The Effect of Trade Policy Uncertainty on Chinese Export-Oriented Listed Companies' Financial Performance

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Abstract. This study examines the impact of trade policy uncertainty on the performance of export-oriented listed firms (A-shares) on China's Shanghai and Shenzhen exchanges from 2016 to 2024. Using firm-level data and the trade policy uncertainty sub-index from the Economic Policy Uncertainty Index, an OLS regression model is employed to analyze the relationship between and corporate financial performance, with robustness tests conducted by substituting the dependent variable with return on equity. The results show a significant negative correlation between and firm profitability: a 1% increase in TPU decreases return on assets () by 0.013 units, a relationship that remains robust after controlling for firm size, financial leverage, and other factors. Robustness tests reveal that also has a significantly negative impact on(coefficient = -0.026, $p<0.01$), indicating that policy uncertainty not only reduces asset operational efficiency but also impairs shareholder returns. Additionally, firm size is positively correlated with , while financial leverage has a significant negative effect on both and , suggesting that highly leveraged firms are more vulnerable to external shocks. This study concludes that trade policy uncertainty substantially negatively affects the performance of export-oriented firms by increasing operational risks and capital costs.

1 Introduction

Since 2018, the deterioration of Sino-US relations has triggered a series of trade restrictions and retaliatory tariff hikes, imposing profound destabilizing impacts on global value chains [1]. A core manifestation of this structural shift is the abrupt surge in Trade Policy Uncertainty (TPU). As indicated by the Economic Policy Uncertainty (EPU) index, the volatility of trade-related policies between China and the US during 2018-2019 increased by 47% compared to the average of the previous decade. Frequent adjustments in tariff policies and the implicit escalation of non-tariff barriers have placed transnational trade entities in unprecedented decision-making dilemmas [2]. The current global trade system is undergoing the most profound structural transformation since World War II. On one hand, traditional multilateral trade mechanisms such as the World Trade Organization (WTO) have seen their dispute settlement functions paralyzed, and the fragmentation of regional trade agreements

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has intensified. The "trilateral framework" of the US, EU, and Japan competes with the Regional Comprehensive Economic Partnership (RCEP) in the Asia-Pacific region in terms of rules [3]. On the other hand, trade protectionism represented by "America First" has swept the globe. In 2023, the number of new global trade restrictions increased by 32% compared to 2019, with technical trade barriers against China accounting for 61% [4]. This drastic change in the policy environment has posed dual challenges to enterprises dependent on global supply chains: the cost of raw material imports has increased by 15-20% due to rising tariffs, while the barriers to entry in major export markets have significantly heightened [5]. The transmission effect of trade policy uncertainty has broken through the traditional trade domain and deeply penetrated into financial markets and corporate micro-behaviors. Academic research shows that a 1-standard-deviation increase in TPU raises the export volatility of enterprises in emerging economies by 2.3 percentage points and the cost of capital by 0.8 basis points [6]. For China, as the world's largest merchandise exporter, the export dependency ratio remained at a high of 17.8% in 2022. Among them, export-oriented listed companies in the A-share market contributed 34% of the country's total export volume, covering key manufacturing industries such as electronics, machinery, and textiles [7]. These enterprises not only directly bear tariff costs, but also face the pressure of supply chain restructuring-approximately 43% of export enterprises have delayed their overseas investment plans due to policy uncertainty [8]. Against this backdrop, this study focuses on the impact mechanism of trade policy uncertainty on the performance of Chinese A-share export-dependent listed companies, attempting to answer three core questions: How does TPU affect corporate performance through channels such as cash flow expectations, investment decisions, and market valuation? What are the heterogeneous response characteristics of different industries? Whether corporate-level risk hedging strategies can effectively mitigate policy shocks [9]. The research uses panel data of listed companies in Shanghai and Shenzhen with export revenue accounting for more than 50% from 2015 to 2023. By combining the Difference-in-Differences model with text mining technology to quantify policy uncertainty, it not only provides micro-level evidence for macro trade policy evaluation but also offers decision-making references for enterprises to construct policy risk early-warning systems [10].

