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*Original Paper*

# Social Insurance Burden and Firms' Outward FDI: Evidence From Chinese Enterprise Data

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***Abstract***

*This study examines how the social insurance burden affects firms' decisions to invest abroad. We construct a structural investment model to show that higher domestic labor costs induced by social insurance contributions diminish the relative profitability of local operations and consequently enhance the incentive for firms' outward foreign direct investment (OFDI). Using panel data on Chinese listed firms from 2007 to 2022, we employ a two-way fixed effects regression to test the causal relationship between firms' social insurance burden and their decision and scale of OFDI. The results indicate that heavier social insurance burden significantly increase firms' OFDI activities. Furthermore, this relationship is moderated by firms' productivity and risk preference. In addition, we find that the positive effects are more pronounced among non-state-owned firms, those operating in the manufacturing sector, and firms located in the eastern regions of the country. The results demonstrate that social insurance policies play an important role in firms' globalization strategies. Policymakers should balance social welfare financing with measures to maintain firms' competitiveness in international markets.*

***Keywords***

*OFDI, Social insurance burden, Productivity, Risk preference*

## 1. Introduction

Labor costs, including mandatory social insurance contributions, are a key determinant of firms' production and investment decisions. China's social security system, established in the late 20th century, aims to provide comprehensive protection for workers, including pensions, medical insurance,

unemployment benefits, work injury compensation, and maternity insurance. However, compared to other countries, China's social security contribution burden remains relatively high. Over the past two decades, the government has pursued reforms aimed at expanding social insurance coverage, while simultaneously adopting measures such as reductions in employer contribution rates to ease the financial burden on enterprises and stimulate economic growth and employment. Despite multiple rounds of rate reductions in recent years, the combined employer and employee contribution rate in major cities like Beijing and Shanghai will still reach 38.1% by 2025 (27.6% employer, 10.5% employee). This remains significantly higher than most international counterparts (the U.S. stands at 15.3%, Japan at 14.385%, and Canada at just 9.9%). Therefore, we examine whether Chinese enterprises would choose to invest overseas given the current disparity in social security contribution rates.

As companies strive to enhance their global competitiveness, factors such as institutional policies, labor costs, and economic conditions significantly influence their OFDI decisions (Huang et al., 2017; Li et al., 2018). Scholars hold the view that institutions exert a significant influence on corporate OFDI (Blonigen, 2005; Daude & Stein, 2010; Kolstad & Wiig, 2012). The existing literature has primarily concentrated on institutional elements. For instance, aspects like government effectiveness, the legal framework, corruption levels, and tax policies (Fredriksson et al., 2003; Peter et al., 2009; Wei & Shang-Jin, 2000) as well as natural resource endowments (Aleksynska & Havrylchyk, 2013; Kolstad & Wiig, 2012) have been found to have crucial effects on corporate OFDI. With the continuous improvement of the social security system, social insurance contributions have become a crucial determinant in enterprises' OFDI decisions. Social insurance contributions, a significant component of corporate social responsibility and labor-related expenditures, have emerged as a factor meriting in-depth exploration (Echevarría & Iza, 2006; Samwick, 1998).

Social insurance, a form of social welfare, provides financial protection against specific economic risks, including aging, unemployment, and medical emergencies (Bratsberg et al., 2014). Typically, the financial resources required for social insurance are obtained through contributions from employers and employees. For enterprises, social insurance contributions represent a significant component of labor costs. In numerous countries, the rates of social insurance contributions are subject to legal regulation, with companies being obligated to allocate a specified percentage of their employees' salaries to social insurance funds (Hong & Rios-Rull, 2007). Rickne and Johanna (2013) utilized Chinese industrial data to analyze the impact of social insurance contribution rates on labor market conditions. It was discovered that sectors where a larger proportion of workers were uninsured were predominantly those within private enterprises, sectors having a higher percentage of low-educated employees, and sectors lacking labor unions. As early as 1999, China's social security system underwent a pivotal reform with the issuance of the *Interim Measures for the Collection and Payment of Social Insurance Premiums*, laying the institutional groundwork for subsequent legal advancements. Building on this foundation,

Cerda (2005) conducted a seminal study on the behavioral effects of social security design, finding that more generous benefits in a social security system tend to accelerate retirement timing, while greater variability in individual account benefits incentivizes delayed retirement. This research shed light on how policy structures shape individual labor decisions, offering a micro-level perspective on social security impacts. Subsequent to the implementation of China's *Social Insurance Law* in 2011, a milestone that formalized and expanded earlier regulatory efforts. Liu et al. (2021) extended the analysis to the corporate sector. Their findings revealed that the law's enforcement heightened financial constraints for enterprises, leading to reduced debt issuance and consequent shifts in capital structures. Together, these studies spanning individual and organizational levels, illustrate how social security policies, evolving from regulatory frameworks to comprehensive legal mandates, exert multifaceted influences on economic behavior, from retirement choices to corporate financial strategies.

Previous research has largely focused on the impact of social insurance on increasing corporate cost burdens, with relatively limited empirical investigation into the direct relationship between social insurance burden and OFDI, especially in developing economies such as China. While social insurance contributions are traditionally regarded as elements of corporate social responsibility and employee welfare, and these elements are components of labor costs, the potential influence of these contributions on firms' strategic investment decisions has received less attention. Despite the growing importance of understanding firm-level behavior, existing literature predominantly emphasizes macroeconomic factors, institutional quality, or regulatory environments in shaping OFDI, with insufficient exploration of how labor-related cost burdens, such as social insurance contributions, directly influence firms' international investment strategies. This gap is particularly significant in the context of rapidly evolving social security systems in countries like China, where such costs may serve as crucial strategic considerations. Additionally, there remains a lack of research examining how firms in different industries or of varying sizes are differently affected by social insurance costs in their internationalization process, as well as the potential moderating role of firm-specific financial flexibility and corporate governance mechanisms.

We develop a theoretical model of firm investment choice (domestic vs. abroad) under labor cost shocks to show that how will companies make investment decisions when faced with increased social security contribution burdens. Using firm-level panel data, we build a two-way fixed effects model to study the impact of social insurance burden on firms' OFDI. The most significant challenge in studying this issue is addressing endogeneity: specifically, the potential for reverse causality. Firstly, we constructed a time-break regression model using the *Circular on Stagewise Reduction of Social Insurance Premium Rates* issued by the Ministry of Human Resources and Social Security and the Ministry of Finance in 2016 to mitigate endogeneity. Secondly, we introduce a one-period lag for the explained variable to further eliminate endogeneity. Additionally, we conduct several robustness checks, including controlling for the impact of the U.S.-China trade war, alternative definitions of the

dependent variable and fixed effects incorporating individual and time interaction terms. Eventually, we explore the mechanism on total factor productivity and executive risk appetite, and investigate how the impact of social insurance burden varies across different ownership structures, manufacturing sectors and regional locations.

Our findings reveal that higher social insurance burden significantly increase OFDI activity, suggesting that rising domestic costs may incentivize firms to reallocate investment abroad. Furthermore, we find that this effect is moderated by two key factors: total factor productivity (TFP) and executive risk preference. Productive firms are better positioned to absorb cost increases and pursue global opportunities, while risk-tolerant executives are more likely to embrace overseas expansion under cost pressure. Heterogeneity analysis shows that the effect is more pronounced in non-state-owned, manufacturing, and eastern-region firms.

