Who Benefits from the Decline of American Manufacturing?

Evidence from 142,663 Foreign and Domestic Entries in China

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Abstract

Using the establishment of U.S.-China Permanent Normal Trade Relation as a plausibly exogenous shock, we study the effect of trade liberalization on domestic entrepreneurial entry and new foreign firms in China. The positive effect on entry rate is concentrated among foreign firms. Foreign entrants' export propensity is more responsive to trade shock. Domestic entrants' export propensity varies with local financial development. Foreign entrants are less financially constrained and grow faster, especially in undeveloped areas. Our results suggest that in emerging markets, trade globalization may in the first instance benefit foreign investors rather than domestic firms and entrepreneurs.

JEL Classification: F13, F23, F61, G15, G32, L26

Key Words: Globalization, International Trade, Trade War, Export, Financial Development, Financial Constraint, Entrepreneurship, China

1. Introduction

Prior literature documents many serious consequences of international trade for the manufacturing sector in the United States. Import competition from China, in particular, is blamed for various problems in American manufacturing sector, including firm closures (Bernard, Jensen, and Schott, 2006), reduced innovative activities (Autor, Dorn, Hanson, Pisano, and Shu, 2016), and reduced sales growth and profitability (Hombert and Matray, 2017). Recent work shows that the economic impacts of Chinese import competition are also highly asymmetric— many of the negative effects fall on working-class Americans (e.g., Pierce and Schott, 2016) and entrepreneurial firms (Ayyagari and Maksimovic, 2017; Aslan and Kumar, 2018). The question of who benefits at the expense of American workers and small business owners has drawn considerable attention from the public.[1] Despite detailed evidence on the downside of free trade in the United States, very little is known about the effects of free trade on entrepreneurial activities in China.

In this paper, we study entry decisions and export activities of new firms in China and identify which types of firms benefit the most from trade globalization. We use the formation of U.S.-China Permanent Normal Trade Relation (PNTR), which is a change in U.S. trade policy that virtually eliminated potential tariff increases on Chinese imports, as a plausibly exogenous trade shock.[2] We show that in underdeveloped financial markets, such as China's, trade liberalization in

[1] Consistent with popular view, Steve Bannon, former White House Chief Strategist, stated "The globalists gutted the American working class and created a middle class in Asia … [*Politico Magazine*, August 18, 2017]."

[2] Since 1980, the U.S. has applied the Normal Trade Relations (NTR) tariff, the relatively low rates reserved for WTO members, to Chinese imports. However, these low NTR rates required annual renewals which were politically contentious. Without the renewal, the tariffs could revert to a much higher non-NTR tariff rates, originally set in 1930 under the Smoot-Hawley Tariff Act. In October 2000, the U.S. Congress passed the law granting Permanent Normal Trade Relations (PNTR) to China, thereby

the first instance may benefit foreign investors more than domestic entrepreneurs, who lack financial resources to support exporting activities. Based on a firm-level dataset with 142,663 manufacturing entries and 670,049 firm-year observations from the Chinese National Bureau of Statistics (Chinese Census), our major findings are as follows:

First, the trade shock increases entry rates of foreign firms. Among foreign entrants, the trade shock greatly increases their propensity to export. On the contrary, the trade shock has no effect on entry rates of domestic firms. Among domestic entrants, the trade shock increases their export propensity but to a lesser degree than foreign entrants. Among entrants that do not export during their first year, foreign entrants are more likely to start exporting in subsequent years than domestic entrants.

Second, the effect of trade shock on export propensity of domestic entrants, especially small private entrants, is sensitive to local financial development. Domestic entrants in developed areas with better financial market access are more responsive to the trade shock than their counterparts in undeveloped areas. In contrast, the response of foreign entrants does not depend on local financial development. This finding is consistent with the notion that domestic entrants rely more on local financial markets. In financially developed areas, domestic firms have greater ability to raise external capital to finance costly export activities.[3] In undeveloped markets, domestic firms may not be able to raise the necessary amount of external capital so they are at a disadvantage relative to foreign firms. We also find that both domestic and foreign entrants are more likely to export in

eliminating the possibility of sudden spikes on tariff. Pierce and Schott (2015) document a link between this tariff shock and a sharp decline in manufacturing unemployment in the U.S.

[3] Overseas sales tend to require more financial resources than domestic sales. For example, Beck (2002, 2003), Zia (2008), and Minetti and Zhu (2011) show that financial constraints play an important role in determining the level of foreign sales.

response to the trade shock in areas with less customs bureaucracy and better infrastructure development.

Third, foreign entrants are larger, better capitalized, and less taxed than domestic entrants. They are also more likely to survive and grow faster within one-year, two-year, and three-year horizons following the entry. This result confirms that foreign firms are less financially constrained than domestic firms. These foreign-domestic differences are greater in underdeveloped areas, in accord with prior results.

Fourth, large firms are more responsive to trade shock than small firms (both in terms of increased entry rate and export propensity). While existing studies (see, for example, Bernard, Jensen, Redding, and Schott, 2007) document that export propensity generally increases with firm size, it is unclear whether large firms should be more or less responsive to the trade shock. On one hand, small firms might be less responsive because they are subject to financial constraints related to export. On the other hand, small firms may be more responsive because the trade shock helps them overcome financial constraints while large firms are not subjected to these constraints in the first place. We further show that the effect of trade shock on export propensity of small entrants depends on local financial development, confirming the latter hypothesis and highlighting the role of financial development on entrepreneurship. Double sorting by size and ownership verifies that the effects of size and foreign ownership are distinct.

Fifth, export propensity is more responsive to trade shock in cities with higher fraction of large businesses. This result deviates from Chinitz (1961) where the prevalence of small businesses in the U.S. is associated with more favorable economic environments and city-level entrepreneurial mindset. If Chinitz (1961)'s hypothesis applies to China, cities with higher fraction of small

businesses should have larger response to trade shock.

Sixth, we find that the trade shock also increases incumbents' propensity to export. Similar to entrants, foreign incumbents are more responsive to trade shock than domestic incumbents. We also find that domestic incumbents are more likely to be acquired by foreign investors as a result of the trade shock.

Last but not least, using the World Bank's data on foreign direct investment projects in China, we find that Japan, U.S., and Germany are among the top three home countries for foreign direct investment projects after the trade shock, with 23.92% (23.77%, 5.87%) of these investment projects made by Japanese (American, German) investors, respectively. We show that American investors are more likely to invest in industries that would benefit most from the trade shock, and they are more likely to invest in less developed areas compared with investors from other countries.

