18.61	0

Notes: R&D is research and development investment; Asset is new asset bought last year; CGI is country-level governance index.

Table 5. Logistic regression results of subsamples.

	R&D		Asset	
	Negative CGI (1)	Positive CGI (2)	Negative CGI (3)	Positive CGI (4)
Foreign	1.3890*** (4.438)	1.3010** (3.274)	1.1770* (2.510)	1.4650*** (4.504)
AGE	0.9980 (−0.062)	1.1030** (2.789)	0.8980*** (−3.965)	1.1410*** (3.766)
SIZE	1.2680*** (11.876)	1.2310*** (6.561)	1.0940*** (5.371)	1.0500 (1.544)
SALE	1.1040*** (10.951)	1.1140*** (5.236)	1.1310*** (16.521)	1.2070*** (9.005)
CFL	3.0870*** (9.995)	0.7650* (−2.342)	1.3640*** (4.783)	0.9360 (−0.563)
GDP	0.8120*** (−25.698)	0.9640*** (−5.354)	0.8580*** (−22.422)	0.9580*** (−6.154)
CREDIT	0.9960 (−1.943)	0.9910*** (−8.286)	0.9800*** (−13.432)	0.9970* (−2.346)
INF	1.0250*** (3.868)	0.8140*** (−10.357)	0.9710*** (−5.507)	0.8920*** (−5.983)
FDI	0.9780* (−2.144)	1.0070 (1.759)	1.0920*** (11.752)	0.9910 (−1.955)
Obs	15,761	5,957	15,761	5,957

Notes: R&D is research and development investment; Asset is new asset bought last year; Foreign is foreign ownership; AGE is firm age; SIZE is firm size; SALE is firm sales; CFL is cash flow; GDP is GDP growth; CREDIT is private credit provided by banks (% of GDP); INF is inflation; FDI is foreign direct investment inflow (% of GDP); CGI is country-level governance index. Columns (1) and (3) report the regression for the subsample of countries with negative CGI. Columns (2) and (4) report the regression for the subsample of countries with positive CGI.

*, **, *** shows significance at 10%, 5% and 1% respectively.

of CGI. The odds of R&D investment for foreign firms are ~38.9% higher than the odds for domestic firms in countries with negative CGI, while the difference in odds ratio is 30.1% in countries with better governance quality. On the contrary, the odds of investment in tangible assets for foreign firms are ~17.7% higher than the odds for domestic firms in countries with negative CGI, while the difference in odds ratio is 46.5% in countries with positive CGI. The results imply that the country-governance quality significantly affects the firm investment—firm ownership interaction.

Foreign-owned firms in poor governance countries may invest more in research and development (R&D) compared to foreign-owned firms in good governance countries. In contrast, foreign-owned firms in poor governance countries may invest less in tangible assets than those in good governance countries. It can be possibly explained that the level of competition may be lower in poor governance countries, compared to good governance countries. Foreign-owned firms operating in such environments

Table 6. IV-2SLS regression results.

	R&D (1)	Asset (2)	R&D (3)	Asset (4)
Foreign	0.0755*** (7.138)	0.1040*** (9.317)	0.0659*** (6.262)	0.0935*** (8.252)
Foreign*CGI			0.0402*** (3.490)	0.0390*** (3.427)
AGE	0.0106** (2.889)	−0.0019 (−0.454)	0.00380 (1.012)	−0.0101* (−2.361)
SIZE	−0.0052 (−0.541)	−0.0255* (−2.421)	−0.0258** (−2.647)	−0.0502*** (−4.730)
SALE	0.0483*** (5.659)	0.0544*** (5.818)	0.0680*** (7.878)	0.0781*** (8.295)
CFL	0.0642*** (9.636)	0.0235** (2.693)	0.0310*** (4.400)	−0.0169 (−1.879)
GDP	−0.0330*** (−21.210)	−0.0383*** (−22.212)	−0.0340*** (−21.536)	−0.0395*** (−22.626)
CREDIT	0.0015*** (14.495)	0.0012*** (10.460)	−0.0011*** (−6.924)	−0.0020*** (−11.355)
INF	−0.0055*** (−5.602)	−0.0087*** (−7.794)	−0.0043*** (−4.245)	−0.0073*** (−6.377)
FDI	−0.0007 (−0.864)	0.0018 (1.938)	0.0020* (2.431)	0.0051*** (5.467)
CGI			0.1470*** (20.312)	0.1780*** (23.321)
Intercept	−0.6090*** (−5.786)	−0.4250*** (−3.681)	−0.6800*** (−6.347)	−0.5120*** (−4.375)
Obs	21,718	21,718	21,718	21,718
Wald Chi-squared	3497.66	3023.18	3992.76	3963.23
Test of endogeneity p-Value	0.0000	0.0001	0.0000	0.0000
Test of overidentification p-Value	0.9502	0.8101	0.3038	0.1897