Our study contributes to the literature by highlighting a novel domestic cost factor in the study of Chinese firms' OFDI. Specifically, it incorporates the burden of social insurance contributions as a critical determinant of firms' outward investment decisions, which has been largely overlooked in previous research. By integrating cost-based decision-making into the analysis, we provide fresh insights into how rising labor costs can push firms to seek more cost-efficient production opportunities abroad. Additionally, our findings shed light on the heterogeneity of this effect, demonstrating that it varies significantly across firms with different ownership structures, manufacturing status, regional locations, and social insurance burden.

Firstly, this study significantly bridges the gap between labor-cost related research and international investment research. Previous research has focused on either the domestic implications of labor costs or the macro-strategic aspects of OFDI, neglecting the direct link between these two crucial elements at the micro-enterprise level. Secondly, this study develops a theoretical model based on corporate internationalization and cost-benefit theories, analyzing how social security burden impact OFDI decision-making. Finally, this study highlight the positive role of fulfilling social insurance obligations in enhancing international image and promoting CSR, which in turn supports overseas expansion and labor welfare.

The rest of the study is organized as follows. The second part is the theoretical development. The third part is the model design, variable definition, and data source. The fourth part is the analysis of the empirical results, which includes baseline regression analysis, endogeneity test, robustness check, mechanism and heterogeneity analysis, and Section 5 concludes the study.

## 2. Theoretical Development

### *2.1Investment Model Construction*

Assume a firm has a total investment budget $I_0$, which it allocates between domestic investment and OFDI investment $I_f$. This constraint reflects the trade-off and choice between domestic and foreign

markets that firms need to make with limited resources. And the allocation constraint is given by:

$$I_d+I_f=I_0 \tag{1}$$

In the context of economic modeling, serves as the productivity parameter within the domestic market framework. The parameter captures diminishing returns to scale. is the baseline wage cost, and represents the social security burden per unit of labor. The profit from domestic investment is modeled as:

$$\pi_d(I_d,S)=A_d I_d^{\gamma}-(\omega+S)I_d \tag{2}$$

In the income equation for outward FDI, is the productivity parameter in the foreign market. is the wage cost in the host country, and is a fixed cost associated with entering the foreign market. The profit from OFDI is given by:

$$\pi_f(I_f)=A_f I_f^{\gamma}-\omega^{*}\ I_f-F \tag{3}$$

The firm engages in the optimization of its aggregate profit through the determination of the optimal magnitudes of domestic investment and foreign investment $I_f$. It is postulated that the firm assigns a weighting factor to foreign-sourced profits. This weighting factor can be construed as encapsulating elements such as risk exposure or time-preference characteristics. The ensuing objective function is then considered subject to the budgetary constraint denoted as (1).

$$\max_{I_d,I_f\geq 0} \pi_d(I_d,S)+\delta\pi_f(I_f) \tag{4}$$

In order to solve the optimization problem of the enterprise, the Lagrange function is constructed:

$$\mathscr{L}=A_d I_d^{\gamma}-(\omega+S)I_d+\delta\left[A_f I_f^{\gamma}-\omega^{*}\ I_f-F\right]+\lambda\left(I_0-I_d-I_f\right) \tag{5}$$

The first-order conditions (FOCs) with respect to $I_d$, $I_f$, and the multiplier are:

$$\begin{cases} \dfrac{\partial\mathscr{L}}{\partial I_d}=\gamma A_d I_d^{\gamma-1}-(\omega+S)-\lambda=0 \\ \dfrac{\partial\mathscr{L}}{\partial I_f}=\delta\gamma A_f I_f^{\gamma-1}-\delta\omega^{*}\ -\lambda=0 \\ \dfrac{\partial\mathscr{L}}{\partial\lambda}=I_0-I_d-I_f=0 \end{cases} \tag{6}$$

Equating the multipliers from the first two FOCs, we obtain the equilibrium condition:

$$\gamma A_d I_d^{\gamma-1}-(\omega+S)=\delta\gamma A_f I_f^{\gamma-1}-\delta\omega^{*} \tag{7}$$

This equilibrium condition reflects the optimal allocation of investment for firms with equal marginal returns between domestic and foreign investment.

Subsequently, we derive the equation for based on Eq. (7). First, we perform an additive operation on both sides of the relevant equation. Specifically, we add to both sides. This yields the following

equation:

$$\gamma A_d I_d^{\gamma-1}+\delta\omega^* -(\omega+S)=\delta\gamma A_f I_f^{\gamma-1} \tag{8}$$

Next, to isolate the term involving $I_f$, we divide both sides of Eq. (8) by $\delta\gamma A_f$. This operation results in:

$$I_f^{\gamma-1}=\frac{\gamma A_d I_d^{\gamma-1}+\delta\omega^* -(\omega+S)}{\delta\gamma A_f} \tag{9}$$

Finally, to obtain explicitly, we raise both sides of Eq. (9) to the power of $\frac{1}{\gamma-1}$.

$$I_f=\left[\frac{\gamma A_d I_d^{\gamma-1}+\delta\omega^* -(\omega+S)}{\delta\gamma A_f}\right]^{\frac{1}{\gamma-1}} \tag{10}$$

The aforementioned equilibrium condition serves to implicitly define the optimal investment allocation $\left(I_d^*, I_f^*\right)$. It is noteworthy that an increment in the social security burden results in an elevation of the marginal cost associated with domestic investment. When other influencing factors are held constant, this development renders domestic investment relatively less appealing, thereby instigating a reallocation of resources in the direction of OFDI. Rigorously, through the application of comparative statics analysis, the following implications are obtained:

$$\frac{\partial I_f}{\partial S}=\frac{dI_f}{dS}=-\frac{1}{\gamma(\gamma-1)\left[A_d I_d^{\gamma-2}+\delta A_f I_f^{\gamma-2}\right]}>0 \tag{11}$$

which captures the theoretical mechanism: a higher domestic social security burden incentivizes the firm to increase its OFDI investment. The following hypothesis is thus proposed:

**Hypothesis 1** An increasingly social insurance contribution burden positively promote corporate outward foreign direct investment.

*2.2 Productivity Effect*

Based on the model analysis, this part will discuss the role of domestic productivity in the impact of social security contribution burden on enterprise OFDI. Productivity is not only a key capability, but also a core factor that affects the investment decision and competitiveness of enterprises. It runs through the enterprise's production and operation, cost control, market competition and investment strategy and other key links. High domestic productivity provides firms with greater flexibility in resource allocation, enabling them to respond more effectively to changing cost structures. When rising social security contribution burden compress profit margins, firms with high productivity can leverage their efficient production capacity to better evaluate overseas investment opportunities. This strategic advantage may encourage these firms to actively seek lower-cost production bases and broader market opportunities through OFDI. To a certain extent, strengthening the social security contribution burden

promotes enterprises to increase the positive effect of OFDI.