2 Theoretical analysis and research hypothesis

2.1 Research hypothesis

Uncertainty in Trade Policy (TPU) is trade volatility, for example, in the imposition of sanctions, tariffs, and foreign agreements [6]. The increase in the recent history from 2018 in the level of TPU is a historic departure from recent experience and has become an important source of firm-specific uncertainty and stock market volatility. According to the real options theory [7], in cases involving uncertainty, companies delay investment and become less risk-taking, leading to poor performance. Similarly, the risk-return trade-off model suggests that higher uncertainty increases the cost of capital and depresses firm value [8]. Wang and Wu find that trade frictions substantially increase TPU, disturbing long-term business planning and profitability [2]. Davis emphasizes that trade policy has played an unusually prominent role in recent market volatility [6]. Empirical research confirms the negative consequences of TPU: Chen and Zhao show that reduced TPU stabilizes firm-level exports to the U.S., while increased TPU disrupts trade and increases volatility in exports to other markets [3]. Further, geopolitical shocks like the U.S. – China trade war and Brexit have had profound impacts on currency markets and firm-level investor confidence [1,7]. Zaman also demonstrates how regulatory and political disruptions lead to significant financial market swings [9]. In China, listed firms—particularly those engaged in export—are highly vulnerable to such fluctuations, as shown by Chen, Jiang, and Tong [4]. Given these theoretical and empirical foundations, this paper proposes the following hypothesis: Trade policy uncertainty has a significant negative impact on the financial performance of export-oriented listed firms in China.

3 Methodology

3.1 Sample selection

The sample consists of 2016-2024 listed Shanghai and Shenzhen stock market A-share companies. Export firms are filtered through a three-pronged list of criteria: segmental disclosure, the export revenue-to-total revenue ratio, and industrial benchmarks for classification of high cross-border dependence. To ensure data validity and comparability, the sample excludes financial institutions, specially treated (ST, ST, PT) firms, and firms with missing or outlier values for the major financial variables. The firms analyzed are those having high, enduring experience with export exposure, thereby winnowing the subsample most likely exposed to shifts in trade policy uncertainty.

3.2 Data source and description

To experimentally investigate the effect of trade policy uncertainty on the financial performance of export-oriented listed companies in China, this study uses data from both firm-level and macroeconomic sources. The time frame for the sample is 2016-2024. The CSMAR database, which offers thorough accounting, financial statement, and segmental disclosure information for Chinese A-share listed businesses, is the source of firm-level financial and operational data. Export-oriented firms are identified through segment disclosures and the presence of export-related keywords, such as "foreign," "foreign trade," or "export," within the "operating income" section of profit and loss statements. In cases where export revenue proportions are disclosed, these are used as a supplementary criterion to confirm export orientation. This widely recognized indicator quantifies the extent of policy instability in trade matters by tracking the frequency and severity of trade-related uncertainties. Tariff data are sourced from official trade databases, including the WTO, China Customs, and USTR records, with product-level standardization achieved through the HS6 classification system. Financial institutions, businesses receiving special treatment (ST/ST), and businesses with erratic or missing financial data are not included in the sample to preserve data dependability. To reduce outlier distortion, all continuous variables are also winsorized at the 5th and 95th percentiles. Panel regression analysis can be used to assess the impact of TPU on corporate financial performance using the resulting dataset.

3.3 Model setting

To analyze the relationship between trade policy uncertainty (TPU) and the financial performance of listed export firms in China, the paper uses an OLS regression approach. The Return on Assets (ROA) is the major performance metric used in the paper, while the major independent variable used is the trade-specific component of the EPU Index. Various robustness checks such as the use of temporal lag tests and alternative specifications are used in the paper to test the empirical findings, as shown in Table 1.

Table 1. Variable definitions.