We acknowledge the possibility that other contemporaneous shocks such as policy changes related to China's accession to WTO might affect export entry in China. Our results are robust to controlling for a comprehensive list of contemporaneous shocks including changes in export licensing policy, foreign ownership restrictions, import tariffs, and production subsidies in China, and the abolishment of import quotas on some textile and clothing imports in 2002 under the global Multi-Fiber Arrangement (MFA), and the bursting of tech "bubble" in the U.S. Our results are robust to alternative measures of firm entry, industry exposure to the trade shock, and development, and alternative specifications using Probit regressions, triple interaction term, different fixed effects, standard errors clustered at the industry levels, potentially endogenous firm controls, and separate linear time trends for control and treatment groups.

This paper contributes to several strands of literature. Given our focus on new firms, we

add to the literature on entrepreneurship and new firm creation. Prior papers document the importance of financing on entrepreneurial activities in the U.S. For example, Hellmann and Puri (2000) show that venture capital financing is related to product market strategies and outcomes of new firms. Babina, Ouimet, and Zarutskie (2017) find that wealth gains from successful IPOs allow employees to depart to start-ups. Here, we examine the roles of financial factors on entrepreneurship in an emerging market.

The financial development literature shows that well-functioning financial markets can alleviate agency and asymmetric information problems and promote economic growth (e.g., Demirguc-Kunt and Maksimovic, 1998; Rajan and Zingales, 1998; Beck, Demirguc-Kunt, and Maksimovic, 2005, 2008; Ayyagari, Demirguc-Kunt, and Maksimovic, 2010). Our paper shows that regional financial development affects entry and export decisions of new firms, thereby linking the entrepreneurship literature with the literature on financial development. By examining the roles of financial development in China, our paper joins the growing literature that identifies institutional factors driving entrepreneurship in international context, such as culture (Guiso, Sapienza, and Zingales, 2006) and entry regulation (Klapper, Laeven, and Rajan, 2006).

Chinitz (1961) argues that in the U.S. the presence of large firms can crowd out more entrepreneurial activities. Cities with large firms (such as Pittsburgh which is dominated by the steel industry) tend to have an abundance of company men but few entrepreneurs. Cities with small firms (such as New York City) tend to have a large number of small input suppliers and a labor force with entrepreneurial aptitude. Our finding that Chinese cities with large firms are more responsive to trade shock suggests that lack of financial resources, rather than lack of entrepreneurial aptitude or appropriate suppliers (i.e., the Chinitz factors), constrains entering firms from taking advantage of

new export opportunities.

A number of papers examine the effects of import competition in the U.S. On the financial side, import competition is shown to affect cash policy (Fresard, 2010), investment policy (Fresard and Valta, 2016), and household leverage (Barrot, Loualiche, Plosser, and Saivagnat, 2017). On the production side, import competition is shown to increase unemployment and firm closures in manufacturing industries (Bernard, Jensen, and Schott, 2006; Pierce and Schott, 2016). The rapid decline of manufacturing industries also leads to unfavorable social outcomes ranging from criminal activities (Feler and Senses, 2015) to political polarization (Autor, Dorn, Hanson, and Majlesi, 2016). While these papers focus on the consequences of trade shocks in the U.S. or other developed countries[4,5], we study the behavior of firms in China where the import competition shock originates.

Our work is also closely related to the papers on corporate inequality. In recent years, the profits, productivity, and pay gaps between top firms and other firms have been widening (Song et al., 2015; Bloom, 2017). Given that prior papers establish that Chinese exports have been specifically detrimental to manufacturing entrepreneurs in the U.S. (Ayyagari and Maksimovic, 2017; Aslan and Kumar, 2018), one may conjecture that their counterparts in China would benefit more from free trade—corporate inequality in China might be reduced if the trade shock creates new opportunities for small Chinese firms. Our paper shows that this conjecture is not true. In China, foreign firms, large firms, and firms in financially developed areas have greater ability to respond to the trade shock. China's underdeveloped financial markets may inhibit their small domestic firms

[4] Bloom, Draca, and Van Reenen (2016) examine the effects of Chinese import shock on R&D in twelve European countries.

[5] See Bernard, Jensen, Redding, and Schott (2007) for a survey on the roles of firms in international trade.

from taking advantage of export opportunities. Moreover, a large fraction of foreign firms in China is American multinationals, especially in industries that benefit most from the trade shock. Free trade seems to worsen corporate inequality problems both in the U.S. and in China.

The rest of the paper is organized as follows: Section 2 documents the prevalence of foreign firms in China. Section 3 describes our data sources and the construction of trade shock and other variables from the matched Census-tariff dataset, and presents the summary statistics. Section 4 discusses the difference-in-difference methodology and presents the effects of trade shock on entry rate and export propensity. Section 5 compares characteristics and performance of foreign and domestic entrants. Sections 6 and 7 examine the effect of firm size and initial city conditions on the responsiveness to trade shock. Section 8 provides additional findings on incumbents. Section 9 examines the country of origins of foreign investors following the trade shock. Section 10 concludes.

2. Foreign Firms in China

China adopted the open-door policy and started its market-oriented economic transformation in 1978.[6] Since then, Mainland China is among the top destinations for foreign direct investment. The exporting sector has also become a crucial contributor to the Chinese economy.[7] Using data from the Chinese Census, we assess the role of foreign firms in the economy and the exporting sector in our sample. Table 1 presents the results.

[6] The open-door policy is an economic policy announced by Xiaoping Deng in 1978 that welcomed foreign businesses. Special Economic Zones (SEZ) were set up with favorable tax and regulatory terms to attract capital and business from overseas and promote exports. It was a turning point when China's economic policy shifted to encouraging foreign investment and international trade.

[7] In 2016, Mainland China received around 1.46 trillion dollars of foreign direct investment, ranked the third worldwide (only after the U.S. and the U.K.). Around 19.5% of 2016 GDP can be attributed to export. Information on FDI inflows, GDP, and export in China and FDI inflows of other countries are from the World Fact Book by Central Intelligent Agency (2016).