Additionally, high productivity enterprises have advantages in the use of domestic resources (Al-Dujaili & Mohammed, 2013; Castellani & Zanfei, 2001). Domestic productivity is like an amplifier, which positively regulates the impact of social security contribution burden on the corporate OFDI. When the domestic social security payment burden increases, high productivity enterprises have strong competitiveness in the domestic market. High productivity enables these firms to absorb additional cost pressures through better economies of scale, advanced technological capabilities, and optimized production processes (Syverson, 2011; Yeaple, 2009). This operational flexibility reduces the impact of cost shocks, allowing them to sustain their competitive advantage, protect profit margins, and preserve financial stability in the face of increasing labor expenses (Bloom et al., 2007; Melitz, 2003). Meanwhile, their strong market position and superior management capabilities often provide them with greater access to external financing (Rajan & Zingales), further enhancing their ability to invest in efficiency improvements and expand internationally through OFDI (Acemoglu et al., 2007). Based on the above analysis, we propose the following hypothesis.

**Hypothesis 2** Holding other conditions constant, higher levels of domestic productivity will significantly strengthen the positive relationship between social security contribution burden and firms' OFDI decisions.

*2.3 Executive risk Preference Effect*

Based on the derivation of the model, this part further discusses the effect of risk preference on the impact of social security contribution burden on enterprise OFDI. Executives play a central role in shaping corporate strategy, investment decisions, risk management practices, and organizational culture, all of which directly influence a firm's growth trajectory and market positioning (Bertrand & Schoar, 2003; Cain et al., 2016). Cen et al. (2017) utilize the 2008 financial crisis as a natural experiment, demonstrating that CEO risk preferences are positively correlated with corporate risk.

Executives with high-risk preference tend to pursue aggressive strategies, actively exploring new markets and promoting large-scale OFDI in anticipation of high returns. They are more likely to seize international market opportunities, even in emerging industries, where rapid expansion can secure early advantages. These leaders may interpret rising domestic labor costs as a strategic signal to accelerate overseas expansion, despite relatively high domestic productivity, aiming to capture long-term global market share. In contrast, executives with low-risk preference prioritize stable growth and conservative strategies. They are more cautious about OFDI, focusing on consolidating existing businesses and requiring higher levels of certainty in their investment returns. When facing increased social security contribution burden and uncertain domestic conditions, these executives are more likely to focus on optimizing domestic operations rather than pursuing risky international expansions.

Finally, executives' risk tolerance shapes their approach to corporate risk management (Malmendier & Tate, 2005). High-risk executives tend to emphasize balancing risk and return, demonstrating a greater

willingness to accept uncertainty in exchange for potentially higher gains. Conversely, low-risk executives implement more stringent risk controls, conducting detailed assessments before committing to OFDI, and maintaining strict oversight to protect against potential losses. Therefore, the following hypothesis is proposed:

**Hypothesis 3** Managers' risk preference positively moderate the impact of social security contribution burden on firms' OFDI decisions.

## 3. Data and Variables

### *3.1 Data Description*

The data for this study is primarily sourced from the CSMAR (China Stock Market & Accounting Research) Database. The database is comprehensive and widely-used in the field of financial and economic research in China. It provides a wealth of high-quality data, including firm-level financial information, market trading data, and corporate governance data.

Initially, we obtain the financial statements of A-share listed companies from the CSMAR. And we extracted the required data on corporate social insurance contributions and key control variables, such as total assets and debt ratios.

Secondly, the World Bank database was also utilized to obtain data on outward foreign direct investment. The World Bank database offers the annual official average exchange rate in currency for the registered capital amount. To calculate the scale of foreign direct investment by listed companies in a given year, we consider the proportion of equity in listed companies. We sum up the investment scales of listed companies in different years. It gives us the annual foreign direct investment scale of listed companies. The database also provides information on the related transactions of listed companies and basic documents of affiliated companies. This includes details such as the registered location of the affiliated company, registered capital (along with the currency type), the type of associated relationship, and the proportion held by the listed company. When the related party is registered outside mainland China, the listed company's controlling interest exceeds 10%, and the related relationship type is either "subsidiary of the listed company", "joint venture of the listed company", or "associated company of the listed company", this article determines that the listed company had foreign direct investment in that particular year (Xiao & Haojun, 2016).

Overall, the data was then combined and aggregated to create a research dataset comprising A-share listed companies from 2007 to 2022. Subsequently, we performed a series of elementary processing operations on the data to avoid measurement errors. First, we exclude firms in the financial and insurance sectors due to their unique regulatory environments and accounting practices. Second, we remove firms with missing values in key variables, as incomplete data can lead to biased estimates. Third, we take the logarithm of corporate OFDI amount. Finally, to mitigate the influence of outliers, we winsorize the continuous variables at the 1% and 99% levels. The detailed data description is

presented in Table 1.

*3.2 Variables Definitions and Data Characteristics*

3.2.1 Outward FDI

We define two key dependent variables to study the impact of social insurance contribution burden on listed firms' OFDI, drawing on the framework established by (Ding et al., 2022). We use OFDI_AMOUNT to capture the total financial resources a firm allocates to overseas investments within a given period, reflecting the overall scale of its international expansion. And we use OFDI_OCCUR as an another dependent variable. It is a binary variable that takes the value of 1 if a firm engages in OFDI within a particular period, and 0 otherwise, reflecting the firm's participation in international investment activities. Moreover, to make the research results more stable, we adopted OFDI_FREQUENCY as the variable for the robustness test. It measures the number of new overseas investment projects undertaken by a firm during a specific timeframe, indicating its strategic aggressiveness in entering foreign markets. This three aforementioned explanatory variables have been utilized by various scholars to examine the impact of other factors on OFDI (Buckley et al., 2008; Cheung & Qian, 2009; Luo et al., 2010).

3.2.2 Social Insurance Contribution Burden

This study uses the social insurance contribution burden as the explanatory variable. To be specific, we calculate the actual payment rate by dividing the actual social insurance payment by the total operating income. The social insurance payment expenditure is the current increase of "social insurance premium" under the account of "Employee compensation payable" in the financial statements. Social insurance contributions are payments by listed firms for social insurance programs protecting employees from risks like old-age, illness, etc. Calculated as a percentage of employees' salaries, rates vary by region and industry. For listed firms, they directly affect cost structure, increasing labor costs short-term but bringing long-term benefits such as higher employee satisfaction and a better reputation.

3.2.3 Control Variables

Drawing on existing studies (Chen et al., 2022), we use the following variables as control variables: firm size (Size), firm age (Age), leverage (LEV), return on assets (ROA), ratio of fixed assets to total assets (Asset), firm growth (Growth), percentage of shares held by the first largest shareholder (Board), Big 4 audit (Audit), per capita fixed assets (CAP), firm value (Tobin Q), and degree of financing constraints (Constraint). Table 1 presents detailed explanations for each control variable. In addition, the empirical model includes both year fixed effects and firm fixed effects. Year fixed effects are incorporated to control for time-specific factors that may influence all firms in a given year, such as macroeconomic shocks, policy changes, or global market trends. Firm fixed effects are included to account for unobserved, time-invariant characteristics specific to each firm, such as management quality, firm culture, or long-term strategic orientation, thereby reducing the risk of omitted variable bias.