Notes: R&D is research and development investment; Asset is new asset bought last year; Foreign is foreign ownership; AGE is firm age; SIZE is firm size; SALE is firm sales; CFL is cash flow; GDP is GDP growth; CREDIT is private credit provided by banks (% of GDP); INF is inflation; FDI is foreign direct investment inflow (% of GDP); CGI is country-level governance index. Columns (1) and (2) report the regression for the relationship between foreign ownership and firm investment. Columns (3) and (4) report the regression for the relationship between foreign ownership and firm investment with the interaction term between country-level governance quality and foreign ownership.

*, **, *** shows significance at 10%, 5% and 1% respectively.

may face fewer competitors and need to differentiate themselves through innovation and R&D to capture market share. Good governance countries provide a stable and predictable business environment, which enhances investor confidence and preferences (Abdioglu et al., 2013; Gelos & Wei, 2002). Foreign-owned firms in such countries may have greater assurance that their investments in fixed assets, such as land, buildings, machinery, and infrastructure, will be protected and secured. Moreover, good governance countries tend to have well-developed infrastructure, including transportation networks, utilities, and communication systems, because good governance quality can lead to economic growth (Cooray, 2009; Rivera-Batiz, 2002). This infrastructure supports efficient business operations and logistics, making investing in fixed assets easier for foreign-owned firms.

4.4. Endogeneity consideration

In this subsection, we raise the potential endogeneity issue in our study. Endogeneity problem in examining the relationship between foreign ownership and firm investment may exist due to the reverse causality and unobserved heterogeneity. The coexistence of reverse causality occurs when firm investment and other firm characteristics, such as firm performance (measured by firm sales), affect each other (Belderbos et al., 2004; Lee et al., 2016). Unobserved heterogeneity also occurs when one variable may be omitted in the regression model. In this case, the instrument variables (IVs) approach is helpful in controlling for several potential sources of endogeneity arising from reverse causality, selection bias, or measurement errors. In this study, we adopted the two-stage ordinary least squares (2SLS) approach to correct for endogeneity bias. We selected two instruments for the 2SLS estimator that are highly correlated with firm sales but indirectly affect firm investment. Electricity obstacles and transportation obstacles that are closely related to firm performance (Cole et al., 2018; Geginat & Ramalho, 2018).

In 2SLS approach, the first stage model regresses the endogenous indicator variable (SALE) on both instruments (electricity and transportation obstacles) and all controls to estimate the predicted value. In the second stage, the endogenous variable (SALE) is replaced with its predicted value from the first stage. Firm investment is then regressed on the predicted value of SALE and the same controls from the first stage.

Table 6 shows the regression results in 2SLS analysis. After controlling for endogeneity, the coefficient for Foreign and the interaction between Foreign and CGI are still significant and positive. We also consider several post-estimation in 2SLS analysis. Tests of endogeneity are significant in all estimations; it would indicate that firm sale (SALE) is endogenous in our models. If tests of overidentification are significant, this implies that one or more of the instruments are not valid. In our study, the tests of overidentification are insignificant in all cases.

5. Conclusion

This study aims to investigate the role of foreign ownership on firm investment, proxied by research and development decisions and asset expenditures. This study also tests the influence of country-level governance quality on the relationship between foreign ownership and firm investment. Using the WBES dataset over the 2016–2022 period, the regression results confirm that the odds of R&D investment for foreign firms are 56.6% higher than for local firms. In terms of capital expenditures, the odds for foreign firms are 67.0% higher than the odds for local firms. Secondly, country governance quality could promote firm investment through the mechanism of foreign ownership adjustment. The significant coefficient for the interaction term between Foreign and CGI indicates that the level of governance quality adjusts the effect of foreign ownership on firm investment. The positive sign effect suggests that foreign firms in countries with better governance quality would invest more in both research and development and new assets. Thirdly, the investment preferences also vary according to the level of country governance quality.