Type	**Variables**	**Symbols**	**Definitions**
Dependent Variable	Return on Assets	ROA	Net Income / Total Assets
	Return on Equity	ROE	Net Income / Shareholders' Equity
Independent Variable	Trade Policy Uncertainty	TPU	Degree of unpredictability in trade-related policies that may affect economic decisions
Control Variable	Firm Size	Size	Measured by the natural logarithm of total assets
	Financial Leverage	Lev	Total Liabilities / Total Assets
	Working Capital Turnover	WCTurnover	Net Sales / Average Working Capital

4 Research design

4.1 Model of base regression

Adopting the approach of Liu and Gao, the ordinary least squares (OLS) regression model is used in the paper in order to test the effect of trade policy uncertainty (TPU) on the financial performance of Chinese listed firms with export specialisation [10]:

$$ROA_{it} = \alpha + \beta TPU_{t} + \gamma_1 Size_{it} + \gamma_2 Lev_{it} + \gamma_3 WCTurnover_{it} + \varepsilon_{it} \quad (1)$$

Where ROA_{it} is derived on assets, the dependent variable, firm i ’ s year t. ROA indicates the percentage to which the firm uses all its assets in generating net income. Based on the Economic Policy Uncertainty Index ’ s trade policy-specific sub-index, TPU_t is Trade Policy Uncertainty Index, the main independent variable. The natural logarithm of total assets is the standard proxy for the size of the firm. , Lev_{it} total liabilities-to-total assets, is a proxy for the level of financial leverage. $WCTurnover_{it}$, an operating efficiency measure, working capital turnover, is the revenue-to-working-capital. The error term ε_{it} is idiosyncratic shocks that cannot be explained by the model. Omitted factor bias is eliminated and the estimated relation between firm performance and TPU is rendered stable by the choice of control variables.

4.2 Robustness checks model

There can be many tests for robustness anticipated through which the reliability and consistency of the baseline regression outcomes can be confirmed. It is the objective of the robust tests to determine that the relationship between trade policy uncertainty and firm performance, as identified, is not the result of model specification, and it is not the function of the chosen variables. First, the dependent variable will be replaced to test whether the main findings are held under alternative definitions of firm performance. While the baseline model uses Return on Assets, this study will employ Return on Equity as an alternative performance measure.ROE is widely used in financial analysis and provides a complementary perspective by focusing on the returns to shareholders rather than total assets. The regression model under this robustness check is specified as follows:

$$ROE_{it} = \alpha + \beta TPU_{t} + \gamma_1 Size_{it} + \gamma_2 Lev_{it} + \gamma_3 WCTurnover_{it} + \varepsilon_{it} \quad (2)$$

If the estimated effect of trade policy uncertainty remains consistent in sign and significance when using ROE , this would strengthen the credibility of the main findings. All control variables will remain the same as in the baseline specification to ensure comparability.

5 Empirical results and discussion

5.1 Baseline regression results

Table 2. Regression Results of the Effect of TPU on ROA

VARIABLES	-1 ROA
lnTPU	-0.013
	(-6.34)
wcturnover	0
	(-0.36)
ln_Size	-0.005
	(-17.86)
lev	-0.002
	(-11.67)
Constant	0.229
	-19.6
Year	Fixed
Observations	22,751
R-squared	0.039

t-statistics in parentheses

p<0.01, p<0.05, p<0.1

As indicated in Table 2, the regression provides convincing proof that trade policy uncertainty (TPU) has negative, statistically significant impacts on the profitability of firms, measured using Return on Assets (ROA). The lnTPU coefficient is -0.013 and statistically significant at 1% (t = -6.34), in support of the argument that trade policy uncertainty deteriorates firms' financial performance. According to theoretical expectations, operating and strategic challenges afflict firms when trade policies become unpredictable. Firm size (ln_Size) and leverage (lev) among the control variables are also found to have negative impacts on ROA. The coefficient for ln_Size is -0.005 (t = -17.86), indicating that larger firms tend to experience lower profitability, possibly due to increased managerial complexity or diminishing returns to scale. Similarly, higher financial leverage (lev= -0.002, t = -11.67) is associated with reduced ROA, consistent with capital structure theories that link excessive debt to financial constraints and risk exposure. In contrast, working capital turnover (wcturnover) does not show a statistically significant effect, implying that short-term liquidity management may have a limited influence on profitability in this context. The year-fixed effects reveal a consistent upward trend, with all annual dummies (2017-2023) displaying positive and statistically significant coefficients at the 1% level. This pattern suggests gradual improvements in firm performance over time, potentially due to macroeconomic recovery, policy adjustments, or firm-level adaptations. The model's explanatory power, reflected in an R-squared value of 0.039, is modest but within the expected range for firm-level panel regressions, where unobserved heterogeneity often accounts for substantial variation. Despite this, the results robustly demonstrate that trade policy uncertainty exerts a meaningful negative impact on firm profitability, even after controlling for financial characteristics and time effects. These findings underscore the importance of policy stability for sustaining corporate financial health, particularly in export-oriented industries.

