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# **Political Connections and Antidumping Investigations: Evidence from China**

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**Political Connections and Antidumping Investigations: Evidence from China\***

**ZHANG Hongyong<sup>†</sup>**

Abstract

Do political connections affect antidumping (AD) investigations? To address this question, we use antidumping filings data combined with micro data on Chinese manufacturing firms for the period 1998-2007. The political connections of a firm are defined by whether it has state-owned capital or whether it is under the administration of central or provincial government. Estimating a probit model of AD filings at the firm level, we find that strong political connections significantly increase the likelihood of AD petitions and affirmative final dumping decisions. State-owned enterprises, firms affiliated with the central or provincial government, low productivity firms, and large firms tend to file AD investigations in China. The industry-level estimation results also confirm that industries with a greater presence of state-owned enterprises are likely to receive trade protection from the Chinese government, controlling for import penetration, year, and industry fixed effects.

*Keywords:* Antidumping, Political connections, State-owned enterprises

*JEL Classification:* F13, F14

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## 1. Introduction

In recent years, the world economy has faced a slowdown and increasing protectionism and import protection policies. According to the World Trade Organization (WTO), the number of antidumping (AD) initiations (measures) by reporting members was 230 (181) in 2015 and exceeded 173 (134) cases in 2010 and 217 (143) cases during the financial crisis in the years 2008 and 2009. The causes and consequences of trade protection including AD investigations have been studied extensively in the literature (see Blonigen and Prusa, 2015 for a recent survey). However, there is still a lack of evidence on the political-economic determinants of trade protection (AD, in this paper), particularly in developing countries, for two reasons. First, the political-economic factors and variables are typically unobserved by economists. As noted by Pierce (2011), “firms applying for protection may take into account whether they have political connections—such as the support of a member of Congress, or participation in a politically sensitive industry—that would affect their chances of receiving protection.” Second, due to a lack of availability of micro-data, trade protection in developing countries is underexplored despite AD investigations and measures widely used by developing countries (see Bown, 2011 for a detailed description of the evolution of AD and other temporary trade barriers).

The goal of this paper is to empirically examine the political-economic factors of AD investigations against foreign firms. Specifically, using comprehensive Chinese firm-level data, we examine whether political connections and favoritism affect China's AD investigations. In this paper, we determine whether a firm is politically connected or favored from three perspectives: whether a firm is a state-owned enterprise, the capital share owned by the state, and whether a firm is under the administration of central or provincial government. These measures are representative and employed in the previous literature. For example, as in this paper, Cai, Lu, and Zhu (2016) use the affiliation of a state-owned enterprise (SOE) as a proxy for the degree of government protection it receives. Li, Meng, Wang, and Zhu (2008) treat the Chinese Communist Party membership of private entrepreneurs as political connections.<sup>1</sup>

China is an excellent setting for the study of this topic. China experienced great trade liberalization in the late 1990s and 2000s and entered the WTO in 2001. As a condition to joining the WTO, China conducted substantial tariff reform in the late 1990s. At the same time, China has started using AD instruments intensively (see Figure 1).<sup>2</sup> In 2002, the number of AD

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<sup>1</sup> For Indonesia, another large developing country, Fu, Shimamoto, and Todo (2015) use measures such as personal relations between firm managers and politicians, government ownership, and politicians on the board of directors.

<sup>2</sup> See Bown (2010) and Chandra (2011) for a comprehensive introduction of China's AD policies and safeguards.

initiations by China accounted for 10% of total initiations in the world. In 2003, the share of China's AD measures (AD duties in force) to the total measures in the world increased to 15%. A possible explanation is that trade liberalization could promote the use of AD, which is similar to the case of India described in Bown and Tovar (2011) and theoretically studied by Mukunoki (2017). However, although 15 years have passed since its WTO accession, many countries such as the United States, the European Union, and Japan still do not recognize China as a market economy. Considering the non-market characteristics and the state capitalism of the Chinese economy,<sup>3</sup> China provides a suitable testing environment in which to examine the relationship between political connections and trade protection.