Insert Table 1 Here

We identify foreign firms based on Foreign Invested Enterprise (FIE) status in China. FIEs refer to enterprises registered as one of the following four types: equity joint ventures, cooperative joint ventures, wholly-owned foreign enterprises, and foreign-invested companies limited by shares. Among them, equity joint ventures (wholly-owned foreign enterprises) require at least 25% (100%) of the registered capital received from foreign (including Hong Kong, Macau, and Taiwan) entities or individuals.[8] Cooperative joint ventures have no specific requirement on minimum initial foreign investment: rather than forming a single legal entity, foreign and domestic owners operate as separate legal entities, bear liabilities independently, and divide profit based on the contract terms rather than by investment share. The last FIE type, foreign-invested companies limited by shares, refers to publicly-listed companies with foreign shares: some are domestically listed companies approved by CSRC (China Securities Regulatory Commission) that are allowed to issue foreign shares (i.e., B shares in China); others are listed on exchanges outside China. Among the above four types of FIEs, equity joint ventures and wholly-owned foreign enterprises are the most common types of foreign firms.[9]

Table 1 shows that foreign firms are prevalent in manufacturing industries. The census panel contains 670,049 firm-year observations and 142,663 entries. Around 19.57% of these

[8] Since Hong Kong, Macau, and Taiwan adopt different political and economic systems than mainland China, Chinese Census and regulatory bodies include investment from these regions in foreign investment. In Appendix Table 8, we show that our main results hold if we exclude investment from Hong Kong, Macau, and Taiwan.

[9] Among the 23,536 firm-year observations of foreign manufacturing entrants in the Chinese Census during our sample period of 1999 to 2003, 45% (46%) are equity joint ventures (wholly-owned foreign enterprises), while only 8% (1%) are cooperative joint ventures (foreign-invested companies limited by shares).

manufacturing firms and 16.5% of entrants receive investment from foreign countries or Hong Kong, Macau, and Taiwan. Compared to the U.S.,[10] export sector plays a more prominent role in China: 25.76% of manufacturing firms and 21.36% of manufacturing entrants export.

Historically, foreign presence in the export sector is especially strong. Majority of foreign firms (59.85 %) in our sample export. Overall, 45.47% of manufacturing exporters receive foreign investment. When we turn to manufacturing entries, foreign presence is similarly substantial: 41% of entrants to the export sector are foreign in our sample.

Prior literature shows that export requires more resources than domestic sales (e.g., Beck 2002, 2003; Zia, 2008; Minetti and Zhu, 2011), which might give foreign firms more competitive advantages in a less developed economy like China. To begin with, foreign firms can utilize technologies, brands, or know-hows of the parent companies (Fresard, Hege, and Phillips, 2017). They can also utilize distribution channels in parent countries. Foreign firms may also have tax or regulatory advantages due to China's open-door policy.[11] More importantly, foreign firms can access the global financial markets and the financial resources of the parent companies, while local firms are more restrained to the domestic financial market which is underdeveloped and largely segmented (See, for example, Qian, Strahan, and Yang, 2015; Allen, Qian, Shan, and Zhu, 2017). Prevalence of foreign firms in Chinese export sector in our sample is consistent with these foreign advantages.

[10] Bernard, Jensen, Redding, and Schott (2007) document that the overall share of U.S. manufacturing firms that export is 18%.

[11] As an example, until 2008, manufacturing foreign firms were eligible for tax exemption in the first two years of operation after they turn profitable and three years of tax concession at half rates commencing in the third year of operations.

3. Data and Variable Constructions

3.1 The Sample

Our sample consists of manufacturing firms in the Chinese Census over the time period of 1999 to 2003. Firm-level data on entry, location, financial and ownership information, and export activity are from the Chinese Census Database, which is Chinese National Bureau of Statistics (NBS)'s annual survey of manufacturing firms. This survey covers all non-state industrial firms with annual sales over 5 million RMBs and all state-owned firms during the period of 1998 to 2007.[12,13] Recent papers (e.g., Brandt et al., 2012; Zhang et al., 2017) use this dataset to examine macroeconomic issues such as total factor productivities.[14] In this paper, we choose our sample period around the formation of U.S.-China PNTR, so that the sample spans two years before (i.e., year 1999-2000) and three years after this trade shock (i.e., year 2001-2003).[15] City-level development data on financial market access are constructed from World Bank Enterprise Investment Climate Survey (2004). Industry-level tariff data and variables on other contemporaneous shocks such as changes in China import tariffs are from Pierce and Schott (2016).

[12] The threshold is based on official documentation. However, Huang and Xiong (2017) document that in fact a significant number of below-the-threshold non-state firms, accounting for about 5% of the unbalanced panel, are also included.

[13] Given the size threshold, our dataset does not capture smaller subsistence entrepreneurs. This paper focuses on the entry of transformational entrepreneurs who create larger businesses. Schoar (2010) argues that, unlike transformational entrepreneurs, subsistence entrepreneurs rarely grow into medium or large enterprises and do not provide jobs and income for other workers.

[14] Pierce and Schott (2016) complement their results from the U.S. Census by using the Chinese Customs data to show that the trade shock increases Chinese export to the U.S. relative to other countries. While their customs data have the information on products and export destinations, the Chinese Census data have detailed firm-level information. Given our objective of identifying the types of firms that benefit from trade shock, the Chinese Census data is more appropriate for our application.

[15] 1999 is the first year that entry data can be derived from Chinese Census based on our definition of entry. Our sample ends in 2003 because NBS substantially increased the coverage of the survey in 2004, leading to a discontinuity in data collection practice.

3.2 The Trade Shock

Here, we describe how we measure industries' exposure to the trade shock. Following Pierce and Schott (2016), we define NTR gap as the difference between the non-NTR rates and the NTR rates that were locked in by PNTR for each industry. A potential concern is that raw NTR gap might be correlated with some sectoral characteristics. Appendix Table 2 confirms that the raw tariff gap is correlated with export propensity: Industries with high NTR gap tend to have a high propensity to export in our sample. As an example, textile mill products, which represent 14% of total entries, have an average NTR gap of 49.39% and export propensity of 42.91%, compared with the average NTR gap of 29.82% and export propensity of 21.36% in the full sample. In contrast, chemicals and allied products, which represent 11.62% of total entries, have an average NTR gap of 22.70% and export propensity of 13.70%.

