Do Major Government Customers Help U.S. Firms Escape Foreign Competition?

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Abstract

This paper studies whether government-dependent firms are more resilient to foreign competition. Using the United States granting Permanent Normal Trade Relations to China as an exogenous shock, we show that government contractors have better operating performance than their peers when their industries are more exposed to the import shock. The results are robust to the inclusion of a broad set of controls, instrumental variable analysis, matching analysis, and alternative proxies of government dependence and import competition. The beneficial effect is found to be stronger among firms with greater financial constraints or less corporate diversification. Further analysis shows that government procurements allow firms to maintain a higher level of investment and investment efficiency and enjoy a lower demand uncertainty when import competition intensifies. Overall, this study provides further evidence of the effect of government participation in product market.

Permanent Normal Trade Relations (PNTR)

U.S. imports from China were subject to relatively high tariff rates imposed by the Smoot-Hawley Tariff Act of 1930, known as the "non-Normal Trade Relations (non-NTR) tariff rates". Starting in 1980, the U.S. president granted a waiver to China on an annually renewable basis and allowed imports from China to enjoy the relatively low "Normal Trade Relations" (NTR) tariff rates that the United States offered World Trade Organization (WTO) members. However, the annual waiver was subject to Congress approval and was politically contentious. This created high uncertainty about China's NTR status and deterred U.S. firms from sourcing goods from China (Pierce and Schott, 2016). In October 2000, PNTR was passed by U.S. Congress and went into effect in December 2001 upon China's accession to the WTO. The passage of PNTR effectively eliminated the uncertainty associated with China's NTR status, leading to a substantial reduction in expected U.S. import tariffs on Chinese goods. The impact of PNTR also varies across industries. Pierce and Schott (2016) show that industries more exposed to the policy change experience a greater increase in Chinese imports after the passage of PNTR than do other industries.

Government as a Major Customer

Governments are important customers of public and private firms around the world. Many public U.S. firms report government departments and agencies as their significant customers in their regulatory filings. Our data shows that for these government-dependent firms, more than 35% of their total revenues are generated from the government. Prior studies show that, relative to private investment, U.S. government purchases are very stable over time, with a low correlation between GDP and total government procurement expenditures (Bachmann and Bai, 2013; Goldman, 2020). Since government customers often offer longer-term procurement contracts, government purchases are likely to be stable at the firm level. As a result, having a major government customer can provide supplier firms with distinct benefits. In particular, government contractors would face lower default risk and lower risk of being replaced by their government customers (Dhaliwal et al., 2016; Cohen and Li, 2020).

Contributions

First, our paper adds to the international business literature on the impact of import competition on firms. Very few studies explore factors that can help firms in developed countries better cope with intensified foreign competition. Second, this paper contributes to the emerging line of studies that investigates the impact of government spending on firm behavior. Though macroeconomic studies have examined how government purchase affects the overall economy, the role of government entities as major customers to private sector firms is understudied. Third, our paper adds to the literature that investigates how a firm's customer affects corporate outcomes. We focus on firms with government purchase. Finally, our paper also contributes to the literature that examines how different trade polices affect corporate performance. This study sheds some additional light on the real consequences of PNTR and the resulting increased Chinese imports on U.S. firms.

Main Results

1. Baseline results

	ROA$_{t+1}$			Profit margin$_{t+1}$		
	(1)	(2)	(3)	(4)	(5)	(6)
NTR gap	0.134***	-0.009	-0.011	0.181	-0.044	-0.047
	(4.786)	(-0.133)	(-0.157)	(1.031)	(-0.128)	(-0.140)
NTR gap ×Post	-0.099**	0.004	0.033	-1.321***	-0.398***	-0.812*
	(-2.187)	(0.153)	(0.470)	(-3.049)	(-2.632)	(-1.900)
Major gov	-0.009	-0.018*	-0.018*	-0.141**	-0.110	-0.115
	(-1.459)	(-1.847)	(-1.934)	(-2.277)	(-1.409)	(-1.451)
NTR gap ×Post ×Major gov	0.198***	0.119***	0.126***	1.043***	0.390*	0.401*
	(6.171)	(3.734)	(3.981)	(3.914)	(1.953)	(1.918)
Major corp	0.031***	0.014***	0.015***	0.293***	0.169***	0.162***
	(9.282)	(3.845)	(3.860)	(10.707)	(5.537)	(5.492)
NTR gap ×Post ×Major corp	0.027*	-0.017	-0.018	0.500***	0.011	0.052
	(1.700)	(-1.266)	(-1.254)	(3.540)	(0.107)	(0.503)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
NTR gap ×Post ×controls	No	No	Yes	No	No	Yes
Industry-year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	No	Yes	Yes	No	Yes	Yes
Observations	50,719	50,719	50,719	46,344	46,344	46,344
R-squared	0.490	0.733	0.733	0.336	0.719	0.720