[Insert Figure 1 here]

In the empirical analysis, we use comprehensive AD investigation data merged with Chinese firm-level data for the period 1998 to 2007 and examine the political-economic factors of China's use of AD. Estimating the probabilities of AD petitions and AD case outcomes at the firm-level, we find that strong political connections significantly increased the probabilities of AD petitions and received affirmative decisions in most cases. Firms have a greater state capital share, and firms affiliated with the central or provincial government have a higher propensity to file AD petitions.

Our study is mostly related to the literature focusing on the political-economic factors of trade protection including AD investigations and duties. Grossman and Helpman (1994) propose a theoretical model and explanation of trade protection based on government-industry interaction. Using product-level data from India, Bown and Tovar (2011) test the Grossman and Helpman (1994) model and find that India unwound its commitment to reduce tariffs using AD and safeguard protection in the face of political-economic pressure. The authors use the counts of the number of groups listed in the World Guide to Trade Associations as a measure of interest group activities. In contrast, we use direct measures of political-economy variables, that is, SOEs and their affiliations with the government, and examine how such political connections could affect trade protection. This paper, to the best of our knowledge, is the first to show the relationship between political connections and AD protection at the firm-level.

This paper also relates to Knetter and Prusa (2003), Bown and Crowley (2013), and Bao and Qiu (2011). These authors argue that macroeconomic factors and retaliatory factors may also affect a country's AD investigations and duties. Furthermore, there is vast literature studying the impact of AD on international trade. In the context of China, Park (2009) and Chandra (2016) examine

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<sup>3</sup> See Li, Liu, and Wang (2015) for arguments on China's state capitalism.

trade depressing and diversion effects of China-initiated AD. On the other hand, Chandra and Long (2013) and Lu, Tao and Zhang (2013) investigate the responses of Chinese firms to foreign use of AD against China.

The remainder of the paper is organized as follows. Section 2 describes the data on China's AD investigations and manufacturing firms. Section 3 show the relationship between political connections and AD investigations. Section 4 concludes.

## **2. Data**

Our main firm-level data for this study come from the Annual Survey of Industrial Firms (ASIF) collected by China's National Bureau of Statistics (NBS) for the period 1998 to 2007. These annual surveys cover all SOEs and non-SOEs in industrial sectors with annual sales greater than 5 million RMB. The ASIF data provide detailed firm-level information on capital, intermediate inputs, the number of employees, sales, profits, and four-digit industry affiliations.<sup>4</sup>

The political connections are key variables in this study, which requires us to first identify political connections in the sample. We identify whether a firm is politically connected in three ways. First, we follow the official definition of SOEs in the data. Specifically, SOEs correspond to three specific registered ownership types in the data: SOEs, state-associated enterprises, and enterprises solely funded by the state. Second, as an alternative measure of SOEs, we use registered capital share owned by the state. We assume that the larger the state capital share, the stronger the firm's political connections. Third, following Cai, Lu, and Zhu (2016), we use the affiliation of an SOE as a proxy for the degree of government protection it received and investigate whether SOEs administrated by different levels of the Chinese government affect China's AD investigations differently. The SOEs in the sample are classified as those firms under the administration of the government above the city level (i.e., central or provincial government) or those administrated by a city, county, or township government.

The AD data come from the Global AD Database (GAD) of the World Bank developed by Bown (2016), and we supplement the database using relevant announcements from China's Ministry of Commerce (MOFCOM). The AD database has information on AD duties imposed by 25 countries from 1980 to 2014 including a description of the product under investigation (HS six-digit code), target countries and regions, date of investigation initiation, date of preliminary AD measure

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<sup>4</sup> These data are the most comprehensive firm-level dataset in China and have been widely used by economic researchers in recent years (for example, Cai and Liu, 2009; Brandt, Van Biesebroeck, and Zhang, 2012)

imposition, date of final AD measure imposition, and other information. Importantly, the database includes the names of domestic firms that initiated AD duty in several countries including China. In this paper, we focus on AD investigations and measures initiated by China against foreign countries regardless of the country's location.