To alleviate this concern, we strengthen the identification strategy in Pierce and Schott (2016) by matching the treatment with control from the same industry group, splitting each 2-digit SIC into high and low NTR gap subsamples.[16] More specifically, we construct another industry-level indicator variable, *High NTR Gap,* based on *NTR Gap*. We first compute the median *NTR Gap* in each industry group (two-digit SIC). *High NTR Gap* equals one (zero) if *NTR Gap* of a specific industry is higher (lower) than the group median. By doing so, we ensure that there are industries with relatively high and low tariff gap within each industry group, effectively matching the treatment subsample (*High NTR Gap*=1) and the control subsample (*High NTR Gap*=0) within the same industry group. Given our definition, *High NTR Gap* is set to missing for industry groups with zero

[16] Export propensity is still higher in treatment than in control group in Table 4, but compared to Appendix Table 2, the industry matching does reduce the pre-treatment difference in export propensity between treatment and control groups.

variations in *NTR gap*, for example, tobacco products and petroleum and coal products.

As an example of our methodology, within the industry group of textile mill products (SIC 22), knitting mills- women's hosiery (SIC 2253) are classified as the high NTR gap group with a raw NTR gap of 0.6073. In contrast, broad woven fabric mills (SIC 2231) are classified as the low NTR gap group with a raw NTR gap of 0.4651.

Since the U.S. granted China PNTR status at the end of 2000, we define *PstPNTR* as an indicator variable that is equal to one for observations from or after 2001, and zero otherwise (Pierce and Schott, 2016). We then use the standard difference-in-difference approach, comparing observations with high NTR gap and low NTR gap before and after the granting of PNTR to China. In regression analyses, we use the difference-in-difference shock term (*PstPNTR*High NTR Gap*) to assess the impact of trade shock. We also use the raw NTR gap to form an alternative shock term (*PstPNTR*NTR Gap*) for robustness.

3.3 Construction of Other Variables

Below we describe the construction of other variables. Detailed descriptions of our variables are provided in Appendix 1. Our paper focuses on entrants in manufacturing industries. Based on the panel of firm-year observations in Chinese Census, we identify *Entry* as a firm that did not exist in the previous year but enters in the current year. Alternatively, we identify *Entry* as a firm with less than or equal to two years of age based on its founding date for robustness.[17] We compute *Entry Rate* as the ratio of number of new entrants divided by total observations.

A key dependent variable in this study is *Export Indicator*, which equals one if a firm

[17] We do not base our main analysis on this alternative definition due to the large amount of missing information on founding date.

exports in a specific year, and zero otherwise. We thus examine the entrant's propensity to export by computing the percentage of entrants that export in the year of entry. To investigate the financial conditions of the entrants, we use total assets or number of employees to proxy for size, total liabilities divided by total assets to proxy for capital structure, and corporate income taxes divided by net sales to proxy for tax liability. To study the performance of entrants, we compute one-year, two-year, and three-year growth rate of total assets during the time windows of one year, two years, and three years, respectively, after the entry. *One-Year Performance* is defined as the one-year growth rate of total assets for surviving firms, and -100% for firms that do not survive one year after the entry. *Two-Year Performance* and *Three-Year Performance* are defined accordingly based on the time windows of two years and three years after the entry, respectively.

Together with the trade shock variables, the following serve as the main explanatory variables in our study.

(1) Ownership types: We examine the following ownership types based on the registration-type information of manufacturing firms in Chinese Census. First, as stated earlier, we define foreign firms as those with FIE status.[18] Second, among domestic firms, we study two major ownership types: state-owned and privately-owned. Domestic state (privately)-owned firms refer to those whose ultimate owner is the central or local government or a government agency (a private entity or individual).[19]

[18] According to Bilateral FDI Statistics from United Nations Conference on Trade and Development, after the establishment of PNTR (2001-2003), apart from Hong Kong, Macau, and Taiwan, the countries (regions) with the largest FDI outflow to mainland China are United States ($14.06 billion), Japan ($13.59 billion), South Korea ($9.36 billion), Singapore ($6.54 billion), and Germany ($3.00 billion).

[19] We note that domestic firms also include another ownership type—collective ownership. Collectively-owned firms refer to local businesses jointly owned by farmers in a village or residents of a community.

(2) City-level variables on development: We construct variables on city development from the World Bank Enterprise Investment Climate Survey (2004). Our main development measure, *Development*, is computed by averaging the scores on financial market access across all enterprises that participated in the survey in each city. We use this measure to proxy for regional financial development. For robustness, we use the staggered liberalization of the banking sector after China's accession to WTO as an exogenous shock to local financial development. We compute the average number of days customs clearance takes and the average scores on infrastructure development in each city, respectively, to obtain *Customs Bureaucracy* and *Infrastructure Development*. We also examine the effects of trade shock across cities with different initial conditions based on the pre-shock distribution of local firms. We compute, for each city, the fraction of private firms that are (1) small businesses (firms with fewer than 50 employees) and (2) exporters in year 1999.

3.3 Summary Statistics

Table 2 presents summary statistics for our main variables. To mitigate the effect of outliers, all variables except categorical ones are winsorized at the 1 and 99 percent levels. Given our focus on entry decisions and export propensity among new firms, the summary statistics are based on the 142,663 entering firms.

Insert Table 2 Here

As mentioned earlier, 21.36% of entrants in our sample export. Among all entrants, 16.5% are foreign, and 9.9% (46.25%) are state- (privately)-owned.[20] An average entrant operates in an

[20] We note that state (privately)-owned firms are more (less) prevalent among all manufacturing firms than among entrants: 20.44% (9.9%) of firm-year observations of manufacturing firms (manufacturing entrants) are state-owned firms, while 28.52% (46.25%) of manufacturing firms (manufacturing entrants) are private firms. In contrast, foreign firms have a similar presence among both all manufacturing firms

industry with an NTR gap of 29.82%, and have 28.72 million RMB assets, 170 employees, liabilities/assets of 57.44%, and corporate taxes/sales of 0.57%. On average, the one-year performance is -0.94%. The average two-year and three-year performance are 2.63% and 7.36%, respectively.