3.2.4 Descriptive Statistics

Table 1 shows the statistical characteristics for the main variables. After taking the logarithm of the OFDI amount (in millions of US dollars), the average OFDI is 2.114. And the mean value of the dummy variable for whether or not the listed firms in this sample conduct OFDI is 0.131. It indicates that the number of listed firms choosing to engage in OFDI is still relatively small. The mean value of OFDI Frequency, one of the alternative dependent variables, is relatively low. This suggests that listed firms engage in OFDI infrequently, reflecting a limited willingness or capacity to pursue international expansion on a regular basis. The social security contribution burden is used as the key explanatory variable in the analysis. It is calculated as the ratio of a firm's social security contributions in the current period to its operating income. The average value of this variable is 0.013, indicating that social insurance payments account for approximately 1.3% of business income on average.

**Table 1. Descriptive Statistics**

| Variable | Description | Mean | Std. dev. |
|---|---|---|---|
| *OFDI_AMO* | Natural logarithm of OFDI Amount | 2.114 | 5.561 |
| *OFDI_OCC* | Dummy=1 if enterprise has OFDI | 0.131 | 0.338 |
| *OFDI_FRE* | OFDI Frequency | 0.226 | 0.695 |
| *SSC* | Social insurance contributions divided by Total operating income | 0.013 | 0.861 |
| *Size* | Natural logarithm of total assets | 22.120 | 1.290 |
| *Age* | Natural logarithm of the firm's listing age | 1.984 | 0.953 |
| *LEV* | Ratio of liabilities to assets | 0.417 | 0.206 |
| *ROA* | Return on assets (net income divided by total assets) | 0.044 | 0.066 |
| *Asset* | Ratio of fixed assets to total assets | 0.212 | 0.160 |
| *Growth* | Growth rate of the operating income | 0.171 | 0.391 |
| *Board* | The percentage of equity of the controlling shareholder | 0.346 | 0.149 |
| *Audit* | Dummy=1 if the auditor hired by the company is one of the "Big Four" | 0.060 | 0.238 |
| *Cap* | Per capita fixed assets | 14.510 | 0.943 |
| *Tobin Q* | Enterprise value | 2.070 | 2.403 |
| *Constraint* | The SA index of financing constraints | -3.788 | 0.278 |

Firm size is measured by the natural logarithm of total assets, with a mean value of 1.984, reflecting the overall scale of the firms in the sample. A firm's financial leverage is measured by the ratio of total

liabilities to total assets, with an average value of 0.417, indicating a moderate level of debt financing among the sampled firms. Return on Assets, defined as net income divided by total assets, has a mean value of 0.044. This metric reflects the firm's overall profitability and its efficiency in utilizing assets to generate earnings. The variable Asset, defined as the ratio of fixed assets to total assets, has a mean value of 0.212. This ratio may influence a firm's operational flexibility and its ability to adjust investment strategies. The growth rate of operating income, has a mean of 0.171, reflecting the performance and expansion potential of the firm's core business. Board represents the percentage of equity held by the controlling shareholder. Its mean value is 0.346, indicating a relatively high level of ownership concentration. This concentration may have a significant influence on corporate decision-making processes. Audit is a binary variable used to indicate the presence of a high-quality external auditor. A value of 1 denotes that the firm hires an auditor from one of the "Big Four" accounting firms. The mean value of 0.060 suggests that only a small proportion of firms in the sample engage top-tier auditors. Cap represents per capita fixed assets, indicating the amount of fixed assets allocated per employee. It has a mean value of 14.51, reflecting the average level of capital intensity among the sampled firms. Furthermore, we include enterprise value (Tobin Q) and financing constraints as additional control variables to account for a firm's market valuation and its access to external capital.

## 4. Econometric Strategy

The goal of this study is to investigate the impact of social insurance contribution burden on the OFDI of listed firms in China. We exploit firm-level panel data from 2007 to 2022 and employ a two-way fixed effects model for identification. The estimation equation is specified as follows:

$$OFDI_{i,t}=\alpha+\beta_1 SSC_{i,t}+\beta_2 Controls_{i,t}+\delta_i+\varphi_t+\varepsilon_{i,t} \quad (12)$$

Where represents the individual listed company and represents the year. The explained variable represents the OFDI of listed company in year $t$, which is measured by the natural logarithm of the amount of OFDI(OFDI_AMO) and the dummy variable of whether the company conducts OFDI(OFDI_OCC), so as to fully reflect the scale and activity of OFDI. The explanatory variable ($SSC_{i,t}$) is social insurance contributions burden divided by total operating income of listed company in year $t$. $Controls_{i,t}$ is a set of control variables such as gearing ratio and firm size, etc., is the individual fixed effect, which is used to control the individual-specific and time-invariant effect. is a set of year dummies. is the i.i.d. error term. is the constant term.

We focus on the two-way fixed effects model to control for unobserved heterogeneity. In particular, absorbs all time-invariant firm characteristics (including industry-specific factors if industry FE are omitted) and captures common shocks (such as macroeconomic cycles). Because the Social insurance law enforcement varied by locality and over time, we argue that conditional on controls the within-firm variation in $SSC_{i,t}$ is plausibly exogenous. Potential endogeneity concerns include reverse causality

(e.g. firms scaling down domestic operations after deciding OFDI might reduce employment, affecting measured *SSC*) and omitted time-varying confounders. We partially address these concerns by including firm-specific trends and, as a robustness check, replacing the explained variable, changing the sample period, and lagging the explained variable by one period to account for potential endogeneity and dynamic effects.

## 5. Empirical Results

### *5.1 Baseline Results*

Table 2 presents the econometric estimation results on the impact of social insurance contribution burden (SSC) on firms' OFDI. The theoretical framework predicts a positive relationship between SSC and firms' OFDI activities. And empirical evidence strongly supports this hypothesis, indicating that higher social insurance burdens are significantly associated with increased OFDI.

Across the various regression specifications shown in the results table, the coefficients for SSC remain consistently positive and statistically significant. Firstly, under the condition that no control variables are added, we estimate a 20.3 percent increase in OFDI amount and 1 percent increase in OFDI activity in column 1 and 2 of table 2. Subsequent column (3) and (4) of the results table incorporate an expanded set of control variables to address potential confounding factors that may influence the relationship between SSC and OFDI. The inclusion of these control variables, such as firm size (Size), firm age (Age), financial leverage (LEV), and other pertinent factors, further validates the hypothesized positive relationship between SSC and OFDI. This indicates that, even after accounting for the influence of these control variables, SSC continues to exert a positive and statistically significant impact on firms' OFDI activities, thereby reinforcing the robustness of the hypothesized relationship.

Table 2 also shows that larger firms exhibit a stronger propensity to engage in OFDI. In addition, firm size, listing age, and leverage (asset-liability ratio) all have a positive and significant effect on firms' OFDI activities. By contrast, return on assets and financing constraints are negatively associated with OFDI. Specifically, firms with higher ROA appear less inclined to undertake OFDI, possibly due to sufficient domestic investment returns. Similarly, greater financing constraints limit firms' ability to allocate resources toward overseas expansion, thereby reducing the likelihood of OFDI.