Although the GAD includes information on all AD investigations initiated by Chinese firms, it only provides firm names in English. On the other hand, MOFCOM releases all relevant AD filings with HS codes and firm names in Chinese. We updated the GAD using the notices released by MOFCOM. In fact, as Bown (2016) indicated, China's AD investigations in GAD originally come from MOFCOM. We merge these AD-related firms with the micro-data from manufacturing firms (firm names are in Chinese) described in this section to implement our analysis.

Figure 2 shows the number of AD investigations completed by outcome for the period 1999 to 2014. The number of AD investigations increases immediately following China's WTO accession in 2001, and the number of new measures spiked in 2003. Another feature of China's AD investigations is that most of the cases received affirmative final decisions, which is quite different from AD investigations in the United States.

[Insert Figure 2 here]

Table 1 reports the distribution of products involved in AD investigations that were completed from 1998 to 2007 by two-digit HS Chapter. The most frequent petitioners of AD duties were producers of "Organic chemicals" (Chapter 29) and "Iron and steel" (Chapter 72). Other active applicants for AD protection included producers of "Paper and paperboard" (Chapter 48), "Plastic and articles thereof" (Chapter 39), and "Man-made staple fibers" (Chapter 55).

[Insert Table 1 here]

With the AD investigation data and firm-level production data in hand, we merge these two datasets by firm name and industry classification. We also convert HS six-digit codes in AD investigations data to four-digit Chinese Industry Classification (CIC) in the manufacturing firm data. Regarding the AD cases filed by some industrial associations, we identify the relevant industries as AD-related industries.

### **3. Political connections and AD investigations**

#### **3.1. Probit model estimation**

To examine the relationship between political connections and AD investigations at the firm-level, we perform probit estimations of the likelihood of AD petitions and AD case outcomes using the following equation:

$$\Pr(AD_{ft} = 1) = \Phi(\alpha + \beta SOE_{ft-1} + \gamma X'_{ft-1} + FE_i + FE_t + \varepsilon_{ft}) \quad (1)$$

For the estimation on petition,  $AD_{ft}$  equals one if a firm files an AD petition at year  $t$  and zero otherwise; for the estimation on outcome,  $AD_{ft}$  equals one if a firm's AD petition receives an affirmative decision and zero if the decision is negative or terminated. The key independent variable,  $SOE_{ft}$  is either (a) the SOE dummy, (b) the state capital share in firm  $f$ , or (c) the central/province SOE dummy, which indicates a firm's affiliation with government (= 1 if central or provincial government; = 0 otherwise). The expected sign of the coefficient is  $\beta > 0$ . We rely on this approach to test whether, on average, SOEs have a higher likelihood of filing AD. To our knowledge, this has not been documented, and we consider this the first important set of results. We control for total factor productivity (TFP) and sales to capture performance differences in productivity and firm size.<sup>5</sup> Since the sub-industries that produce goods that are subject to import competition are different from those that do not, we include the lagged one-year industry-level import penetration ratio to control for self-selection of AD petitions. Additionally, we include a full set of four-digit industry fixed effects  $FE_i$  and year fixed effects  $FE_t$  to control for any industry-specific and macroeconomic shocks. We focus on those sub-industries that had at least one firm file an AD case during our sample period.

Table 2 shows the results of the AD petitions. The focus of attention is on the SOE variables. The coefficients are positive and statistically significant at the 1% level in columns 1 to 3. First, compared with non-SOEs, SOEs are more likely to file an AD petition. Second, the likelihood of an AD petition increases with the state capital share suggesting a positive relationship between political connections and AD petitions. Third, if the SOE is under the administration of central or provincial government, it has a higher propensity to be involved in AD investigation. This implies

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<sup>5</sup> We use the methodology developed by Levinsohn and Petrin (2003) to estimate firm-level TFP. Since the information on production quantity is not available in the dataset, we cannot use quantity-based productivity.

that firms affiliated to central or provincial governments have stronger political connections than those under the administration of city/county/township governments. Regarding the firm characteristics variables, low-productivity firms and large firms tend to file AD petitions.

[Insert Table 2 here]

Table 3 reports the results of the AD investigation outcomes. There are 520 observations since the regressions only include the firms that had AD petition experience. The results show that among AD firms, the correlation between two SOE dummies and receiving affirmative decisions is positive and statistically significant, which suggests that SOEs have a higher likelihood of receiving protection from the government. The only exception is column 2. A possible explanation for the results is that there are few variations both for the dependent variable (most AD petitions will receive affirmative decisions) and independent variables across the firms that applied for AD protections.