4. The Effect of Trade Shock on Entry Rate and Export Propensity

Using the difference-in-difference methodology, we examine the effects of trade shock on entry rate and export propensity of new firms in this section. We estimate the following OLS models with industry, city, and year fixed effects and robust standard errors as our baseline specifications: Equations (1) and (2) are used to estimate the effect of trade shock on entry rate (Section 4.1) and export propensity of new firms (Section 4.2), respectively.

$$\text{Entry Indicator}_{i,t} = b_0 + b_1\, \textit{PstPNTR*High NTR Gap}_{i,t} + B_2\, \text{Industry Dummies} + B_3\, \text{City Dummies} + B_4\, \text{Year Dummies} + e_{i,t} \quad (1)$$

$$\text{Export Indicator}_{i,t} = b'_0 + b'_1\, \textit{PstPNTR*High NTR Gap}_{i,t} + B'_2\, \text{Industry Dummies} + B'_3\, \text{City Dummies} + B'_4\, \text{Year Dummies} + e'_{i,t} \quad (2)$$

where the capitalized Bs reflect vectors of coefficients, and the sample consists of all manufacturing firms in Model (1) and manufacturing entrants in Model (2).

4.1 The Effect of Trade Shock on Entry Rate

We first examine whether entry rate increases for treatment industries following the trade shock. Table 3 presents the results. The comparative statistics in Panel A show that overall entry rate

and among the subset of entrants: 19.57% (16.49%) of manufacturing firms (manufacturing entrants) are FIEs.

of treatment industries does not increase more than control industries: the increase in entry rate is 4.71% for the high NTR gap group but 5.43% for the low NTR gap group. The results, however, are different for the foreign subsample. Before and after PNTR, the entry rate among foreign firms increases 1.35% for treatment group and 0.92% for control group. The difference in the increase of entry rate between the treatment versus control groups is 0.42%, which is around 31% of the increase in entry rate for the treatment group itself.

Insert Table 3 Here

Panel B of Table 3 reports OLS regression results based on Model (1). Our results confirm the previous finding that only in the foreign subsample, the likelihood of entry is significantly positively affected by the shock.[21] The coefficient on the shock term is estimated at 0.00819, implying that before and after the shock, the propensity of entry increases 0.82% more for high NTR gap industries than low NTR gap industries. The magnitude of the effect of shock (0.82%) almost doubles the previous comparative statistics result (0.42%) after controlling for the effects of industry, year and firm location on the likelihood of entry. In contrast, the coefficients on the shock term are not significant for either the overall sample or the domestic subsample.

We further divide the sample by ownership and the median level of financial development. The double-sorted results indicate that only foreign firms in developed cities experience increased entry rate following the trade shock.[22] The effects of the trade shock on domestic entries are

[21] The main results on entry hold when we define entry as a firm with less than or equal to two years of age based on its founding date (See Appendix Table 3 Panel A).

[22] This result differs from our later finding that the financial advantage of foreign entrants is more pronounced in undeveloped areas. These results suggest that other market imperfections might prevent foreign businesses from entering, but if they manage to overcome these imperfections, foreign entrants have comparative advantages in undeveloped markets. As an example, in untabulated analyses based on

statistically insignificant. That is, the trade shock does not seem to improve local economic conditions in undeveloped areas through creation of new firms in exposed industries.

We have shown that foreign firms in high NTR gap industries are more likely to enter following the trade shock. This finding, however, could be correlated with contemporaneous changes in foreign investment restrictions in China. In particular, China publishes an "Industry Catalogue for Guiding Foreign Investment (Catalogue)" that specifies industries restricted or prohibited from foreign investment every two to three years. Two versions of Catalogues were enforced during our sample period: Catalogue (1997) and Catalogue (2002). Comparing the two Catalogues, the list of restricted industries decreases from 112 to 75 items.[23] We thus exclude industries that were restricted or prohibited in Catalogue (1997) but were lifted from Catalogue (2002). The results show that our main findings are robust to excluding industries whose foreign investment restrictions have been relaxed.[24]

4.2 The Effect of Trade Shock on Export Propensity of New Firms

4.2.1 Baseline Results

Next, we investigate among the entrants whether the propensity to export during the year of entry increases following the shock. Table 4 presents the results. Panel A shows that the propensity to export increases by 1.29% for treatment group and 0.10% for control group, implying that entrants' export propensity increases around 1.20% more for treatment group. This indicates a

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the World Bank Enterprise Investment Climate Survey (2004), we find that foreign firms are more likely to face bureaucratic interference with their production, export, and hiring practices in undeveloped cities.

[23] The list of prohibited industries remains similar from Catalogue (1997) to Catalogue (2002), except for a few product categories such as handmade carpets and blue and white porcelains.

[24] Results are shown in Appendix Table 4 Panel A.

strong impact of the shock, as the difference between two groups (1.20%) is of a similar magnitude as the increase in export entry by treatment groups itself (1.29%).[25]

While it is apparent from Section 2 that foreign firms have higher export propensity than domestic firms, it is unclear a priori whether foreign firms should be more or less responsive to the trade shock compared to domestic firms. On one hand, domestic firms should be more responsive because foreign firms are already inclined to export, even in absence of the trade shock. On the other hand, domestic firms might be less responsive because they lack resources to take advantage of new export opportunities.

We find that new foreign firms are more responsive to trade shock than new domestic firms. The propensity to export increases 2.19% (0.65%) more for foreign (domestic) entrants in treatment group relative to the control group.[26]

Insert Table 4 Here

Panel B of Table 4 reports OLS regression results based on Model (2). Our result indicates that the difference between high and low NTR gap groups, as documented in Panel A, is highly significant after controlling for the industry, year, and location fixed effects. The magnitude of the coefficient on the shock term increases substantially from 1.20% (Column 3 of Panel A) to 6.95% (Column 1 of Panel B), implying that the likelihood of export entry increases 6.95% more for industries with high NTR gap.

[25] We also consider an alternative measure—export entry scaled by total observations, rather than by number of entries. We find similar results based on this alternative measure: export entry divided by total observations increases by 1.46% for treatment group and 1.01% for control group.

[26] Rows (6) and (9) of Table 4 Panel A confirm that foreign firms have higher export propensity before the establishment of PNTR. This supports the notion that factors allowing foreign firms to export more prior to the shock enable these firms to be more responsive to the shock as well.

The results in Columns (2) and (3) show that foreign entrants are more responsive to trade shock than domestic entrants. The shock coefficient is estimated at 0.0807 for foreign entrants and 0.0513 for domestic entrants, suggesting a 2.9% difference between the foreign and domestic subsamples regarding the relative increase in export propensity. The Chi-Square test for difference in the coefficient estimates indicate that the difference is statistically significant at the 10% level. As discussed earlier, foreign firms have competitive advantages in terms of financial resources, technology, brand, know-how, and distribution channels, allowing them to take advantage of the trade shock.