Based on the results, some policy implications are proposed for policymakers and firm managers. First, the results confirm the significant role of foreign investors in firm investment. Therefore, the government needs to implement policies to attract foreign investment, such as reducing bureaucratic hurdles for foreign investors, offering tax incentive packages, and so on. Second, country governance quality could promote firm investment through the mechanism of foreign ownership adjustment. Therefore, the government needs to improve the quality of the country-level governance to encourage businesses to invest more in research, development, and infrastructure. The main reason is that when the quality of national governance is improved, investment procedures and policies are also more open. In addition, the government needs to improve the quality of national governance if they would attract investment from foreign investors and enable foreigners participate in the production activities of domestic enterprises.

Based on the positive effect of foreign ownership on firm investment, firms should diversify their ownership by allowing more foreign investors' shareholding since foreign investors help existing firms in investment to improve their competition and exporting. Additionally, the country-level quality of governance plays a significant role in influencing firms' investment decisions. Good governance creates a favorable environment for businesses and investors, while weak governance can deter investment and hinder economic growth. Therefore, firms can contribute to the improvement of the quality of national governance by making proposals and recommendations to the government, which in turn can enhance the business environment and attract foreign investment.

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References

- Abdioglu, N., Khurshed, A., & Stathopoulos, K. (2013). Foreign institutional investment: Is governance quality at home important? *Journal of International Money and Finance*, 32, 916–940. <https://doi.org/10.1016/j.jimonfin.2012.08.001>
- Aggarwal, R., Klapper, L., & Wysocki, P. D. (2005). Portfolio preferences of foreign institutional investors. *Journal of Banking & Finance*, 29(12), 2919–2946. <https://doi.org/10.1016/j.jbankfin.2004.09.008>
- Agyemang, O. S., Fantini, G., & Ansong, A. (2016). Unearthing the integral determinants of foreign ownership prevalence of companies in Africa: Role of country-level governance. *Journal of African Business*, 17(2), 225–253. <https://doi.org/10.1080/15228916.2016.1145179>
- Agyemang, O. S., Fantini, G., & Frimpong, J. (2015). Does country-level governance enhance ethical behaviour of firms? An African perspective. *International Journal of Law and Management*, 57(6), 582–599. <https://doi.org/10.1108/IJLMA-12-2014-0063>
- Agyemang, O. S., Gbettey, C., Gatsi, J. G., & Acquah, I. S. K. (2019). Country-level corporate governance and foreign direct investment in Africa. *Corporate Governance: The International Journal of Business in Society*, 19(5), 1133–1152. <https://doi.org/10.1108/CG-07-2018-0259>
- Aivazian, V. A., Ge, Y., & Qiu, J. (2005a). Debt maturity structure and firm investment. *Financial Management*, 34(4), 107–119. <https://doi.org/10.1111/j.1755-053X.2005.tb00120.x>
- Aivazian, V. A., Ge, Y., & Qiu, J. (2005b). The impact of leverage on firm investment: Canadian evidence. *Journal of Corporate Finance*, 11(1–2), 277–291. [https://doi.org/10.1016/S0929-1199\(03\)00062-2](https://doi.org/10.1016/S0929-1199(03)00062-2)
- Akdoğan, E., & MacKay, P. (2008). Investment and competition. *Journal of Financial and Quantitative Analysis*, 43(2), 299–330. <https://doi.org/10.1017/S0022109000003537>
- Akron, S., Demir, E., Díez-Esteban, J. M., & García-Gómez, C. D. (2022). How does uncertainty affect corporate investment inefficiency? Evidence from Europe. *Research in International Business and Finance*, 62, 101752. <https://doi.org/10.1016/j.ribaf.2022.101752>
- Alam, A., Uddin, M., & Yazdifar, H. (2019). Institutional determinants of R&D investment: Evidence from emerging markets. *Technological Forecasting and Social Change*, 138, 34–44. <https://doi.org/10.1016/j.techfore.2018.08.007>
- Allison, L., Liu, Y., Murtinu, S., & Wei, Z. (2023). Gender and firm performance around the world: The roles of finance, technology and labor. *Journal of Business Research*, 154, 113322. <https://doi.org/10.1016/j.jbusres.2022.113322>
- Alzeban, A. (2019). The impact of audit committee, CEO, and external auditor quality on the quality of financial reporting. *Corporate Governance: The International Journal of Business in Society*, 20(2), 263–279. <https://doi.org/10.1108/CG-07-2019-0204>
- An, H., Chen, Y., Luo, D., & Zhang, T. (2016). Political uncertainty and corporate investment: Evidence from China. *Journal of Corporate Finance*, 36, 174–189. <https://doi.org/10.1016/j.jcorpfin.2015.11.003>
- Aysan, A. F., Nabli, M. K., & Véganzonès-Varoudakis, M.-A. (2007). Governance institutions and private investment: An application to the Middle East and North Africa. *The Developing Economies*, 45(3), 339–377. <https://doi.org/10.1111/j.1746-1049.2007.00042.x>
- Belderbos, R., Carree, M., & Lokshin, B. (2004). Cooperative R&D and firm performance. *Research Policy*, 33(10), 1477–1492. <https://doi.org/10.1016/j.respol.2004.07.003>
- Bhatta, B., Marshall, A., Neupane, S., & Thapa, C. (2022). Foreign ownership and the enforcement of corporate governance reforms. *Review of Quantitative Finance and Accounting*, 58(2), 541–580. <https://doi.org/10.1007/s11156-021-01002-2>
- Bonetti, P., Magnan, M. L., & Parbonetti, A. (2016). The influence of country- and firm-level governance on financial reporting quality: Revisiting the evidence. *Journal of Business Finance & Accounting*, 43(9–10), 1059–1094. <https://doi.org/10.1111/jbfa.12220>
- Boubakri, N., Cosset, J.-C., & Saffar, W. (2013). The role of state and foreign owners in corporate risk-taking: Evidence from privatization. *Journal of Financial Economics*, 108(3), 641–658. <https://doi.org/10.1016/j.jfineco.2012.12.007>
- Boubakri, N., Guedhami, O., & Saffar, W. (2016). Geographic location, foreign ownership, and cost of equity capital: Evidence from privatization. *Journal of Corporate Finance*, 38, 363–381. <https://doi.org/10.1016/j.jcorpfin.2016.02.004>
- Cao, Y., Dong, Y., Lu, Y., & Ma, D. (2020). Does institutional ownership improve firm investment efficiency? *Emerging Markets Finance and Trade*, 56(12), 2772–2792. <https://doi.org/10.1080/1540496X.2018.1486705>

