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Foreign Ownership, Tax Preference and Firm Performance

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Abstract

Continuingly deepening reform, upgrading and transforming industries and attracting investment from foreign-funded firms become important measures to boost China's economic reform. Chinese government adopts various preferential tax policies for different industries since the beginning of the implementation of reform and opening-up. This study employs a-share listed firms from 2011 to 2017 as the sample to investigate the relation between foreign ownership, tax preference and firm performance. The results show that tax preference has positive relation with the investment of foreign-funded firms, and the investment and shareholding of foreign-funded firms have positive impact on the firm performance.

Keywords: foreign ownership, tax preference, firm performance, income tax, factor analysis.

I. INTRODUCTION

Under the background of continuingly deepening reform and opening-up and financial reform, rapid economic growth and implementation of preferential tax policies, the numbers of foreign capitals are attracted into China. More and more foreign firms become shareholders of listed firms in China. The preferential tax policy not only reflects the intention of macro-control but also has the advantages of microcosm, constitutive property and incentiveness (Zheng, 2006). The tax preference becomes one of the main measures to attract foreign investment in China. The tax policy is of great significance to China's economic reform.

However, such a tax policy causes many problems such as unreasonable industrial distribution of foreign capital, ineffective utilisation of foreign capital, regional imbalance of foreign investment and blindness in attracting foreign capital (Tao, 2007). To solve the problems above, the income tax policy of foreign-funded firms and Chinese firms are reformed in 2007, which in turn significantly affects the structure, quantity, regional and industrial distribution of foreign-funded firms in China. In order to increase the intensity of foreign investment and foreign shareholding, the Chinese government provides foreign investors with a series of preferential tax policies and numbers of facilitations. The foreign shareholders change the ownership structure

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of Chinese listed firms so as to influence the corporate governance and firm performance.

A number of prior studies investigating the relation between foreign ownership, tax preferences and firm performance are based on the data and policies decades ago. The results are not timely enough to provide guidance for the current issue of attracting foreign ownership. Based on the economic environment in recent years, this study explores the relation between foreign ownership, tax preferences and firm performance. The conclusion of this study provides theoretical support for the policy development of foreign ownership in the future. The research on the relation between preferential tax policies, foreign shareholding and firm performance plays a real-time supervision role to ensure that the preferential tax policies for foreign shareholding have a long-term impact on promoting China's economic development.

Based on the sample of a-share listed firms from 2011 to 2017, this study empirically investigates the incentive effectiveness of China's currently preferential tax policies on foreign ownership. Furthermore, this study examines the impact of foreign ownership on firm performance. The remainder of this paper is organised as follows. In the following section, an overview of the impact of preferential tax policies on foreign investment and prior research accounting for the impact of foreign ownership on firm performance. From this background, hypotheses are also developed. Section 3 describes the research design, including the various measures of the firm performance and the control variables used in the analyses. Section 4 provides some preliminary descriptive results and the main empirical results regarding the impact of preferential tax policies on foreign investment and the impact of foreign ownership on firm performance. Section 5 reveals the robustness tests. Finally, the conclusions are presented in section 6.

II. LITERATURE REVIEW

2.1. Impact of Tax Preferences on Foreign Ownership

The reform and opening-up leads China to make great achievements in attracting foreign investment using a series of preferential tax policies. However, the extant studies exist inconsistent conclusions on the effectiveness of tax preferences. Most of the early studies document that tax preferences have little impact on attracting foreign investment. The primary factors influencing foreign investment are the market potential, economic scale and public infrastructure (Root & Ahmed, 1978; Mintz & Tsiopoulos, 1994). Root and Ahmed (1978) use 52 multinational firms as samples and illustrate that among 19 influencing factors on foreign direct investment (FDI), the importance of tax concession of host country on investors ranks 7th in developing countries and 8th in developed countries. Mintz and Tsiopoulos (1994) examine five central and eastern European countries' economic transition and their tax policies to attract foreign investment. The empirical results show that the tax preferences are not an effective way to attract foreign investment and shareholders. However, with the improvement of investment environment, the reduction of investment cost and the increase of the actual return rate of foreign-invested shares, the tax preferences gradually become the main factors affecting foreign-invested shares.