Having shown that foreign entrants are more likely to take advantage of the trade shock than domestic entrants, we examine whether such differential responses are related to financial development. Previous literature has shown that export requires more financial resources than domestic sales (Beck, 2002, 2003; Zia, 2008; Minetti and Zhu, 2011). In financially developed areas, firms are more likely to have access to external funds to finance costly exporting activities. In underdeveloped capital markets, however, firms may not be able to raise the optimal amount of external capital. Given that domestic firms tend to rely more on local financial markets, the disparity between financially developed and undeveloped areas should be larger among domestic firms. We test this hypothesis directly by double-sorting the sample by ownership and financial development.

The regression results in the last four columns of Table 4 Panel B confirm the above hypothesis. For foreign firms, the differential response between developed and undeveloped areas is 0.15% and statistically insignificant: The shock coefficient is 7.98% for developed areas and 7.83% for undeveloped areas. For domestic firms, however, the differential response is 1.76% and statistically significant at the 1% level: The shock coefficient is 6.07% for developed areas and 4.31%

for undeveloped areas.

A concern is that financially developed cities are concentrated along the eastern coastline so our results reflect regional differences rather than financial development. We find that, even within the most developed eastern and coastal regions, the differential response between relatively developed and undeveloped cities is significant for domestic entrants but not so for foreign entrants (Appendix Table 6).[27]

We consider two other important aspects of regional development that may also affect export propensity. First, we examine the effect of government inefficiency in the form of customs bureaucracy. Government red tape may increase the costs of doing business and impede international trade. Second, we examine the effect of economic development in general using the average scores on infrastructure development in a particular city. Well-developed infrastructure should increase business activities and facilitate export.

The results in Panel C of Table 4 show that both foreign and domestic entrants in areas with less bureaucracy and better infrastructure are more responsive to trade shock, highlighting the role of alternative development channels. Given that the responses of foreign entrants depend on bureaucracy and infrastructure but not on financial development whereas the responses of domestic entrants depend on all three developmental channels, our study suggests that the competitive

[27] In order to isolate the effects of financial development from other institutional factors, we also use the staggered liberalization of the banking sector after China's accession to WTO as a quasi-exogenous shock to local financial development. Before this liberalization, foreign banks were not allowed to conduct local-currency transactions anywhere in China; the liberalization opened up nine pilot cities to such transactions according to a staggered schedule that was relatively exogenous. Prior studies have shown that this liberalization has improved efficiency of the Chinese banking system (e.g., Qian, Strahan, and Yang, 2015). The results in Appendix Table 5 show that new firms in treatment industries are more responsive to the trade shock in liberalized cities.

advantage of foreign entrants comes more from their financial market access, rather than superior abilities to deal with government inefficiency or overcome poor infrastructure.

4.2.2 Robustness and Extensions

Alternative Specifications and Sample. Our main findings are robust to using the following specifications: (1) Probit regression;[28] (2) OLS regressions using the shock term based on raw NTR gap as the main explanatory variables; (3) OLS regressions using triple interaction terms between foreign ownership and the shock term (*PstPNTR* High NTR Gap*); (4) OLS regressions controlling for other contemporaneous shocks including changes in China's export licensing policy, import tariffs, and production subsidies, industry contractibility, the abolishment of import quotas on some textile and clothing imports in 2002 under the global Multi-Fiber Arrangement (MFA), and the bursting of U.S. tech "bubble";[29] (5) OLS regressions controlling for City*Year fixed effects; (6) OLS regressions controlling for firm characteristics including size, leverage, and profitability;[30] (7) OLS regressions with separated linear time trends between treatment and control groups;[31] (8) OLS regressions with standard errors clustered at the industry

[28] We adopt the OLS specification as our benchmark specification to ease the estimation and interpretation of interaction terms in Probit models.

[29] Since we have already strengthened the identification strategy in Pierce and Schott (2016) by matching each treated industry (High NTR Gap Group) with a control industry (Low NTR Gap Group) within the same two-digit SIC code, these controls are less necessary for our test specifications.

[30] We do not control for these characteristics in the main specifications since they are potentially endogenous. Firm size, profitability, and capital structure are likely to be affected directly by the trade shock themselves.

[31] As described in Angrist and Pischke (2009), the difference-in-difference estimation relies on comparison in levels, while necessitating the counterfactual trend behavior of treatment and control groups to be the same (the parallel-trend assumption). While our relatively short sample period helps reduce the possibility of confounding factors, it limits our ability to visualize the pre-shock trend with two years of data. To address this issue, following Chava et al. (2013), we control for a linear time trend specific to the high gap industries in addition to the industry and year fixed effects. This

levels.[32] Additionally, we show that our results are robust to excluding industries that experienced changes in foreign ownership restrictions during our sample period. (Appendix Table 3 Panel B).

Comparing Ownership Structure. We break down our subsamples of foreign and domestic entrants into more detailed ownership types. Among domestic entrants, we examine the subsamples of state- and privately-owned firms. Among foreign entrants, we separate firms with investment from Hong Kong, Macau, and Taiwan and those with investment from other regions. We also consider whether a firm has a controlling/non-controlling foreign stake based on the percentage of capital stock contributed by foreign investors, using the 25% cutoff. The subsample regression results in Appendix Table 8 confirm that all four types of foreign firms (those with investment from Hong Kong, Macau, Taiwan or from other regions, and those with controlling or non-controlling foreign stake) are more responsive to the trade shock than privately-owned domestic firms, with state-owned domestic firms being least responsive to the shock. The developed-undeveloped difference is economically larger and statistically more significant among private domestic firms. Since private domestic firms are likely to rely more on local financing, this finding further highlights the role of financing in exporting activities.

Propensity to Export (in Subsequent Years) for Non-Exporting Entrants. A potential concern is that our result that foreign entrants are more responsive to trade shock might be inconsequential because domestic entrants simply have delayed responses. That is, while foreign entrants might be more export-oriented at first, domestic entrants are more likely to switch to

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additional control allows us to more precisely identify the effect of the trade shock using deviation from group-specific trend that might be driven by confounding factors. Even though the trend specific to high gap industries may partly capture the effect of the trade shock, we still find significant coefficient on the shock term.

[32] Panels A to H of Appendix Table 7 present these robustness results.

exporting when the firms get older.