- Chari, A., Chen, W., & Dominguez, K. M. E. (2012). Foreign ownership and firm performance: Emerging market acquisitions in the United States. *IMF Economic Review*, 60(1), 1–42. <https://doi.org/10.1057/imfer.2012.1>
- Chavis, L. W., Klapper, L. F., & Love, I. (2011). The Impact of the business environment on young firm financing. *The World Bank Economic Review*, 25(3), 486–507. <https://doi.org/10.1093/wber/lhr045>
- Chen, H.-L., & Hsu, W.-T. (2009). Family ownership, board independence, and R&D investment. *Family Business Review*, 22(4), 347–362. <https://doi.org/10.1177/0894486509341062>
- Chen, L., Han, M., Li, Y., Megginson, W. L., & Zhang, H. (2022). Foreign ownership and corporate excess perks. *Journal of International Business Studies*, 53(1), 72–93. <https://doi.org/10.1057/s41267-021-00466-7>
- Chen, R., El Ghoul, S., Guedhami, O., & Wang, H. (2017). Do state and foreign ownership affect investment efficiency? Evidence from privatizations. *Journal of Corporate Finance*, 42, 408–421. <https://doi.org/10.1016/j.jcorpfin.2014.09.001>
- Cho, M.-H. (1998). Ownership structure, investment, and the corporate value: An empirical analysis. *Journal of Financial Economics*, 47(1), 103–121. [https://doi.org/10.1016/S0304-405X\(97\)00039-1](https://doi.org/10.1016/S0304-405X(97)00039-1)
- Choi, J. J., Lam, K. C. K., Sami, H., & Zhou, H. (2013). Foreign ownership and information asymmetry. *Asia-Pacific Journal of Financial Studies*, 42(2), 141–166. <https://doi.org/10.1111/ajfs.12010>
- Choi, S. B., Lee, S. H., & Williams, C. (2011). Ownership and firm innovation in a transition economy: Evidence from China. *Research Policy*, 40(3), 441–452. <https://doi.org/10.1016/j.respol.2011.01.004>
- Chow, Y. P., Muhammad, J., Bany-Ariffin, A. N., & Cheng, F. F. (2018). Macroeconomic uncertainty, corporate governance and corporate capital structure. *International Journal of Managerial Finance*, 14(3), 301–321. <https://doi.org/10.1108/IJMF-08-2017-0156>
- Chu, W.-K., Yang, N.-T., & Yang, S.-Y. (2016). Corporate governance' impact on research and development. *Journal of Business Research*, 69(6), 2239–2243. <https://doi.org/10.1016/j.jbusres.2015.12.036>
- Cole, M. A., Elliott, R. J. R., Occhiali, G., & Strobl, E. (2018). Power outages and firm performance in sub-Saharan Africa. *Journal of Development Economics*, 134, 150–159. <https://doi.org/10.1016/j.jdeveco.2018.05.003>
- Cooray, A. (2009). Government expenditure, governance and economic growth. *Comparative Economic Studies*, 51(3), 401–418. <https://doi.org/10.1057/ces.2009.7>
- Daude, C., & Stein, E. (2007). The quality of institutions and foreign direct investment. *Economics & Politics*, 19(3), 317–344. <https://doi.org/10.1111/j.1468-0343.2007.00318.x>
- De Long, J. B., & Summers, L. H. (1991). Equipment investment and economic growth. *The Quarterly Journal of Economics*, 106(2), 445–502. <https://doi.org/10.2307/2937944>