However, Benssy-Quere et al. (2007), Gorg et al. (2009) and Goodspeed et al. (2011) respectively demonstrate that the high-quality public services, social expenditure policies and governance measures adopted by the government have a more significant impact on attracting foreign ownership than tax preferences. Since the reform and opening-up, China sets a series of tax preferences to attract foreign investment and

promotes the economic development of state-owned firms (SOEs) and non-state-owned firms (non-SOEs). The level and scope of tax preferences and government regulation and control significantly increase. There are inconsistent conclusions about whether the tax preferences play an incentive role in attracting foreign ownership. Chen (2007), Li and Lu (2004) utilise the Panel Data model to examine the effectiveness of tax preferences on attracting investment. The results show that tax preferences play a significant role in promoting foreign investment and basically achieve the policy objective of attracting foreign investment to specific regions in a specific period. Shen et al. (2011) investigate the new foreign investment in 288 prefecture-level cities from 2004 to 2008. The findings support the international production compromise theory and the theory of tax signal transmission. They suggest that the income tax significantly affects the location choice and decision of foreign investment, indicating that the tax preferences have a significant incentive impact on the foreign ownership.

However, some studies show that the preferential tax policy is not the most important factor affecting foreign investment ownership. Zhong and Hu (2007) conduct a questionnaire survey on the foreign-invested firms in China. The results indicate that the labor cost and market demand are far more important than tax preferences. Zhu and Fu (2008) construct tax preferences index, using provincial panel data in China, and find that in comparison with economic environment factors such as economic scale and degree of market economy, the impact of tax preferences is relatively low and weakening. There are dynamic delays and regional differences. Tax reform has little influence on foreign investment and shareholding. Instead, the large number of foreign investment and shareholding are mainly attributed to the improving the investment environment in China, political stability, tremendous market potential and the strong momentum of national economy development. All the factors listed above are favored by the investors around the world. Thus, the tax preferences likely affect small and medium-sized foreign investment and shareholdings but have less influence on large multinational firms.

China's new corporate income tax increases tax preferences for high-tech industries, environmental protection industries, industries working on water and energy saving, and other key industries supported by the state. Accordingly, this study proposes the following hypothesis:

Hypothesis 1: tax preferences have a positive impact on foreign ownership.

2.2. Impact of Foreign Ownership on Firm Performance

Most of the existing literatures on the relation between foreign ownership and firm performance focus on developing countries and discuss the impact of foreign investment from developed countries on the firms in developing countries. Most studies show that foreign investment has a positive impact on firm performance. Arnold and Javorcik (2009) examine a case of merger and acquisition in Indonesia and find that the production capacity of the acquired firm increases significantly since the year of merger and acquisition and in the following years. Pant and Pattanayak (2007) select 1,833 listed firms in Bombay share exchange from 2000 to 2003 to investigate the impact of equity structure on the market value of listed firms in India. The results indicate that the shareholding of foreign sponsors and partners is conducive to the improvement of firm value. The foreign shareholders bring advanced management concepts and science and technology to improve firm performance, thus positively promoting firm value.

A few studies show that the foreign investment has a positive impact on firm performance only within a certain range. Hanousek et al. (2007) empirically investigate the relation between various type of shareholders and firm performance and find that the factor of foreign shareholders has a significant positive relation with firm performance. The foreign ownership has a positive impact on the return on assets and return on net assets. The performance of firms increases with the increase of foreign ownership. However, when the foreign ownership exceeds a certain proportion, firm performance decreases with the increase of foreign ownership.

Some literatures suggest that there is insignificant relation between foreign ownership and firm performance. Grosfeld (2009) finds that foreign ownership is not conducive to the improvement of firm performance. Buckley et al. (2002) utilize the sectional data of 130 industries in China in 1995 and find that foreign investment promotes the production efficiency of Chinese firms. But they also conclude that foreign investment fails to improve the productivity of collective firms. At the same time, some literatures show that foreign ownership has a negative impact on firm performance. After being acquired, the return on total assets of the firm decreases instead.

The impact of foreign ownership on firm performance is also an important issue in China. Yet, there are no unified conclusion on this issue. Foreign major shareholders have a very significant role in promoting firm performance. The investment of foreign financial institutions has a positive impact on firm value, which is the smaller the firm is, the more significant the positive impact of foreign ownership on firm value. The firm performance is significantly improved when foreign shareholders participating in the daily operation and management of firms, and that the different nature of foreign shareholders has different impacts on firm performance.