We track entrants that do not export immediately in the first year of entry during the post-shock period of 2001 to 2003. We then estimate the propensity to switch to export within one, two, and three years after entry. Among firms that entered post shock, foreign entrants are more likely to switch to exporting than domestic entrants.[33] To focus on firms whose entry is likely driven by the trade shock, we interact the foreign dummy with High NTR gap. In industries exposed to the trade shock, non-exporting foreign firms are particularly more likely to start exporting. Therefore, not only are foreign entrants in exposed industries more likely to export at the first year of entry, but foreign non-exporting entrants in these industries are also more likely to start exporting one year, two years, and three years following their entry.

In conclusion, prior papers (Pierce and Schott, 2015, 2016) show that granting China PNTR affects firms in the U.S. Our findings show that this shock also affects firms in China. After the shock, entry rate rises for foreign firms. The propensity to export greatly increases in all subsamples, especially for foreign entrants. Export propensity of domestic entrants, particularly private entrants, is more sensitive to local financial development, consistent with the notion that financing issues contribute to the cross-sectional difference in responses to the trade shock.

5. Comparing Characteristics and Performance of Foreign versus Domestic Entrants

Having shown that foreign entrants are more responsive to trade shock than domestic entrants and that this difference in responses might be due to foreign firms' financial advantage, in this section, we compare characteristics and post-entry performance of foreign and domestic

[33] Appendix Table 9 presents the results.

entrants.

5.1 Characteristics of Foreign versus Domestic Entrants

To shed further light on the reason why foreign entrants are more capable of responding to the trade shock, we compare characteristics of foreign and domestic entrants. Specifically, we test whether there exist differences in size, capital structure, and tax liability between foreign and domestic entrants, and whether such differences vary by regional financial development. Table 5 reports the results.

Insert Table 5 Here

The statistics in Table 5 Panel A show that foreign entrants are larger, better capitalized, and less taxed than domestic entrants. All the differences are significant at the 1 percent level. The odd columns of Table 5 Panel B show that such differences are robust to the inclusion of controls for industry, year, and location fixed effects. These results confirm that foreign firms are less financially constrained than domestic firms.

Next, we examine whether the differences between foreign and domestic firms are more pronounced in underdeveloped financial markets. In the even columns of Table 5 Panel B, we include an interaction between *Foreign Indicator* and *Development*. The results indicate that domestic entrants are smaller than foreign entrants, particularly in underdeveloped areas. We also find evidence that domestic entrants in underdeveloped areas pay much more corporate taxes than foreign entrants.[34]

[34] As discussed before, following the open-door policy, the central government of China implemented a series of tax incentive programs for foreign firms. Local governments are encouraged to initiate additional tax incentives for foreign firms. These incentive plans tend to be greater in underdeveloped areas to attract foreign businesses.

We further divide domestic entrants into state and private subsamples. We find that state-owned entrants are larger and more levered than both foreign and domestic entrants, perhaps due to their ability to obtain inexpensive loans from state-owned banks (See Appendix Table 10). State entrants also pay less taxes than foreign and private entrants.

Overall, examination of entrant characteristics indicates that foreign entrants are less financially constrained than private domestic entrants. Their differences are more pronounced in underdeveloped areas.

5.2. Performance of Foreign versus Domestic Entrants

Thus far, we have shown that foreign entrants have comparative advantages in term of financial resources, and therefore they can better take advantage of the trade shock. Here, we assess whether these foreign entrants indeed perform better than their domestic peers. Table 6 presents the results.

Insert Table 6 Here

Table 6 Panel A compares growth statistics between the two groups. The results show that foreign firms are more likely to survive than domestic firms. Among firms that survive, foreign firms grow faster than domestic firms and the cross-sectional dispersion of asset growth is higher among domestic firms.

Next, we regress firm performance on foreign indicator, controlling for industry, year, and location fixed effects in Panel B of Table 6. We find that foreign firms grow faster than domestic

firms, within one year, two years, and three years following the entry.[35] In addition, such differences are more pronounced in underdeveloped financial markets. The estimated coefficients on the interaction term between *Foreign Indicator* and *Development* are consistently negative whereas the coefficients on the *Foreign Indicator* are all positive, confirming that the foreign-domestic differences are concentrated in underdeveloped financial markets. [36]

In sum, foreign entrants grow faster than domestic entrants. The foreign-domestic differences are greater in underdeveloped areas, consistent with the prior results.

6. The Effect of Size on the Responsiveness to Trade Shock

Ayyagari and Maksimovic (2017) show that manufacturing entrants in the U.S. are hurt most by trade liberalization, worsening the corporate inequality problem. Large entrants experience the highest declines in entry rates and quality of workforce. It thus becomes a point of interest to investigate whether small or large firms in China benefit most from trade liberalization. If the trade shock benefits small firms, trade liberalization may alleviate the inequality problem in China. Furthermore, given our previous finding that foreign entrants are typically larger, it is important to evaluate how much of their responsiveness to trade shock is driven by their large size.

We divide the sample into four size groups based on number of employees. The cutoffs of the number of employees are 50, 100, and 250 for the four size groups. Table 7 Panel A presents the

[35] We find that the performance of state-owned entrants is worse than private entrants but both state- and privately-owned entrants perform worse than foreign entrants (Appendix Table 10 Panel B).

[36] We also examine the comparative statistics based on the developed and underdeveloped area subsamples in unreported analyses. We find that the foreign-domestic differences in survival rates and growth rates are larger in underdeveloped areas. In fact, the growth rates of surviving foreign firms are larger than those of domestic firms only in underdeveloped areas. In developed areas, surviving domestic firms grow faster.

effects of trade shock on entry rates for each ownership type-size category.

Insert Table 7 Here

We find that the entry rates among large firms are generally more responsive to trade shock than the entry rates among small firms. The estimated coefficients show that the trade shock primarily increases entry rates among foreign firms that are larger than 100 employees. Trade shock does not increase entry rate for domestic firms in any of the size categories.[37]

Table 7 Panel B presents the effects of trade shock on export propensity of new firms in each ownership type-size category. We find that export propensity of large entrants are more responsive to trade shock than small entrants' propensity. Prior literature identifies size as a key component of financial constraint measures (e.g., Hadlock and Pierce, 2010; Whited and Wu, 2006). So, a potential explanation is that large firms are able to overcome financial constraint related to exporting. The results also confirm that the effects of size and foreign ownership are distinct. We find that the differences between foreign firms and domestic public firms are still present, even after conditioning for their size. [38]

Given that state-owned firms might be systematically larger than private firms, we separate domestic state firms from domestic private firms.[39] Conditional on size, we find that domestic

[37] Consistent with the results in Table 7 Panel A, we show that trade shock increases the size of foreign entrants, particularly in developed areas in Appendix Table 14. The size of domestic entrants is not affected by the shock.