[Insert Table 3 here]

There are potential concerns that the results in Table 2 and Table 3 may suffer some biases due to sample selection. For example, some firms cooperate to file a case, or some industry associations, not firms, also apply for AD protection. Moreover, the government may decide whether to approve protection for petitioners based on the macroeconomic variables such as import penetration, employment and, potentially, the presence of SOEs in the sub-industry rather than the petitions of some specific firms. To address such concerns, we estimate a probability of protection at the four-digit industry-level. Table 4 shows that the probability of receiving AD protection increases with more SOE employment, higher import penetration, and greater labor productivity.<sup>6</sup> These results suggest that firm's political connections with the government would affect their chances of receiving protection.

[Insert Table 4 here]

### **3.2.Discussion: SOEs' performance**

For understanding SOEs' high propensity for AD filings, it is useful to have a look at the relationship between political connections and firm performance. Tables 2 and 3 show that SOEs and low-productivity firms tend to file AD petitions, but the relationship between SOEs and productivity is not clear. We simply relate firms' performance to their political connections in a

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<sup>6</sup> Our results are robust to the sales of SOEs and the share of SOEs' industry sales.



regression framework and estimate the percentage difference in performance between SOEs and non-SOEs. The specification we apply to the data is given by

$$\ln Y_{ft} = \alpha + \beta SOE_{ft} + FE_i + FE_t + \varepsilon_{ft} \quad (2)$$

where  $Y$  is the measure of firm performance: TFP, labor productivity (value added divided by the number of employees), sales, or the number of employees.  $SOE_{ft}$  is a dummy indicating whether the ownership is state-owned, and  $\beta$  measures the percentage performance difference for SOEs. Note that we are not interpreting  $\beta$  as a causal parameter. We estimate this regression for two-digit chemicals industries for the period 1998 to 2007. A full set of four-digit industry fixed effects  $FE_i$  and year fixed effects  $FE_t$  are included to control for industry-specific and macroeconomic shocks.

Table 5 reports the differences in firm performance between SOEs and non-SOEs. The results reported in Panel A suggest that, on average, SOEs are less productive than non-SOEs in terms of TFP (11%), fewer sales (32%), and lower profitability (6%). However, compared with non-SOEs, SOEs have more employment (50%) and receive more production subsidies from the central or local government. The results suggest that the performance of SOEs and non-SOEs are systematically different from each other, and low productivity and profitability SOEs are likely to seek trade protection from the government. Even when we restrict our samples to the AD firms in Panel B, we still find that SOEs are large firms with more subsidies but lower profitability.

[Insert Table 5 here]

#### 4. Conclusion

AD duties are frequently used by both developed and developing countries to protect domestic firms from import competition. However, knowledge of the political-economic factors of AD investigations is limited. Focusing on China, the largest developing country, and one of the most important users of AD duties, this paper empirically examines how political connections affect AD investigations and how Chinese firms respond to trade protection. We find that SOEs and those affiliated with central and provincial governments are more likely to file AD petitions and obtain affirmative decisions in most cases. This suggests that political connections do affect AD investigations and outcomes.