**Table 2. Baseline results: SSC and Corporate OFDI**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Dependent Variables | | | |
| Variables | *OFDI_AMO* | *OFDI_OCC* | *OFDI_AMO* | *OFDI_OCC* |
| *SSC* | 0.203*** | 0.010*** | 0.257*** | 0.013*** |
| | (0.049) | (0.003) | (0.055) | (0.003) |

| | | | | |
|---|---|---|---|---|
| *Size* | | | 0.294*** | 0.017*** |
| | | | (0.055) | (0.003) |
| *Age* | | | 0.200*** | 0.013*** |
| | | | (0.074) | (0.004) |
| *LEV* | | | 0.469** | 0.029** |
| | | | (0.214) | (0.013) |
| *ROA* | | | -1.212** | -0.070** |
| | | | (0.553) | (0.034) |
| *Asset* | | | 0.924*** | 0.052*** |
| | | | (0.256) | (0.015) |
| *Growth* | | | 0.030 | 0.003 |
| | | | (0.055) | (0.003) |
| *Board* | | | 1.471*** | 0.086*** |
| | | | (0.352) | (0.021) |
| *Audit* | | | 0.637*** | 0.038*** |
| | | | (0.234) | (0.013) |
| *Cap* | | | 0.084 | 0.003 |
| | | | (0.059) | (0.003) |
| *Tobin Q* | | | 0.018*** | 0.001*** |
| | | | (0.005) | (0.000) |
| *Constraint* | | | -3.105*** | -0.207*** |
| | | | (0.443) | (0.025) |
| *Constant* | 3.167*** | 0.187*** | -17.350*** | -1.091*** |
| | (0.256) | (0.016) | (2.029) | (0.121) |
| YEAR FE | Yes | Yes | Yes | Yes |
| IND FE | Yes | Yes | Yes | Yes |
| Observations | 40,408 | 40,408 | 39,740 | 39,740 |
| R-squared | 0.570 | 0.557 | 0.576 | 0.563 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In a comprehensive synthesis of the empirical evidence, the unwavering manifestation of positive and statistically significant coefficients of the social insurance contribution burden variable across all four regression models provides robust and compelling corroboration of research hypothesis. These findings bestow substantial credibility upon the theoretical proposition that social insurance contribution burden

exert a positive influence on firms' decisions regarding OFDI. As such, they effectively validate the hypothesized theoretical nexus between the two variables, thereby bolstering the theoretical framework underpinning this research inquiry.

*5.2 Endogeneity Test*

5.2.1 Regression Discontinuity in Time (RDiT)

Hausman and Rapson (2017) first introduced the concept of Regression Discontinuity in Time. Unlike traditional regression discontinuity methods, RDiT considers the time series characteristics of the data by treating the policy or program initiation time as the breakpoint. It involves setting a grouping variable based on the interval of time and assessing whether the dependent variable exhibits a jump at the policy-induced temporal breakpoint. Using RDiT, Hartojo et al. (2024) find that village fund (VF) positively impacts rural welfare. This approach further facilitates the analysis of causal relationships between the driving variables and the dependent variable.

On April 14, 2016, the Ministry of Human Resources and Social Security and the Ministry of Finance jointly issued the Circular on Stagewise Reduction of Social Insurance Premium Rates, marking a major policy shift aimed at reducing enterprise costs and enhancing business vitality. Since then, social security contribution rates have been gradually lowered. Therefore, this study utilizes 2016 as the breakpoint and employs a time discontinuity regression to investigate the causal relationship between social security contribution burden and OFDI of listed firms. The sample period spans from 2011 to 2021 (a total of 11 years, including five years before and five years after the breakpoint, with 2022 excluded to eliminate the additional impact of the COVID-19 pandemic on OFDI). As shown in Table 3, the coefficient of SSC is significantly positive at the 1% level, and the coefficient of the interaction term between the dependent variable and the policy variable is significantly negative. This indicates that a higher social security contribution burden tends to promote firms' outward foreign direct investment, thereby supporting Hypothesis 1.

**Table 3. Endogeneity test: Regression Discontinuity in Time**

| | (1) | (2) |
|---|---|---|
| | Dependent Variables | |
| VARIABLES | *OFDI_AMO* | *OFDI_OCC* |
| *SSC* | 0.536*** | 0.0305*** |
| | (0.075) | (0.005) |
| *SSC*Policy* | -0.130*** | -0.008*** |
| | (0.034) | (0.002) |
| *Controls* | Yes | Yes |
| Constant | -17.630*** | -1.097*** |

| | | |
|---|---|---|
| | (2.052) | (0.123) |
| YEAR FE | Yes | Yes |
| IND FE | Yes | Yes |
| | | |
| Observations | 39,741 | 39,741 |
| R-squared | 0.576 | 0.564 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.2.2 Lagged one Period Dependent Variables

To address potential endogeneity concerns in this study, we follow the approach of scholar Corrado et al. (2005) by incorporating a one-period lag of the dependent variable as a robustness check. Table 4 presents the results of robustness checks using one-period lagged dependent variables. Incorporating lagged dependent variables is a common approach in panel data analysis to address potential endogeneity concerns (Chand & Sne, 2010; Dawes & J., 2000; Wayne et al., 2002). This method helps mitigate issues such as reverse causality and omitted variable bias, thereby enhancing the credibility of the estimated relationships. Within these regression models, the dependent variables consist of lagged values of firms' OFDI metrics. Specifically, $OFDI\_AMO_{t-1}$ denotes the lagged amount of OFDI and $OFDI\_OCC_{t-1}$ represents the lagged incidence of OFDI.

**Table 4. Endogeneity test: Lagged One Period Dependent Variables**

| | (1) | (2) |
|---|---|---|
| | Dependent Variables | |
| VARIABLES | $OFDI\_AMO_{t-1}$ | $OFDI\_OCC_{t-1}$ |
| | | |
| *SSC* | 0.529*** | 0.030*** |
| | (0.078) | (0.004) |
| *Controls* | Yes | Yes |
| Constant | -19.640*** | -1.269*** |
| | (2.321) | (0.140) |
| YEAR FE | Yes | Yes |
| IND FE | Yes | Yes |
| Observations | 34,541 | 34,541 |
| R-squared | 0.575 | 0.562 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

After incorporating control variables along with year and industry fixed effects, the SSC variable exhibits positive and statistically significant coefficients in both models. In column (1), the coefficient of SSC is 0.529, indicating that a 1 percentage point increase in the social security contribution burden is associated with a 52.9% increase in the amount of OFDI in the previous period, significant at the 1% level. In column (2), the coefficient of 0.030 implies that the same 1 percentage point increase in SSC leads to a 3.0% increase in the probability of a firm having engaged in OFDI during the prior period. These results highlight the strong and persistent influence of SSC on firms' outward investment behavior.

Collectively, the results from these robustness checks using one-period lagged dependent variables reinforce the main findings of the study. They confirm that the positive association between SSC and firms' OFDI remains robust even when accounting for dynamic effects. This strengthens the credibility of the empirical conclusions and further suggests that social security contribution burdens exert a persistent and positive influence on firms' prior OFDI decisions.

*5.3 Robustness Check*

5.3.1 Eliminate the Impact of the Trade War

To ensure the robustness of the benchmark regression results, this study conducts a sensitivity test by excluding observations from 2018 onward. This exclusion is motivated by the onset of the China-U.S. trade war, which began in 2018 and may have introduced external shocks that significantly influenced firms' OFDI behavior, thereby potentially confounding the estimated effects of social insurance contribution burden. The tariff barriers, increased market uncertainties, and the restructuring of the global supply chain caused by the trade war may become important driving factors for enterprises' overseas investment(Beckmann et al., 2024; Wei & Li, 2020)[4,56], thus interfering with the impact mechanism of social security contribution burden on OFDI.