- Dimelis, S., & Louri, H. (2002). Foreign ownership and production efficiency: A quantile regression analysis. *Oxford Economic Papers*, 54(3), 449–469. <https://doi.org/10.1093/oep/54.3.449>
- Ding, S., Liu, M., & Wu, Z. (2016). Financial reporting quality and external debt financing constraints: The case of privately held firms. *Abacus*, 52(3), 351–373. <https://doi.org/10.1111/abac.12083>
- D'Mello, R., & Toscano, F. (2020). Economic policy uncertainty and short-term financing: The case of trade credit. *Journal of Corporate Finance*, 64, 101686. <https://doi.org/10.1016/j.jcorpfin.2020.101686>
- Ehie, I. C., & Olibe, K. (2010). The effect of R&D investment on firm value: An examination of US manufacturing and service industries. *International Journal of Production Economics*, 128(1), 127–135. <https://doi.org/10.1016/j.ijpe.2010.06.005>
- Eilon, S., & Cosmetatos, G. (1982). The effect of investment on unit cost and on profit. *Omega*, 10(1), 35–42. [https://doi.org/10.1016/0305-0483\(82\)90083-4](https://doi.org/10.1016/0305-0483(82)90083-4)
- Ernstberger, J., & Grüning, M. (2013). How do firm- and country-level governance mechanisms affect firms' disclosure? *Journal of Accounting and Public Policy*, 32(3), 50–67. <https://doi.org/10.1016/j.jaccpubpol.2013.02.003>
- Farooq, U., Tabash, M. I., Al-Rdaydeh, M., & Al-Faryan, M. A. S. (2022). Measuring the impact of country-level governance on corporate investment: A new panel data evidence. *Global Business Review*, 09721509221112993. <https://doi.org/10.1177/09721509221112993>
- Farooque, O. A., & Yarram, S. R. (2010). Corporate governance and foreign direct investment inflows: Cross-sectional international evidence. *American J. of Finance and Accounting*, 2(1), 1–15. <https://doi.org/10.1504/AJFA.2010.034564>
- Farooque, O. A., & Yarram, S. R. (2013). Evidence on two-way relationships between foreign direct investment inflows and country-level individual governance indicators. *The Singapore Economic Review*, 58(2), 1350013. <https://doi.org/10.1142/S0217590813500136>
- Fazio, G., & Talamo, G. M. C. (2008). How “attractive” is good governance for FDI? In *International finance review* (Vol. 9, pp. 33–54). Emerald (MCB UP). [https://doi.org/10.1016/S1569-3767\(08\)09002-X](https://doi.org/10.1016/S1569-3767(08)09002-X)
- Ferreira, M. A., & Matos, P. (2008). The colors of investors' money: The role of institutional investors around the world. *Journal of Financial Economics*, 88(3), 499–533. <https://doi.org/10.1016/j.jfineco.2007.07.003>
- Geginat, C., & Ramalho, R. (2018). Electricity connections and firm performance in 183 countries. *Energy Economics*, 76, 344–366. <https://doi.org/10.1016/j.eneco.2018.08.034>
- Gelos, R. G., & Wei, S.-J. (2002). *Transparency and International Investor Behavior* (No. w9260). National Bureau of Economic Research. <https://doi.org/10.3386/w9260>