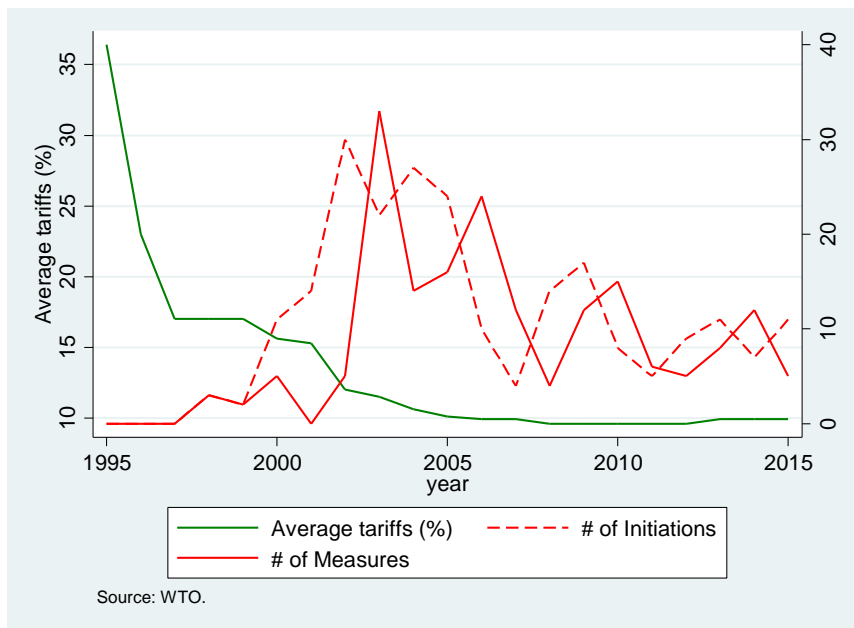
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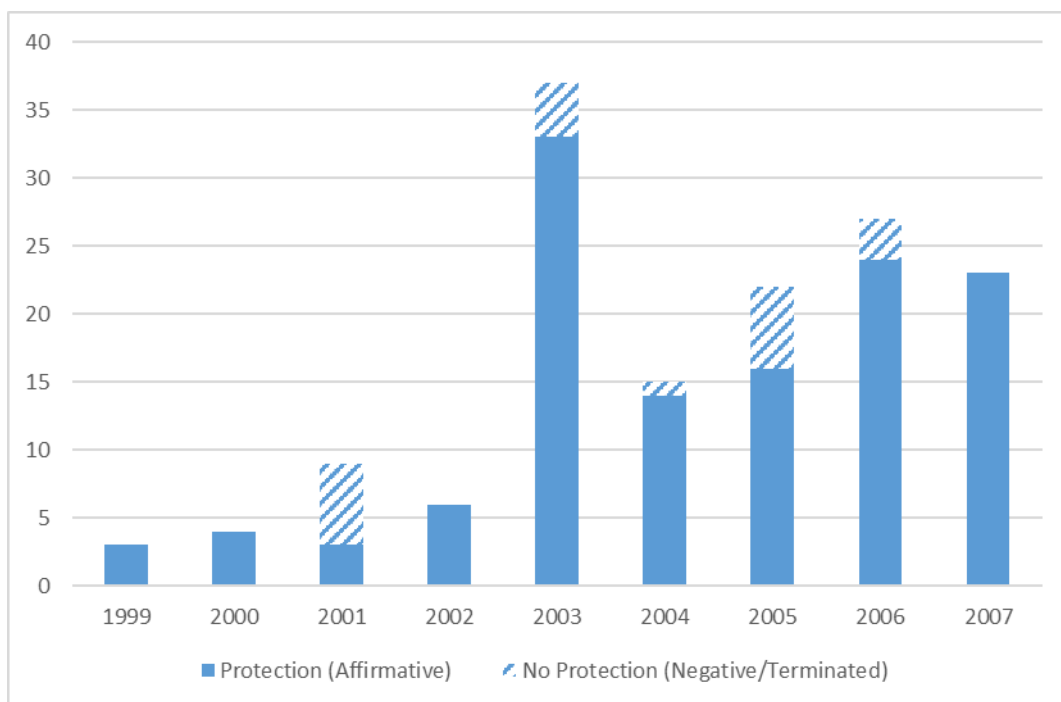
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**Figure 1. China's tariffs and AD investigations**



**Figure 2. AD investigations by outcome**



Note: The terminated include cases terminated prior to ruling by government and cases withdrawn prior to ruling by petition industry.

Source: Global AD Database, World Bank.

**Table 1. AD investigations by industry and outcome**

HS2	Description	Final Dumping Decision	
		Affirmative	Negative/Terminated
11	Products of the milling industry	1	
28	Inorganic chemicals	4	
29	Organic chemicals	84	10
38	Miscellaneous chemical products	6	2
39	Plastics and articles	13	3
40	Rubber and articles	6	3
48	Paper and paperboard	30	
54	Man-made filaments	10	2
55	Man-made staple fibers	2	
72	Iron and steel	73	
90	Precision instruments and apparatus	3	
Total		232	20

Source: Global AD Database, World Bank.