Table 5 reports the results of the robustness check. After excluding observations from 2018 onward, the impact of social insurance contribution burden on firms' OFDI remains positive and statistically significant. Specifically, a 1 percentage point increase in the social security contribution burden is associated with a 21.3% increase in the amount of OFDI. Likewise, it leads to a 1.1% increase in the probability that a firm engages in OFDI. This finding suggests that the main results are not driven by external shocks such as the China-U.S. trade war, thereby reinforcing the robustness and credibility of the benchmark regression estimates.

**Table 5. Robustness Check: Excluding the Impact of Trade Wars**

| | (1) | (2) |
|---|---|---|
| | Dependent Variables | |
| VARIABLES | *OFDI_AMO* | *OFDI_OCC* |

| | | |
|---|---|---|
| *SSC* | 0.213*** | 0.011*** |
| | (0.069) | (0.004) |
| *Controls* | Yes | Yes |
| Constant | -18.870*** | -1.204*** |
| | (2.680) | (0.160) |
| YEAR FE | Yes | Yes |
| IND FE | Yes | Yes |
| Observations | 24,053 | 24,053 |
| R-squared | 0.590 | 0.579 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.3.2 Alternative the Dependent Variable

To further assess the robustness of our findings, we replaced the original dependent variable with the frequency of firms' OFDI. While the initial model was designed to examine the impact of social security contribution burden on various dimensions of firms' economic behavior, this alternative specification allows for a more dynamic assessment. OFDI frequency captures how often firms undertake new overseas investment projects within a given period, providing a more direct measure of their international investment activity and strategic expansion efforts(Qiao et al., 2020). This substitution helps validate the consistency and reliability of our results across different dimensions of OFDI behavior.

After re-estimating the model with OFDI frequency as the dependent variable, the coefficient on the SSC variable remains positive and statistically significant at the 1% level, consistent with the results of the baseline analysis. This outcome confirms that the main findings are robust to alternative specifications of the dependent variable, thereby reinforcing the reliability of the conclusion that social security contribution burdens positively influence firms' outward investment behavior.

**Table 6. Robustness Check: Replace the Explained Variable**

| | (1) | (2) |
|---|---|---|
| | Dependent Variables | |
| VARIABLES | *OFDI_FRE* | *OFDI_FRE* |
| *SSC* | 0.029*** | 0.034*** |
| | (0.006) | (0.007) |
| *Controls* | No | Yes |

| | | |
|---|---|---|
| Constant | 0.377*** | -2.647*** |
| | (0.032) | (0.264) |
| YEAR FE | Yes | Yes |
| IND FE | Yes | Yes |
| Observations | 40,408 | 39,740 |
| R-squared | 0.579 | 0.585 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.3.3 Adding Fixed Effects for the Interaction Term of Industry and Year

Table 7 presents the results of a robustness test that incorporates interaction terms for industry and year fixed effects. This approach enhances the model by accounting for time-varying unobserved heterogeneity across industries (Lee, 2007). Specifically, it controls for factors such as sector-specific shocks, regulatory changes, or macroeconomic trends that may vary over time and potentially influence both social security contribution burden and firms' OFDI decisions. By accounting for these interaction effects, the model provides a more rigorous identification strategy. In column (1), where the industry-year interaction fixed effects are not included, the coefficient for SSC is 0.257 and statistically significant at the 1% level. When industry-year interaction fixed effects are added in column (3), the SSC coefficient slightly decreases to 0.250 but remains significant at the 1% level. Similarly, in column (2), which excludes the interaction effects, the SSC coefficient is 0.013 and significant at the 1% level. This result is unchanged in column (4), where the SSC coefficient remains at 0.013 and continues to be significant at the 1% level even after including industry-year interaction fixed effects.

Overall, regardless of whether industry-year interaction fixed effects are included, the coefficient for the social security contribution burden remains significantly positive for both the scale of OFDI and the likelihood of engaging in OFDI. This consistency across model specifications highlights the robustness of the positive relationship and reinforces the credibility of the empirical findings.

**Table 7. Robustness check: Adding FE for the Interaction Term of Industry and Year**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Dependent Variables | | | |
| VARIABLES | *OFDI_AMO* | *OFDI_OCC* | *OFDI_AMO* | *OFDI_OCC* |
| *SSC* | 0.257*** | 0.013*** | 0.250*** | 0.013*** |
| | (0.055) | (0.003) | (0.058) | (0.003) |
| *Controls* | Yes | Yes | Yes | Yes |

| | | | | |
|---|---|---|---|---|
| Constant | -17.350*** | -1.091*** | -18.620*** | -1.178*** |
| | (2.029) | (0.121) | (2.145) | (0.128) |
| YEAR FE | Yes | Yes | Yes | Yes |
| IND FE | Yes | Yes | Yes | Yes |
| IND x YEAR FE | No | No | Yes | Yes |
| Observations | 39,740 | 39,740 | 36,196 | 36,196 |
| R-squared | 0.576 | 0.563 | 0.574 | 0.561 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

*5.4 Mechanism*

5.4.1 Total Factor Productivity Effects

Building on the assumptions outlined in the theoretical development, we next examine the role of productivity in shaping the relationship between social insurance contribution burden and firms' OFDI behavior. This research draws upon the studies conducted by Lu and Lian (2012), and further refines the measurement index of domestic total factor productivity (TFP) proposed in their research. In this study, TFP is calculated using three distinct methods to ensure robustness. The first is the Olley-Pakes (TFP_OP) method, which estimates TFP based on an econometric framework that addresses simultaneity and selection bias using investment as a proxy. The second is the Levinsohn-Petrin (TFP_LP) method, which uses intermediate inputs to account for similar biases. The third method is the conventional Ordinary Least Squares (TFP_OLS) approach. Interaction terms are constructed by interacting each of the three TFP indices with the social security contribution burden variable. These terms are then included in fixed-effects regression models, where the dependent variables are the scale of OFDI and a binary indicator of whether a firm engages in OFDI.

The regression results show that, across all TFP measurement methods, the interaction terms yield positive and statistically significant coefficients. These findings provide strong support for the second hypothesis, indicating that total factor productivity amplifies the positive impact of social security contribution burden on firms' OFDI decisions.