However, there are quite a number of studies concluding inversely. There is insignificant change in the firm performance in foreign-funded firm in the year of merger and acquisition compared with that before merger and acquisition. The participation of foreign shareholders likely affects the management structure. Besides, the personnel changes have a greater impact on the stability of firm operation and have a negative impact on firm performance. Most of the acquired firms are firms with poor operating conditions or even severe losses and are difficult to improve the firm performance rapidly in the year of merger and acquisition. Thus, the firm performance in the year of merger and acquisition have insignificant improvement compared with that in the past.

The technology spillover and capital investment from the developed countries are regarded as the important sources for China's economic development. At present, the foreign-funded firms holding China's listed firms mostly come from the developed countries and regions, which brings not only the sufficient funds, but also new technologies, new equipment and advanced management concepts. The core competitiveness of firms and the continuous growth of firm performance increase with the benefits the foreign firm bringing in. The senior executives absorb foreign technology and management concepts and make innovations by combing with their own experience, which benefit firms greatly. Although the motivation of investment and the way of equity participation are various, seeking profit is the fundamental driving force of foreign capital. In order to achieve the profit target, the foreign investors intend to improve the core competitiveness and market share of the firms. Accordingly, the firm performance continues to grow. The foreign ownership brings abundant capital, advanced technology and management concept and more reasonable

governance structure to domestic firms in China and ultimately has a positive impact on the firm performance of the invested firms. Therefore, the second hypothesis of this study is proposed as follow:

Hypothesis 2: foreign ownership has a positive impact on firm performance.

III. RESEARCH METHODOLOGY

3.1. Data Selection and Definition of Variables

All a-share listed firms from 2011 to 2017 are used as the sample in this study, which are obtained from Wind and Cninf database. ST firms are deleted, leaving the total of 3416 firms. The foreign ownership and tax preference are set as the dependent and independent variables respectively when examining the impact of the preferential income tax rate on the foreign ownership. The operating performance and foreign ownership of a-share listed firm are taken as the dependent and independent variables separately when investigating the influence of foreign ownership on firm performance of a-share listed firm. In addition, the ownership concentration, government subsidies, capital structure, asset-liability ratio, firm size and total market value all are set as the control variables. The statistical year are selected as the dummy variable. Table 1 shows the definitions of variables employed in this study.

Table 1
Definition of Variable

Name	Symbol	Definition
Foreign Ownership	FO	1 for the firm with foreign shares; 0 for the firm without foreign shares
Total Evaluation Index of Firm Performance	F	By factor analysis, the comprehensive evaluation index of the firm performance is calculated from four aspects: profitability, development ability, innovation ability and market value (see Table 10)
Tax Preference	Taxpre	Nominal income tax rate - actual income tax rate
Ownership Concentration	OC	Proportion of top 10 shareholders
Government Subsidies	GS	Natural logarithm of total government subsidies
Capital Structure	CS	Owner equity / creditor equity
Asset-Liability Ratio	Lev	Total liabilities / total assets
Firm Scale	Size	Natural logarithm of total assets
Total Market Value	TMV	Natural logarithm of total share capital * share price
Statistical Year	Year	Annual dummy variable

Using only one financial index to evaluate the firm performance in empirical analysis of the relation between the presence or absence of foreign shareholding in a-share listed firms and current firm performance has great limitation. A comprehensive and objective assessment of the relation between the presence or absence of foreign shareholding in firms and current firm performance requires a comprehensively evaluation of the firm performance. Based on the theoretical analysis of firm performance, there are four aspects: profitability, development capacity, innovation ability and market value. In order to increase the comprehensiveness and objectivity of the research results, this study selects the comprehensive financial performance index as the substitution variable of firm performance. The comprehensive financial index is

extracted by the factor analysis from 15 commonly used single financial indicators, which fully reflect the overall firm performance. The definitions of 15 financial indicators are shown in Table 2.