**Table 2. SOEs and AD petition probability**

	(1)	(2)	(3)
Dependent variable: "1" if petition; "0" otherwise			
		ME	ME
SOE dummy	0.209* [0.118]	0.0008	
SOE share		0.415*** [0.123]	0.0017
Central/Province SOE dummy			0.524*** [0.135]
TFP	-0.164 [0.269]	-0.0006	-0.143 [0.267]
Sales	0.568*** [0.099]	0.0023	0.546*** [0.098]
Import penetration	0.333* [0.170]	0.0013	0.319* [0.172]
Year fixed effects	Yes	Yes	Yes
4-digit industry fixed effects	Yes	Yes	Yes
Observations	150473	150473	150473
Pseudo R-squared	0.401	0.406	0.407

Note: Firm TFP and sales are in logarithm. Import penetration is the share of imports to output at the four-digit industry level. All explanatory variables are one-year lagged. ME is marginal effect. Standard errors in parentheses are clustered at the firm-level. \*\*\*, \*\* and \* denote significance at the 1, 5, and 10% level, respectively.

**Table 3. SOEs and AD outcome probability**

	(1)	(2)	(3)
Dependent variable: "1" if affirmative; "0" if negative/terminated			
		ME	ME
SOE dummy	0.508* [0.277]	0.132	
SOE share		0.406 [0.325]	0.106
Central/Province SOE dummy			0.598** [0.272]
TFP	0.098 [0.742]	0.025	0.109 [0.745]
Sales	0.177 [0.280]	0.046	0.199 [0.286]
Import penetration	0.687* [0.373]	0.178	0.622* [0.367]
Year fixed effects	Yes	Yes	Yes
4-digit industry fixed effects	Yes	Yes	Yes
Observations	520	520	520
Pseudo R-squared	0.268	0.264	0.269

Note: Firm TFP and sales are in logarithm. Import penetration is the share of imports to output at the four-digit industry-level. All explanatory variables are one-year lagged. ME is marginal effect. Standard errors in parentheses are clustered at the firm-level. \*\*\*, \*\* and \* denote significance at the 1, 5, and 10% level, respectively.

**Table 4. Industry-level results for AD protection**

	(1)	(2)
Dependent variable: "1" if affirmative; "0" if negative/terminated/no petition		
		ME
SOE employment	0.221*** [0.038]	0.010
Share of SOE employment		0.510*** [0.182]
Import penetration	0.118*** [0.031]	0.005
Labor productivity	0.508*** [0.071]	0.022
Year fixed effects	Yes	Yes
Observations	4087	4087
Pseudo R-squared	0.193	0.111

Note: All explanatory variables are at the four-digit industry-level with a one-year lag. ME is marginal effect. Standard errors in parentheses are clustered at the industry-level. \*\*\*, \*\* and \* denote significance at the 1, 5, and 10% level, respectively.

**Table 5. SOEs' performance**

	(1)	(2)	(3)	(4)	(5)
	TFP	Employment	Sales	Profitability	Subsidies
<b>Panel A: Full sample</b>					
SOE dummy	-0.112*** [0.013]	0.553*** [0.028]	-0.311*** [0.035]	-0.062*** [0.002]	0.006*** [0.002]
Year fixed effects	Yes	Yes	Yes	Yes	Yes
4-digit industry fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	229078	229078	229078	229078	229078
R-squared	0.080	0.103	0.080	0.059	0.000
<b>Panel B: Antidumping firms</b>					
SOE dummy	-0.067 [0.093]	0.631** [0.285]	-0.031 [0.310]	-0.028** [0.014]	0.005** [0.002]
Year fixed effects	Yes	Yes	Yes	Yes	Yes
4-digit industry fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	672	672	672	672	672
R-squared	0.458	0.564	0.549	0.092	0.138

Note: Firm TFP, employment, and sales are in logarithm. Profitability is the ratio of profits to sales, and subsidies are the ratio of production subsidies to sales. Standard errors in parentheses are clustered at the firm-level. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10% level, respectively.