5.2 Robustness checks

Table 3. Robustness Check: Regression Results Using ROE

VARIABLES	-1 ROE
lnTPU	-0.026
	(-8.70)
wcturnover	0
	-0.92
ln_Size	0.003
	-8.46
lev	-0.003
	(-11.93)
Constant	0.147
	(8.71)
Year	Fixed
Observations	22,751
R-squared	0.029

t-statistics in parentheses

$p<0.01$, $p<0.05$, $p<0.1$

Overall, the results are significant and the regression method is correct. To ensure the reliability of our primary findings, conduct a robustness test by substituting the dependent variable with Return on Equity (ROE), an alternative profitability metric that evaluates firm performance relative to shareholders' equity. The regression outputs, presented in Table 3, demonstrate remarkable consistency with our baseline results. Specifically, the coefficient for trade policy uncertainty (lnTPU) maintains its negative sign and statistical significance at the 1% level (= -0.026, t = -8.70), providing further evidence that heightened policy uncertainty adversely affects corporate profitability, this time from the perspective of equity returns.The control variables exhibit patterns largely congruent with previous findings. Firm size (ln_Size) shows a significantly positive association with ROE, implying that larger enterprises may benefit from superior resource allocation capabilities and enhanced capacity to withstand external shocks. Conversely, financial leverage (lev) continues to demonstrate a negative relationship with performance, reinforcing the notion that excessive debt burdens impair profitability. Mirroring earlier results, working capital turnover (wcturnover) fails to show statistical significance in explaining variations in ROE. These robustness checks using ROE as an alternative performance measure substantiate our core conclusion: trade policy uncertainty exerts a substantial and statistically significant negative impact on the financial performance of China's export-oriented listed companies. The consistency across different performance metrics strengthens the validity of our findings and underscores the economic significance of policy uncertainty in shaping corporate outcomes.

6 Conclusion

The paper considers the impact of trade policy uncertainty (TPU) on the finance of public Chinese firms, specifically exports, listed between 2016 and 2024 in the Shanghai and Shenzhen stock exchanges. The paper employs firm-level data and the Trade Policy Uncertainty sub-index in the Economic Policy Uncertainty (EPU) Index and finds that the profitability of the firms declines considerably as trade policy uncertainty rises.

The base regression captures the presence of the deep negative correlation between TPU and ROA, affirming the intuition that greater trade policy uncertainty impedes operational efficiency and profit margins. Even with the control for the important finance proxies, firm size, leverage, and working capital efficiency, the effect holds. Moreover, the findings are supported using the return on equity (ROE) as the second performance metric in tests for robustness, as it affirms that TPU decreases shareholder returns.

These findings have important bearings for policymakers and managers in the business community. As stability and clarity can support investors' trust and minimize operating risks for firms that depend on exports, the findings emphasize the need for governments to minimize erratic shifts in trade policy, especially in export-dependent nations such as China. The analysis highlights the need for active risk management for business managers in the form of export market diversification and the use of flexible financial planning, to counteract the adverse effects of uncertainty in the conduct of policy.

In summary, providing firm-level proof for the US-China trade tensions, the paper contributes to the literature on policy uncertainty and confirms that TPU is not just an economic phenomenon at the macro level, but it is an important motivator for firm-level finance too. To explore the broader implications of policy uncertainty in international trade, follow-up work may complement the paper with analysis of country heterogeneity, supply chain flexibility, or firm-level innovations.

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