Table 2
Comprehensive Evaluation Index of Firm Performance

Category	Name	Symbol	Definition
Profitability	Earnings per Share	EPS	Net Profit / Total Capital at the End of the Year
	Operating Revenue	OPR	Operating Profit / Gross Revenue
	Return on Asset	ROA	Return on Investment / Total Asset
	Return on Equity	ROE	After-Tax Profit / Owner's Equity
	Net Operating Revenue	ONRR	Net Profit /Gross Income
Development Ability	Growth Rate of Operating Income	IRMBI	Increase in Operating Income of This Year / The Total Operating Income of the Previous Year
	Accounts Receivable Turnover	RTR	Current Sales Net Income / {(Beginning Receivables Balance + Ending Receivables Balance) / 2}
	Turnover of Current Assets	CAT	Net Main Business Income / Average Current Assets
	Total Asset Turnover	TAT	Net Operating Income / Average Gross Assets
Innovation Ability	Liquidity Ratio	LR	Total Current Assets / Total Current Liabilities (Current Assets - Inventory) / Current Liabilities
	Quick Ratio	AR	(Current Assets - Inventory) / Current Liabilities
	Cash Ratio	CR	Monetary Funds / Current Liabilities
Market Value	Ratio of Price to Earnings	PE	Market Price per Share / Earnings per Share
	Price-to-Sales Ratio	PS	Share Price / Sales per Share

3.2. Research Model

Based on the hypothesis of "rational man", this study holds that firms try their best to attract foreign investment by using the preferential income tax policies. The preferential income tax rate has a positive and linear relation with the foreign ownership of firms. In this study, the multivariate linear equation is used as the model to simulate the relation between tax preferences and foreign ownership and shareholdings of firms as follows:

$$\textbf{Logit FO} = \beta_0 + \beta_1 * \textbf{Taxpre} + \sum_{k=2}^{7} \beta_k * \textbf{Control}_k \sum_{n=8}^{8} \beta_n * \textbf{Dummy}_n + € \quad \ldots\ldots (1)$$

This study employs the comprehensive financial performance index as the substitution variable of firm performance in the analysis of the relation between the presence or absence of foreign ownership and firm performance of a-share listed firms. The comprehensive financial index is extracted from 15 commonly used single financial

indexes using factor analysis. Before the factor analysis, the feasibility of factor analysis is tested. The analysis results are shown in Table 3.

Table 3
KMO and Bartlett Test

Kaiser - Meyer - Olkin Measurement		0.654
Bartlett Test for Sphericity	The approximate chi-square	211439.916
	Degrees of freedom	105
	Significance	0.000

The value of Kaiser-Meyer-Olkin (KMO) closer to 1 indicates that the effect of factor analysis is better. Table 3 shows that the KMO value is 0.654, greater than 0.5. At the same time, Bartlett sphericity test reaches the significant value of 0.000, indicating to a certain extent that the 15 variables selected in this study are highly correlated with each other, and that the 15 firm performance indicators selected are suitable for the factor analysis. In this study, the principal component analysis method is used to extract the common factors. The results are shown in Table 4.

Table 4
Factor Analysis of Each Variable to Explain the Total Variance

	Initial Eigenvalues			Extract Sum of Squares and Load			Rotation Sum of Squares and Load		
No.	**Total**	**Vari-ance**	**Cumu-lation**	**Total**	**Vari-ance**	**Cumu-lation**	**Total**	**Vari-ance**	**Cumu-lation**
1	3.135	20.902	20.902	3.135	20.902	20.902	2.921	19.473	19.473
2	2.707	18.046	38.948	2.707	18.046	38.948	2.446	16.305	35.778
3	1.766	11.772	50.720	1.766	11.772	50.720	1.976	13.173	48.951
4	1.446	9.638	60.358	1.446	9.638	60.358	1.708	11.387	60.339
5	1.022	6.815	67.173	1.022	6.815	67.173	1.025	6.833	67.172
6	1.000	6.668	73.840	1.000	6.668	73.840	1.000	6.668	73.840
7	1.000	6.667	80.507						
8	0.973	6.489	86.996						
9	0.805	5.365	92.361						
10	0.468	3.121	95.482						
11	0.296	1.976	97.458						
12	0.285	1.900	99.358						
13	0.073	0.488	99.846						
14	0.013	0.087	99.933						
15	0.010	0.067	100.000						

Table 4 shows 15 individual firm performance indicators in this study. Six common factors F1, F2, F3, F4, F5 and F6 are extracted as the representatives of the four aspects of firm performance. The cumulative variance contribution rate of the 6 common factors reaches 73.839%, which objectively reflects most information of the 15 variables. The weight of each common factor is equal to the variance contribution rate of each common factor by cumulative variance contribution rate. The formula for calculating the comprehensive evaluation index F of firm performance is as follows:

F= 26.4%*F1+22.1%*F2+17.8%*F3+15.4%*F4+9.30%*F5+9.00%*F6

$$\mathbf{F= \beta_0 + \beta_1 * FO + \sum_{k=2}^{7} \beta_k * Control_k \sum_{n=8}^{8} \beta_n * Dummy_n + €} \text{ .....} \quad (2)$$

IV. RESULTS AND DISCUSSIONS

4.1. Descriptive Analysis

This study employs a statistical analysis of the dependent variable, independent variables and control variables with 3416 sample firms of a-share from 2011 to 2017. The specific results are shown in Table 5.