- Gerged, A. M., Beddewela, E. S., & Cowton, C. J. (2023). Does the quality of country-level governance have an impact on corporate environmental disclosure? Evidence from Gulf Cooperation Council countries. *International Journal of Finance & Economics*, 28(2), 1179–1200. <https://doi.org/10.1002/ijfe.2469>
- Ghosh, C., & He, F. (2015). Investor protection, investment efficiency and value: The case of cross-listed firms. *Financial Management*, 44(3), 499–546. <https://doi.org/10.1111/fima.12076>
- Gilchrist, S., & Himmelberg, C. P. (1995). Evidence on the role of cash flow for investment. *Journal of Monetary Economics*, 36(3), 541–572. [https://doi.org/10.1016/0304-3932\(95\)01223-0](https://doi.org/10.1016/0304-3932(95)01223-0)
- Gomila, R. (2021). Logistic or linear? Estimating causal effects of experimental treatments on binary outcomes using regression analysis. *The British Journal of Nutrition*, 150(4), 1–28. <https://doi.org/10.1037/xge0000920>
- Greenaway, D., Guariglia, A., & Yu, Z. (2014). The more the better? Foreign ownership and corporate performance in China. *The European Journal of Finance*, 20(7–9), 681–702. <https://doi.org/10.1080/1351847X.2012.671785>
- Guadalupe, M., Kuzmina, O., & Thomas, C. (2012). Innovation and foreign ownership. *American Economic Review*, 102(7), 3594–3627. <https://doi.org/10.1257/aer.102.7.3594>
- Hadlock, C. J. (1998). Ownership, liquidity, and investment. *The RAND Journal of Economics*, 29(3), 487–508. <https://doi.org/10.2307/2556101>
- Han, M., Ding, A., & Zhang, H. (2022). Foreign ownership and earnings management. *International Review of Economics & Finance*, 80, 114–133. <https://doi.org/10.1016/j.iref.2022.02.074>
- Harrison, A. E., Love, I., & McMillan, M. S. (2004). Global capital flows and financing constraints. *Journal of Development Economics*, 75(1), 269–301. <https://doi.org/10.1016/j.jdeveco.2003.10.002>
- He, X., Rui, O., Zheng, L., & Zhu, H. (2014). Foreign ownership and auditor choice. *Journal of Accounting and Public Policy*, 33(4), 401–418. <https://doi.org/10.1016/j.jaccpubpol.2014.04.002>
- Hillier, D., Pindado, J., Queiroz, V. d., & Torre, C. d I (2011). The impact of country-level corporate governance on research and development. *Journal of International Business Studies*, 42(1), 76–98. <https://doi.org/10.1057/jibs.2010.46>
- Hovakimian, A., & Hovakimian, G. (2009). Cash flow sensitivity of investment. *European Financial Management*, 15(1), 47–65. <https://doi.org/10.1111/j.1468-036X.2007.00420.x>
- Hwang, J., & Akdede, S. H. (2011). The influence of governance on public sector efficiency: A cross-country analysis. *The Social Science Journal*, 48(4), 735–738. <https://doi.org/10.1016/j.soscij.2011.04.002>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- John, K., Litov, L., & Yeung, B. (2008). Corporate governance and risk-taking. *The Journal of Finance*, 63(4), 1679–1728. <https://doi.org/10.1111/j.1540-6261.2008.01372.x>