**Table 8. Mechanism: Total Factor Productivity Effects**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Dependent Variables | | | | | |
| VARIABLES | *OFDI_AMO* | *OFDI_OCC* | *OFDI_AMO* | *OFDI_OCC* | *OFDI_AMO* | *OFDI_OCC* |

| | | | | | | |
|---|---|---|---|---|---|---|
| *TFP_OP*SSC* | 0.016*** | 0.001** | | | | |
| | (0.005) | (0.000) | | | | |
| *TFP_LP*SSC* | | | 0.017*** | 0.001*** | | |
| | | | (0.005) | (0.000) | | |
| *TFP_OLS*SSC* | | | | | 0.015*** | 0.001*** |
| | | | | | (0.004) | (0.000) |
| *Controls* | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | -22.640*** | -1.400*** | -22.630*** | -1.400*** | -22.760*** | -1.407*** |
| | (2.222) | (0.133) | (2.221) | (0.133) | (2.225) | (0.134) |
| YEAR FE | Yes | Yes | Yes | Yes | Yes | Yes |
| IND FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 35,405 | 35,405 | 35,405 | 35,405 | 35,405 | 35,405 |
| R-squared | 0.583 | 0.570 | 0.583 | 0.570 | 0.583 | 0.570 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.4.2 Risk Preference Effects

Currently, there are three primary methodologies for measuring senior executives' risk appetite (Brockman et al., 2010; Koijen, 2014). The first measurement, denoted as Risk I, is calculated as the ratio of the sum of trading financial assets, net available for sale financial assets, and net investment real estate to total assets, i.e., Risk I = (Trading financial assets + Net available for sale financial assets + Net investment real estate)/Total assets. The second approach, Risk II, is formulated as the ratio of the aggregate of trading financial assets, derivative financial assets, net available for sale financial assets, and net investment real estate to total assets, expressed as Risk II = (Trading financial assets + Derivative financial assets + Net available for sale financial assets + Net investment real estate)/Total assets. The third measurement, Risk III, is determined by the ratio of the sum of trading financial assets, net available for sale financial assets, net held to maturity investments, and net investment real estate to total assets, which is Risk III = (Trading financial assets + Net available for sale financial assets + Net held to maturity investments + Net investment real estate)/Total assets.

Building on the established measures of executive risk appetite, this study investigates the moderating role of managerial risk preferences in the relationship between social security contribution burden and firms' OFDI. Specifically, fixed-effects regression models are employed to examine the interaction between executive risk appetite and social security contribution burdens, using both the scale and incidence of OFDI as dependent variables. As shown in Table 8, the empirical results indicate that all

three measures of executive risk preference significantly strengthen the positive effect of social security contribution burden on OFDI. These findings provide robust empirical support for Hypothesis 3, demonstrating that executives' risk appetite plays a critical moderating role in enhancing the likelihood and scale of firms' OFDI in response to rising labor cost pressures.

**Table 9. Mechanism: Executive Risk Preference Effects**

| VARIABLES | (1) *OFDI_AMO* | (2) *OFDI_OCC* | (3) *OFDI_AMO* | (4) *OFDI_OCC* | (5) *OFDI_AMO* | (6) *OFDI_OCC* |
|---|---|---|---|---|---|---|
| *R I*SSC* | 0.121** | 0.008** | | | | |
| | (0.060) | (0.003) | | | | |
| *R II*SSC* | | | 0.117* | 0.008** | | |
| | | | (0.060) | (0.003) | | |
| *R III*SSC* | | | | | 0.130** | 0.009** |
| | | | | | (0.059) | (0.003) |
| *Controls* | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | -17.820*** | -1.117*** | -17.820*** | -1.117*** | -17.820*** | -1.117*** |
| | (2.031) | (0.121) | (2.031) | (0.121) | (2.031) | (0.121) |
| YEAR FE | Yes | Yes | Yes | Yes | Yes | Yes |
| IND FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 39,740 | 39,740 | 39,740 | 39,740 | 39,740 | 39,740 |
| R-squared | 0.575 | 0.563 | 0.575 | 0.563 | 0.575 | 0.563 |

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

*5.5 Heterogeneity*

5.5.1 Ownerships

To further examine the role of social security contribution burden on OFDI across different ownership types, we conducted separate regression analyses for state-owned enterprises (SOEs) and non-state-owned enterprises (non-SOEs) (Cheng & Dong, 2025; Karl et al., 2014). As shown in columns (1) and (2) of Table 9, the effect of SSC on OFDI is more pronounced and statistically significant at the 1% level for non-SOEs, while the effect remains significant at the 5% level for SOEs. This suggests that non-state-owned firms are more responsive to changes in labor cost pressures when making outward investment decisions.

In terms of business objectives, non-SOEs primarily pursue profit maximization, with profitability being closely tied to their survival and long-term development(Yang et al., 2017). An increase in the social security contribution rate directly raises operating costs, compresses profit margins, and places financial pressure on these firms. In response, non-SOEs have stronger incentives to seek lower-cost production inputs and expand into international markets through OFDI as a means to enhance efficiency and sustain profitability. In contrast, SOEs operate under a broader mandate that includes not only economic performance but also social responsibilities and alignment with national strategic goals. As a result, their decision-making is not driven solely by cost and profit considerations. When faced with rising social security contribution burden, SOEs tend to weigh multiple factors, including political and social objectives. Consequently, their OFDI responses to changes in labor cost pressures are more constrained and less directly influenced by cost minimization motives compared to non-SOEs.

Additionally, SOEs and non-SOEs differ significantly in their ability to access resources. SOEs typically enjoy greater advantages in securing domestic resources and receiving policy support, including government subsidies and preferential treatment (Gabriel et al., 2016). These benefits help cushion the impact of rising social security contribution costs, thereby reducing the urgency for SOEs to address cost pressures through OFDI. However, non-SOEs have more limited access to such institutional support and are consequently more sensitive to cost fluctuations. When social security contribution rates rise and internal adjustments or external support are insufficient to offset the burden, non-SOEs are more likely to seek overseas resources and market opportunities to improve their operational efficiency. As a result, increases in social security contribution rates exert a more pronounced influence on the OFDI decisions of non-state-owned enterprises.

The decision-making mechanisms of SOEs and non-SOEs differ substantially (Chen et al., 2011). SOEs typically operate under a more complex and hierarchical decision-making structure, which involves multi-level approvals and comprehensive consideration of national policies and macroeconomic conditions (He & Kyaw, 2018). As a result, their decision-making cycles are longer, making it difficult to respond quickly to changes in social security contribution rates with timely adjustments to OFDI strategies. While non-state-owned enterprises have more flexible and efficient decision-making processes(Cui et al., 2012). Their management teams can promptly assess the impact of rising social security costs and formulate appropriate OFDI strategies to adapt to changing market conditions. This institutional flexibility enables non-SOEs to respond more swiftly to shifts in labor cost pressures, resulting in a more significant and immediate influence of social security contribution rates on their OFDI decisions.

**Table 10. Heterogeneity Analysis: Ownerships**

| VARIABLES | (1)SOEs *OFDI_AMO* | (2)Non-SOEs *OFDI_AMO* | (3)SOEs *OFDI_OCC* | (4)Non-SOEs *OFDI_OCC* |
|---|---|---|---|---|
| *SSC* | 0.157** | 0.314*** | 0.008** | 0.016*** |
| | (0.070) | (0.081) | (0.004) | (0.005) |
| *Controls* | Yes | Yes | Yes | Yes |
| Constant | -14.550*** | -19.140*** | -1.009*** | -1.141*** |
| | (2.937) | (2.765) | (0.175) | (0.167) |
| YEAR FE | Yes | Yes | Yes | Yes |
| IND FE | Yes | Yes | Yes | Yes |
| Observations | 15,441 | 24,299 | 15,441 | 24,299 |
| R-squared | 0.565 | 0.582 | 0.549 | 0.571 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.5.2 Regions

Given the varying levels of regional economic development, the pressure imposed by social security contributions differs across geographic areas. To account for this variation, we conduct a heterogeneity analysis to examine how social security contribution burden influence OFDI among listed firms in different regions of China. Specifically, we compare firms located in the eastern, central, and western regions, with the eastern region representing the most economically advanced area (Ke, 2010). The regional division follows the standard classification used in China's official statistical yearbooks. As reported in Table 10, column (1) shows that the social security contribution burden significantly promotes OFDI among firms in the eastern region, with the coefficient statistically significant at the 1% level. In contrast, columns (2) and (3) present results for the central and western regions, respectively, where the coefficients are statistically insignificant. These findings suggest that the positive effect of social security contributions on OFDI is primarily concentrated in more developed regions, likely due to better firm capabilities and greater openness to international markets.