Table 5
Descriptive Statistical Analysis

Variable	Min.	Max.	Mean	S.D.	Variance
Foreign Ownership	0.0000	88.5493	1.0390	6.4886	42.1020
Preferential Rate of Income Tax	0.0000	25.0000	4.4873	15.5422	241.5610
Equity Concentration	1.3200	100.000	59.3204	16.3156	266.1990
Government Subsidies	5.7038	23.1149	15.8482	1.8047	3.2570
Capital Structure	-6.1362	140.2453	2.5472	4.2897	18.4010
Asset-Liability Ratio	-19.4698	1339.6917	44.0179	30.7795	947.3780
Total Assets	14.9416	30.8925	21.7487	1.6006	2.5620
Total Market Value	18.6082	28.3862	22.5989	1.0341	1.0690

In this study, the preferential income tax rate is 25% - the corporate income tax rate at the end of the year. The range of 25% is obtained, which reflects that the great differences in how sample firms attach importance to the use of the preferential income tax policies so as to reduce the income tax rate at the end of the year to 0% while some firms that do not pay much attention to preferential policies remain pay 25% of corporate income tax. Meanwhile, the standard deviation value of 15.5422 and variance value of 241.5610 indicate that the trend of differentiation is very significant among the sample firms. The average preferential tax rate obtained by the sample firms is 4.4873%, indicating that Chinese a-share listed firms pay little attention to the preferential income tax policy, and that China's preferential income tax policy for foreign shares of listed firms fails to reach the expected effect.

The minimum value of foreign ownership of the sample a-share listed firm is 0, indicating that the firm has no foreign ownership. The maximum value is 88.5493%, indicating that the firm is wholly foreign-owned. The range value of 88.5493% indicates that there is a great difference in the proportion of foreign ownership among the sample firms. The foreign-owned firms in the sample account for about 5% of all a-share listed firms indicates that the foreign-owned firms in the sample remains in the minority, and that the average proportion of foreign-owned firms in the sample is only 1.0390%. The standard deviation value of 6.4886 and variance value of 42.1020 also confirm the conclusion of large difference in the proportion of foreign shares among the sample firms to some extent.

The average capital structure of the sample firms is 2.5472, indicating that the overall equity financing of the sample firms is 2.5 times that of debt financing. The range is as high as 146.3815. Excluding the influence of extreme value, the standard deviation of 4.2897 also indicates that the overall equity financing of a-share listed firms in China is far greater than that of bonds. Although such financial leverage reduces financial risk, the corresponding financing cost is also high. Firms in the sample make full use of the advantages of listed financing, and that firms in China tend to have conservative financing concepts and single financing methods. The average equity concentration ratio (shareholding ratio of the top 10 shareholders) of the sample firms is 59.3204%, and the standard deviation is 16.3156%, indicating that the equity concentration degree of the sample firms is very high. The asset-liability ratio of sample firms is also polarised. Excluding the influence of extreme data, the average asset-liability ratio of 44.0179% indicates that the leverage ratio of Chinese a-share listed firms remains very appropriate.

4.2. Correlation Analysis

Table 6 shows the analysis results of correlation between preferential income tax rate and the presence or absence of foreign ownership in a-share listed firms.

Table 6

Pearson Correlation Results (Hypothesis 1)

Variable	FO	Taxpre	OC	GS	CS	Lev	Size	TMV	Year
FO	1								
Taxpre	-.021** .001	1							
OC	.155** .000	.074** .000	1						
GS	.002 .751	-.065** .000	.043** .000	1					
CS	.082** .000	-.001 .936	.097** .000	-.144** .000	1				
Lev	-.067** .000	-.052** .000	-.126** .000	.183** .000	-.425** .000	1			
Size	.019** .003	-.241** .000	.101** .000	.471** .000	-.220** .000	.270** .000	1		
TMV	.022** .003	.032** .000	.231** .000	.396** .000	-.130** .000	.087** .000	.751** .000	1	
Year	-.345** .000	.015* .018	-.020** .009	-.038** .000	-.066** .000	-.012 .067	.191** .000	.316** .000	1

Notes: indicates significant correlation for **= at the level of 0.01, and *= at the level of 0.05.