- Kadapakkam, P.-R., Kumar, P. C., & Riddick, L. A. (1998). The impact of cash flows and firm size on investment: The international evidence. *Journal of Banking & Finance*, 22(3), 293–320. [https://doi.org/10.1016/S0378-4266\(97\)00059-9](https://doi.org/10.1016/S0378-4266(97)00059-9)
- Karaca-Mandic, P., Norton, E. C., & Dowd, B. (2012). Interaction terms in nonlinear models. *Health Services Research*, 47(1 Pt 1), 255–274. <https://doi.org/10.1111/j.1475-6773.2011.01314.x>
- Kim, H., & Gu, Z. (2009). Financial features of dividend-paying firms in the hospitality industry: A logistic regression analysis. *International Journal of Hospitality Management*, 28(3), 359–366. <https://doi.org/10.1016/j.ijhm.2008.12.003>
- Kimura, F., & Kiyota, K. (2007). Foreign-owned versus domestically-owned firms: Economic performance in Japan. *Review of Development Economics*, 11(1), 31–48. <https://doi.org/10.1111/j.1467-9361.2006.00347.x>
- Koo, J., & Maeng, K. (2006). Foreign ownership and investment: Evidence from Korea. *Applied Economics*, 38(20), 2405–2414. <https://doi.org/10.1080/00036840500427817>
- Kuzmina, O., Volchkova, N., & Zueva, T. (2014). Foreign direct investment and governance quality in Russia. *Journal of Comparative Economics*, 42(4), 874–891. <https://doi.org/10.1016/j.jce.2014.08.001>
- Larimo, J. (2003). Form of investment by Nordic firms in world markets. *Journal of Business Research*, 56(10), 791–803. [https://doi.org/10.1016/S0148-2963\(02\)00467-8](https://doi.org/10.1016/S0148-2963(02)00467-8)
- Lashitew, A. A. (2014). The effect of political connections on credit access: Does the level of financial development matter? *Kyklos*, 67(2), 227–254. <https://doi.org/10.1111/kykl.12051>
- Lee, H., Choi, H., Lee, J., Min, J., & Lee, H. (2016). Impact of IT investment on firm performance based on technology IT architecture. *Procedia Computer Science*, 91, 652–661. <https://doi.org/10.1016/j.procs.2016.07.164>
- Li, K., Yue, H., & Zhao, L. (2009). Ownership, institutions, and capital structure: Evidence from China. *Journal of Comparative Economics*, 37(3), 471–490. <https://doi.org/10.1016/j.jce.2009.07.001>
- Liu, H., Zhang, H., & Fu, J.-Y. (2022). Cultural distance, foreign ownership, and corporate innovation in China. *Applied Economics Letters*, 30(19), 2854–2861. <https://doi.org/10.1080/13504851.2022.2110211>
- Liu, Q., & Lu, Y. (2015). Firm investment and exporting: Evidence from China's value-added tax reform. *Journal of International Economics*, 97(2), 392–403. <https://doi.org/10.1016/j.jinteco.2015.07.003>
- Liu, Y., & Xu, J. (2022). Residual state ownership, foreign ownership and firms' financing patterns. *Emerging Markets Review*, 51, 100868. <https://doi.org/10.1016/j.ememar.2021.100868>
- Loughran, T. (2008). The Impact Of Firm Location On Equity Issuance. *Financial Management*, 37(1), 1–21. <https://doi.org/10.1111/j.1755-053X.2008.00004.x>
- Martins, H. C., Schiehl, E., & Terra, P. R. S. (2017). Country-level governance quality, ownership concentration, and debt maturity: A comparative study of Brazil and Chile. *Corporate Governance: An International Review*, 25(4), 236–254. <https://doi.org/10.1111/corg.12192>