Controls include: Log (Assets), Log (1+Age), M/B, Leverage, Capital intensity, R&D intensity, Tangibility, HHI, and Log (1+Political contribution)

2. Heterogeneous Effects

	ROA				Profit margin			
	(1) Constrained	(2) Unconstrained	(3) Diversified	(4) Non-diversified	(5) Constrained	(6) Unconstrained	(7) Diversified	(8) Non-diversified
NTR gap	0.177***	0.026*	0.127***	0.120***	-0.038	0.112	0.267***	0.220
	(3.425)	(1.725)	(5.585)	(3.094)	(-0.108)	(1.467)	(3.644)	(0.939)
NTR gap ×Post	-0.227**	-0.012	-0.057	-0.120**	1.999***	0.654***	-0.035	1.655***
	(-2.553)	(-0.468)	(-1.373)	(-2.016)	(-2.894)	(-2.815)	(-0.224)	(-3.207)
Major gov	-0.003	-0.002	0.009	-0.009	-0.233*	0.019	0.049*	-0.170**
	(-0.253)	(-0.346)	(1.129)	(-1.065)	(-1.857)	(1.229)	(1.893)	(-1.995)
NTR gap ×Post ×Major gov	0.371***	-0.022	0.055	0.259***	2.288***	-0.159	-0.068	1.578***
	(5.476)	(-1.034)	(1.474)	(5.834)	(3.989)	(-1.339)	(-0.569)	(4.088)
Differences	0.393***		-0.204***		2.447***		-1.646***	
Chi-Square	34.42		12.79		17.75		16.11	
P-value	0.000		0.000		0.000		0.000	
Baseline controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,814	25,872	10,848	37,791	21,616	24,685	10,482	33,857
R-squared	0.492	0.254	0.322	0.501	0.339	0.189	0.237	0.340

3. Mechanism: Investments

	CAPEX (1)	Total investment (2)	Log (Employment) (3)	Employment growth (4)
NTR gap	0.019**	0.035**	0.436***	0.061*
	(2.149)	(1.996)	(4.283)	(1.781)
NTR gap ×Post	-0.035*	0.031	-0.557***	0.065
	(-1.948)	(0.811)	(-2.688)	(1.248)
Major gov	-0.007***	-0.003	-0.010	-0.020**
	(-5.123)	(-0.500)	(-0.681)	(-2.079)
NTR gap ×Post ×Major gov	0.026***	0.051*	0.144**	0.122***
	(3.749)	(1.933)	(1.969)	(3.064)
Baseline controls	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes
Observations	44,339	39,463	49,792	44,358
R-squared	0.353	0.454	0.939	0.093

4. Mechanism: Demand Uncertainty and Investment Efficiency

	Demand Unc (1)	ROA (2)	Profit margin (3)	CAPEX (4)	CAPEX (5)
NTR gap	-0.688	0.066**	-0.117	0.013	0.022***
	(-0.787)	(2.225)	(-0.585)	(1.541)	(2.598)
NTR gap ×Post	-0.102	-0.031	-0.555*	-0.022	-0.033**
	(-0.069)	(-0.629)	(-1.879)	(-1.588)	(-2.166)
Major gov	0.045				-0.009***
	(0.289)				(-6.180)
NTR gap ×Post ×Major gov	-1.978***				0.020**
	(-2.865)				(2.407)
Demand_uncertainty		-0.076***	-0.182	-0.004	
		(-5.494)	(-1.455)	(-1.236)	
NTR gap ×Post ×*Demand_uncertainty*			-0.047***	-0.549***	0.000
			(-3.727)	(-4.339)	(-0.145)
Sales growth				0.006***	0.000
				(6.026)	(0.590)
Sales growth ×NTR gap ×Post ×*Demand_uncertainty*				-0.003**	
				(-2.450)	
Sales growth ×NTR gap ×Post ×Major gov					0.021*
					(1.756)
Baseline controls	Yes	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	48,345	50,719	46,344	42,533	42,533
R-squared	0.028	0.491	0.339	0.367	0.341

Conclusion

- Greater import competition leads to lower profitability for average firms, but not for firms that have a significant business relationship with the U.S. government.

- The positive effects of having major government customers are more pronounced for firms with greater financial constraints or less business diversification.

- Sustained investments, decreased demand uncertainty, and higher investment efficiency are potential mechanisms through which government purchases affect firm performance around trade shocks.

- Robust results when we use several alternative measures of government dependence and foreign competition.

- When firms face greater import competition, major government customers is negatively associated with their cost of bank loans.

- Overall, our results suggest a beneficial effect of the government's participation in product market.

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