Table 6 shows that the coefficient correlation between the preferential income tax rate of the a-share listed firms and the presence or absence of foreign ownership is -0.021, which passes the significance test of 1%. There is a significant relation between the tax rate preference of a-share listed firms and the presence or absence of foreign ownership. Correlation analysis is conducted between current firm performance and the presence or absence of foreign shareholding in a-share listed firms. The coefficient correlation results are shown in Table 7.

Table 7

Pearson Correlation Results (Hypothesis 2)

Variable	F	FO	OC	CS	GS	Lev	Size	TMV	Year
F	1								
FO	.086** .000	1							
OC	.203** .000	.155** .000	1						
CS	.507 .000	.082 .000	.097** .000	1					
GS	-.018* .013	.002 .751	.043** .000	-.144** .000	1				
Lev	-.196** .000	-.067** .000	-.126** .000	-425** .000	.183** .000	1			
Size	-.047** .000	.019** .003	.101** .000	-.220** .000	.471** .000	.270** .000	1		
TMV	.069** .000	.022** .003	.231** .000	-.130** .000	.396** .000	.087** .000	.751** .000	1	
Year	-.062** .000	.071** .000	-.027** .009	-.038** .000	-.063** .000	-.062** .000	3** .000	.343** .000	1

Notes: indicates significant correlation for **= at the level of 0.01, and *= at the level of 0.05.

Table 7 shows that the coefficient correlation between the current firm performance and the presence or absence of foreign ownerships in the a-share listed firms is 0.086, which passes the significance test of 1%. There is a significant positive relation between the presence or absence of foreign ownership and current firm performance in a-share listed firms.

4.3. Results of Regression Analysis

In order to exclude the influence of multicollinearity and ensure the rigor of the test, this study employs binary logistic regression with multicollinearity test at the same time. The regression results are shown in Table 8.

Table 8
Summary of Regression Analysis (Hypothesis 1)

	Coefficient	t-value	p-value	Significance	VIF
Constant	-5.213	0.020	0.965		
Taxpre	0.025	5.382	0.020	*	1.157
OC	0.036	90.074	0.000	**	1.109
GS	-0.158	20.109	0.000	**	1.480
CS	-0.027	8.966	0.003	**	1.368
Lev	-0.006	2.984	0.084		2.033
Size	-0.645	53.961	0.000	**	3.467
TMV	1.621	286.722	0.000	**	2.907
Year	-16.977	0.020	0.887		1.245
Adjusted R^2	0.707				
F-value	4541.844		0.000	**	

Notes: indicates significant correlation for **= at the level of 0.01, and *= at the level of 0.05.

Table 8 shows that the VIF value of the regression model is far less than 5. There is no multicollinearity problem in the regression model in this study. The adjusted R^2 of 0.707 in regression model illustrates that the fitting degree of regression model is high. The coefficient for preferential income tax rate is 0.025 and the significance is 0.020, indicating that there is a positive relation between the preferential income tax rate and the presence or absence of foreign ownership. The level of 0.005 is significant. The F-value is 4541.844, and the p-value is 0.000, indicating that there is a significant relation between the independent variables and the dependent variable.

Table 9
Summary of Regression Analysis (Hypothesis 2)

	Coefficient	t-value	p-value	Significance	VIF
Constant	-1.690	-26.772	0.000	**	
Taxpre	0.057	5.409	0.000	**	1.043
OC	0.003	15.706	0.000	**	1.124
CS	0.048	73.078	0.000	**	1.483
GS	-0.001	-0.562	0.574		1.361
Lev	0.000	1.037	0.300		1.991
Size	-0.016	-4.616	0.000	**	3.432
TMV1	0.082	17.989	0.000	**	3.106
Year	-0.025	-17.311	0.000	**	1.331
Adjusted R^2	0.396				
F-value	1160.461		0.000	**	

Notes: indicates significant correlation for **= at the level of 0.01, and *= at the level of 0.05.

Table 9 shows that the VIF value of the regression model is far less than 5, and there is no multicollinearity problem in the regression model in this study. The adjusted R^2 of 0.396 illustrates that the fitting degree of the model is high. The coefficient correlation between the current firm performance and the presence or absence of foreign ownership in the a-share listed firms is 0.057, with a significance of 0.000. The findings seem to suggest that there is a significant positive relation between the foreign ownership and current firm performance in a-share listed firms. The F-value is

1160.461, and the p-value is 0.000, indicating that there is a significant positive relation between the independent variables and the dependent variable.