- Mengistu, A. A., & Adhikary, B. K. (2011). Does good governance matter for FDI inflows? Evidence from Asian economies. *Asia Pacific Business Review*, 17(3), 281–299. <https://doi.org/10.1080/13602381003755765>
- Mishra, A. V. (2014). Foreign ownership and firm value: Evidence from Australian firms. *Asia-Pacific Financial Markets*, 21(1), 67–96. <https://doi.org/10.1007/s10690-013-9177-0>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Nakano, M., & Nguyen, P. (2013). Foreign ownership and firm performance: Evidence from Japan's electronics industry. *Applied Financial Economics*, 23(1), 41–50. <https://doi.org/10.1080/09603107.2012.705425>
- Narayan, P. K., Sharma, S. S., & Thuraisamy, K. S. (2015). Can governance quality predict stock market returns? New global evidence. *Pacific-Basin Finance Journal*, 35, 367–380. <https://doi.org/10.1016/j.pacfin.2015.02.007>
- O'Toole, C. M., & Tarp, F. (2014). Corruption and the efficiency of capital investment in developing countries. *Journal of International Development*, 26(5), 567–597. <https://doi.org/10.1002/jid.2997>
- Phan, Q. T. (2018). Corporate debt and investment with financial constraints: Vietnamese listed firms. *Research in International Business and Finance*, 46, 268–280. <https://doi.org/10.1016/j.ribaf.2018.03.004>
- Pindado, J., de Queiroz, V., & de la Torre, C. (2015). How do country-level governance characteristics impact the relationship between R&D and firm value? *R&D Management*, 45(5), 515–526. <https://doi.org/10.1111/radm.12115>
- Presbitero, A. F., Rabellotti, R., & Piras, C. (2014). Barking up the wrong tree? Measuring gender gaps in firm's access to finance. *The Journal of Development Studies*, 50(10), 1430–1444. <https://doi.org/10.1080/00220388.2014.940914>
- R L, M., Mishra, A. K., & Sinha, A. K. (2020). Does institutional ownership affect firms' international investments? Empirical evidence from India. *Journal of Strategy and Management*, 14(1), 50–63. <https://doi.org/10.1108/J5MA-12-2019-0210>
- Rivera-Batiz, F. L. (2002). Democracy, governance, and economic growth: Theory and evidence. *Review of Development Economics*, 6(2), 225–247. <https://doi.org/10.1111/1467-9361.00151>
- Rong, Z., Wu, X., & Boeing, P. (2017). The effect of institutional ownership on firm innovation: Evidence from Chinese listed firms. *Research Policy*, 46(9), 1533–1551. <https://doi.org/10.1016/j.respol.2017.05.013>
- Saona, P., & San Martín, P. (2016). Country level governance variables and ownership concentration as determinants of firm value in Latin America. *International Review of Law and Economics*, 47, 84–95. <https://doi.org/10.1016/j.irle.2016.06.004>
- Sarhan, A. A., Ntim, C. G., & Al-Najjar, B. (2019). Antecedents of audit quality in MENA countries: The effect of firm- and country-level governance quality. *Journal of International Accounting, Auditing and Taxation*, 35, 85–107. <https://doi.org/10.1016/j.intaccaudtax.2019.05.003>
- Tran, Q. T. (2020). Foreign ownership and investment efficiency: New evidence from an emerging market. *International Journal of Emerging Markets*, 15(6), 1185–1199. <https://doi.org/10.1108/IJOEM-07-2019-0573>
- Tran, Q. T. (2021). Foreign ownership and cost of debt financing: Evidence from an emerging market. *International Journal of Emerging Markets*, 17(9), 2278–2289. <https://doi.org/10.1108/IJOEM-09-2019-0750>
- Tung, L. T., & Binh, Q. M. Q. (2022). The impact of R&D expenditure on firm performance in emerging markets: Evidence from the Vietnamese listed companies. *Asian Journal of Technology Innovation*, 30(2), 447–465. <https://doi.org/10.1080/19761597.2021.1897470>
- Vishwasrao, S., & Bosshardt, W. (2001). Foreign ownership and technology adoption: Evidence from Indian firms. *Journal of Development Economics*, 65(2), 367–387. [https://doi.org/10.1016/S0304-3878\(01\)00141-9](https://doi.org/10.1016/S0304-3878(01)00141-9)
- Vo, X. V. (2019). Leverage and corporate investment – Evidence from Vietnam. *Finance Research Letters*, 28, 1–5. <https://doi.org/10.1016/j.frl.2018.03.005>
- Wang, H., Luo, T., Tian, G. G., & Yan, H. (2020). How does bank ownership affect firm investment? Evidence from China. *Journal of Banking & Finance*, 113, 105741. <https://doi.org/10.1016/j.jbankfin.2020.105741>
- Wang, J., & Wang, X. (2015). Benefits of foreign ownership: Evidence from foreign direct investment in China. *Journal of International Economics*, 97(2), 325–338. <https://doi.org/10.1016/j.jinteco.2015.07.006>
- Webster, A., Okafor, G., & Barrow, C. (2022). Foreign ownership and firm performance in sub-Saharan Africa. *Transnational Corporations Review*, 14(4), 418–437. <https://doi.org/10.1080/19186444.2022.2078630>
- Wood, E. H. (2006). The internal predictors of business performance in small firms: A logistic regression analysis. *Journal of Small Business and Enterprise Development*, 13(3), 441–453. <https://doi.org/10.1108/14626000610680299>
- Xu, J., Liu, Y., & Abdoh, H. (2022). Foreign ownership and productivity. *International Review of Economics & Finance*, 80, 624–642. <https://doi.org/10.1016/j.iref.2022.02.079>
- Yang, J. Y., Samitas, A., & Kampouris, I. (2020). Investor behavior, stock returns and CDS spreads: Evidence from foreign and domestic investors in Korea. *International Journal of Managerial Finance*, 17(4), 497–521. <https://doi.org/10.1108/IJMF-01-2020-0022>
- Yeh, M.-L., Chu, H.-P., Sher, P. J., & Chiu, Y.-C. (2010). R&D intensity, firm performance and the identification of the threshold: Fresh evidence from the panel threshold regression model. *Applied Economics*, 42(3), 389–401. <https://doi.org/10.1080/00036840701604487>
- Zeng, T. (2019). Country-level governance, accounting standards, and tax avoidance: A cross-country study. *Asian Review of Accounting*, 27(3), 401–424. <https://doi.org/10.1108/ARA-09-2018-0179>