Eastern firms, typically larger and more experienced in international operations, may transform higher social security costs into managerial advantages (e.g., enhancing productivity through improved employee welfare to support overseas expansion). In contrast, central/western firms face greater cost pressures, where increased contributions could theoretically inhibit OFDI, though the non-significant results suggest offsetting effects or confounding factors. In China, eastern regions likely offer stronger government subsidies, tax incentives, or OFDI specific policies to mitigate social security costs,

enabling continued overseas investment despite higher contributions(Laijun et al., 2008)[39]. Conversely, insufficient policy support in central/western regions may obscure the observable impact.

**Table 11. Heterogeneity Analysis: Regional Differences**

| | (1)East | (2)Center | (3)West |
|---|---|---|---|
| VARIABLES | *OFDI_AMO* | *OFDI_AMO* | *OFDI_AMO* |
| *SSC* | 0.426*** | -0.191 | 0.147 |
| | (0.068) | (0.122) | (0.122) |
| *Controls* | Yes | Yes | Yes |
| Constant | -22.720*** | 1.607 | -12.700*** |
| | (2.658) | (3.828) | (3.916) |
| YEAR FE | Yes | Yes | Yes |
| IND FE | Yes | Yes | Yes |
| Observations | 28,318 | 6,821 | 4,588 |
| R-squared | 0.585 | 0.526 | 0.525 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Meanwhile, eastern firms benefit from diversified financing channels, allowing external funding to alleviate cash flow pressures from social security obligations without compromising OFDI. Central/western firms, constrained by limited financing options, might see social security costs crowd out investment capital, though the scarcity of OFDI activity itself contributes to statistical insignificance. And eastern firms predominantly operate in high-value-added sectors, where OFDI serves strategic expansion purposes. Social security costs, as part of human capital expenditures, may be efficiently utilized. Central/western firms in low-end manufacturing sectors face cost escalations but lack the motivation or capability for OFDI, rendering the effect negligible.

5.5.3 Manufacturing or non-manufacturing Industry

Social insurance is a cost expense paid by enterprises for their employees, which means that the more employees an enterprise has, the higher the employment cost it bears(Einav et al., 2018). In order to explore the impact of social security contributions burden on OFDI in different types of industries, this study is divided into manufacturing and non-manufacturing industries for regression analysis (Xu, 2023). As shown in Table 11, the results reveal that SSC has a significantly positive effect on OFDI among manufacturing enterprises at the 1% significance level, whereas the effect is statistically insignificant for non-manufacturing firms.

The manufacturing industry is typically labor-intensive, with labor costs comprising a substantial portion of total operating expenses (Simionca, 2013; Zhang & Zhang, 2005). As a key component of labor costs, changes in social security contributions have a direct impact on overall cost structures. When social security contributions increase, firms face rising operating costs and compressed profit margins. In response, some manufacturing enterprises seek to alleviate cost pressures and enhance competitiveness by engaging in OFDI, leveraging lower labor costs and resource advantages in foreign markets. As a result, social security contributions exert a significant influence on the OFDI decisions of manufacturing firms.

The non-manufacturing sector encompasses a wide range of industries, including finance, information technology, and cultural and creative services (Ellram & Krause, 1994). The core competitiveness of firms in these sectors often relies on intangible assets such as technology, brand value, and intellectual capital (Fioramanti, 2011). While labor costs remain relevant, they do not constitute the primary component of total operating expenses. Consequently, changes in social security contributions have a relatively limited impact on overall cost structures. These cost adjustments are typically insufficient to alter the firms' broader investment strategies, and thus have little influence on their OFDI decision-making.

**Table 12. Heterogeneity Analysis: Type of Enterprise**

| | (1) | (2) |
|---|---|---|
| | Manufacturing | Non-Manufacturing |
| | IND | IND |
| VARIABLES | *OFDI_AMO* | *OFDI_AMO* |
| | | |
| *SSC* | 0.429*** | 0.008 |
| | (0.093) | (0.074) |
| *Controls* | Yes | Yes |
| Constant | -27.370*** | -12.830*** |
| | (3.112) | (3.499) |
| YEAR FE | Yes | Yes |
| IND FE | Yes | Yes |
| | | |
| Observations | 23,728 | 12,424 |
| R-squared | 0.581 | 0.585 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

## 6. Conclusions and Policy Implications

This study develops a structural model of corporate investment decision-making and conducts an empirical analysis using panel data from Chinese A-share listed companies spanning 2007 to 2022. We use a two-way fixed effects model to identify the impact of social insurance contribution burden on outward foreign direct investment. The findings reveal that social insurance contributions significantly promote OFDI, with the effect varying across firms with different characteristics and under different conditions.

In the context of globalization and the ongoing improvement of China's social insurance system, multiple factors influence firms' OFDI behavior. However, the role of social insurance contributions (a key component of labor costs) has received limited attention in the existing literature. This study bridges that gap by integrating research on labor costs and international investment, constructing a multidimensional theoretical framework, and highlighting the positive role that fulfilling social security obligations can play in enhancing a firm's international image. In doing so, it offers new insights and contributes to a more comprehensive understanding of the drivers behind firms' OFDI decisions.

By constructing a corporate investment decision-making model, this study demonstrates that an increase in the domestic social security contribution burden incentivizes firms to expand their OFDI. The analysis is guided by the following hypotheses: (1) social security contribution burdens positively influence firms' OFDI; (2) higher levels of domestic total factor productivity enhance this positive effect; and (3) senior executives' risk preferences further strengthen the impact of social security contributions on OFDI. Benchmark regression results confirm that the social security contribution burden has a significantly positive effect on firms' OFDI. Mechanism analyses further support the theoretical framework: the interaction terms between SSC and various TFP measures are all positive and statistically significant, indicating that productivity amplifies the effect of SSC on OFDI. Similarly, interaction terms between SSC and multiple indicators of executives' risk preferences also yield positive and significant coefficients, validating the proposed moderating role of managerial risk appetite. A series of robustness checks (including alternative model specifications and sample adjustments) affirm the reliability of the findings. Heterogeneity analyses reveal that the positive effect of SSC on OFDI is more pronounced among non-state-owned enterprises, firms located in the eastern region, manufacturing enterprises, and firms facing higher social security contribution rates. These results underscore the nuanced ways in which firm characteristics and institutional context shape the relationship between labor cost burdens and international expansion strategies.

This study enriches the literature on corporate investment behavior. It provides valuable references for policymakers to optimize social insurance policies, balancing workers' benefits and enterprises' international competitiveness. Enterprises can also use these findings to formulate more informed OFDI strategies considering their own characteristics. Future research can expand the sample scope and explore more influencing factors to further support enterprises' international development.

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