4.4. Robustness Analysis

This study uses the accounting-tax difference (BTD) to measure tax preference for the robustness analysis. BTD= (Pre-tax accounting profit - Taxable income) / Nominal income tax rate. The regression results are shown in Table 10.

Table 10
Summary of Regression Analysis (Robustness Test Based on BTD)

	Coefficient	t-value	p-value	Significance
Constant	-3.515	17.259	0.000	**
Taxpre	0.011	3.871	0.049	*
OC	0.053	329.213	0.000	**
GS	0.044	3.614	0.057	
CS	0.002	0.105	0.746	
Lev	-0.013	23.441	0.000	**
Size	-0.182	11.877	0.001	**
TMV	0.035	0.296	0.587	
Year	0.087	18.540	0.000	**
Adjusted R^2		0.117		
F-value	656.227		0.000	**

Notes: indicates significant correlation for **= at the level of 0.01, and *= at the level of 0.05.

Table 10 shows the coefficient for the preferential income tax rate is 0.011, with the significance of 0.049, indicating that there is a positive relation between the preferential income tax rate and the foreign ownership. The level of 0.005 is significant. The F-value is 656.227, and the p-value is 0.000, indicating that there is a significant relation between the independent variables and the dependent variable. Therefore, the results of hypothesis 1 are robust.

The return on total assets represents the overall profitability of the total assets for a firm and is also an important indicator to evaluate the operating efficiency of the assets for a firm. The return on total assets indicates the income level of all assets, reflecting the profitability of firms. Such an indicator is compared with the market capital ratio so as to measure the financial leverage. The higher the return on total assets (ROA) is, the better the input-output level is and the more effective the asset operation is. In this study, the return on total assets (ROA) is selected to examine the relation between foreign ownership and the firm performance.

Table 11
Summary of Regression Analysis (Robustness Test Based on ROA)

	Coefficient	t-value	p-value	Significance	VIF
Constants	-28.732	-14.166	0.000	**	
Taxpre	0.953	2.948	0.003	**	1.044
OC	0.051	9.367	0.000	**	1.124
CS	-0.100	-4.923	0.000	**	1.483
GS	-0.024	-0.475	0.635		1.373
Lev	-0.077	-15.848	0.000	**	1.946
Size	-0.869	-7.989	0.000	**	3.210
TMV1	2.551	17.815	0.000	**	2.964
Year	-0.593	-13.007	0.000	**	1.345
Adjusted R^2	0.078				
F-value	148.224		0.000	**	

Notes: indicates significant correlation for **= at the level of 0.01, and *= at the level of 0.05.

Table 11 shows that there is no multicollinearity problem for the regression equation in this study. The adjusted R^2 of 0.078 illustrates that the fitting degree of the model is high. The foreign ownership has a positive relation with the firm performance coefficient of 0.953, with the significance of 0.003, indicating that foreign ownership has a positive relation with the firm performance. The relation is significant at 0.001 level. The F-value is 148.224, and the p-value is 0.000, indicating that there is a significant positive relation between the independent variables and the dependent variable. The results of hypothesis 2 are robust.

V. CONCLUSION

This study empirically investigates the relation between tax preferences, foreign ownership and firm performance. This study concludes that tax incentive policies have a significant positive relation with foreign ownership. There is a significant positive relation between foreign ownership and firm performance. The findings have important political implications. Prior studies conclude that social spending, social expenditure structure, labor costs, the size of the market investment environment are more important than the tax preferences to foreign ownership. This study, however, finds that the tax preferences remain the main factor to attract foreign ownership. The participation of foreign shareholders still exerts spillover effect on Chinese firms, promotes the improvement of Chinese firm performance, and is beneficial to China's economic development and economic transformation. This study puts forward two suggestions: 1) the government should pay more attention to the development and characteristics of various industries, pay more attention to tax mechanism setting and timely formulate preferential tax policies in line with the development of industries. The government should also play a regulatory role, and vigorously promote the reform process with the help of foreign investment and shareholding; and 2) the government should formulate corresponding tax policies according to the development characteristics of foreign-owned firms, and promote foreign investment to play a greater role.

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