[38] Direct exporting without intermediary in China may require a license from the government for certain types of domestic firms during our sample period. Given that one of the criteria whether a firm is eligible for direct exporting is size, a concern is that our size result is solely driven by large firms' direct exporting rights (i.e., the ability to directly export without the need to apply for the license). In Appendix Table 11, we separate domestic firms with direct exporting rights from firms without direct exporting rights. We find that within each group, large firms are still more responsive to the shock than small firms, indicating that our result does not come from the difference in direct exporting rights.

[39] Appendix Table 12 presents the results.

private entrants are more responsive to the shock than domestic state entrants but less responsive than foreign entrants, confirming our findings in Section 4. We also find that export propensity of large entrants is more responsive to trade shock than small entrants' propensity, particularly for private domestic entrants.

To assess the role of financial development for small firms, we double sort the sample by size and financial development.[40] Conditional on development, larger firms are more responsive to the shock. The differential response between developed and undeveloped areas is more pronounced among small firms with less than 50 employees, suggesting that small firms tend to rely more on local development.

7. The Importance of City Initial Conditions

In addition to the development measures from World Bank Enterprise Investment Climate Survey (2014) above, we examine the effects of trade shock across cities with different initial conditions based on the pre-shock distribution of local firms. As mentioned earlier, we compute, for each city, the fraction of private firms that are (1) small businesses (firms with fewer than 50 employees) and (2) exporters. Here, we focus on private firms rather than state firms since the presence of private firms is more likely to reflect a city's developmental conditions. (The measures constructed from all firms yield similar results.) We use the data from 1999 (the year prior to the trade shock) to compute the measures to ensure that they are not endogenously driven by the shock themselves. The results are reported in Table 8.

Insert Table 8 Here

Panel A of Table 8 examines the effect of the trade shock on entry rate across cities with

[40] Appendix Table 13 presents the results.

different initial conditions. The regression results indicate that only foreign firms in cities with lower fraction of small businesses and foreign firms in cities with higher fraction of export businesses experience increased entry rate following the trade shock. The effects of the trade shock on domestic entries and entries in cities with lower (higher) fraction of export (small) businesses are statistically insignificant.

Panel B of Table 8 shows that the effect of trade shock on export propensity is greater in cities where exporters are more prevalent. Intuitively, a large presence of exporters signifies friendly business environment that encourages international trade so it is expected that entrants in these areas are more responsive to trade shock. The effect of trade shock on export propensity is greater in cities with larger firms. The inter-city difference in response is significant among both domestic and foreign firms.

We note that this result is different from Chinitz (1961). The Chinitz's hypothesis suggests that the prevalence of small firms is associated with favorable local economic environment because small firms have stronger ties with local suppliers and are more conducive to knowledge spillover through local labor forces. People in cities with small firms also tend to have more entrepreneurial aptitude. As suggested by our findings, in an underdeveloped economy like China, a large fraction of small businesses reflects a city's lack of financial resources for firms to grow and poor infrastructure and government inefficiencies rather than Chinitz's active entrepreneurial sectors. Lack of financial resources and issues related to infrastructure and governance, rather than lack of entrepreneurial aptitude or appropriate suppliers (i.e., the Chinitz factors), constrain entering firms from taking advantage of new export opportunities.

8. Incumbents

So far, we examine the effects of trade shock on entrants. In this section, we turn to the effects on incumbent firms and re-estimate the regressions in Table 4 using the sample of incumbents instead of entrants. The results are reported in Table 9.

Insert Table 9 Here

Similar to the entrant results in Table 4 Panel B, the trade shock affects export propensity of foreign incumbents more than domestic incumbents. However, the foreign-domestic difference is economically smaller among incumbents, compared to entrants, suggesting that the foreign advantage is less important for incumbents.

We also find that the trade shock increases the propensity that domestic incumbents are acquired by foreigners.[41] When we divide the sample into domestic incumbents that are exporters and domestic incumbents that are non-exporters, we find that foreign acquisition propensity only increases among non-exporters. These findings suggest that in addition to greenfield investment, foreign firms respond to the trade shock by acquiring domestic firms that do not have the capability to export by themselves and converting them into their subsidiaries.

9. Who are the Foreign Investors?

So far, we have shown that foreign firms in exposed industries are more likely to enter and export in China following the trade shock. However, the Chinese Census does not have the information on foreign investor nationalities so we are not able to identify whether these foreign firms are indeed from the U.S. In this section, we complement our analysis by using the World Bank's data on foreign direct investment projects in China (in 2003) to examine the characteristics

[41] See results in Appendix Table 15.

of foreign investment following the trade shock.[42] Table 10 presents the results.

Insert Table 10 Here

Panel A of Table 10 reveals that Japan, the U.S., and Germany are among the top three countries with foreign direct investment projects in China. Among the 1,346 foreign direct investment projects with detailed target industry and location information, 23.92% of them are from Japan, 23.77% of them are from the U.S., and 5.87% are them are from Germany. Other frequent home countries include South Korea, France, and the U.K. Given the prevalence of American and Japanese projects, we construct two dummies indicating these nationalities and use them as explanatory variables in Panel B.

Across investment target industries and locations, we find that U.S. investment projects are more likely to be in the high NTR gap industries and in financially undeveloped cities, suggesting that American firms are more likely to take advantages of the trade shock and more willing to invest in less developed areas. In contrast, Japanese investment projects are more likely to be in developed cities.

10. Conclusion

This paper examines entry decisions and exporting activities of new firms in China. Using a micro dataset with 142,663 entries and 670,049 firm-year observations from the Chinese Census, we show that trade liberalization may benefit foreign firms more than domestic firms.

As a plausibly exogenous trade shock, we use the establishment of U.S.-China Permanent

[42] This dataset is only available from 2003 onwards so we are unable to test whether nationalities of foreign firms shift as a result of the trade shock. However, the prevalence of American projects at the end of our sample period, particularly in high gap industries, strongly indicates that the investors in the U.S. benefit from the trade shock.

Normal Trade Relation, which is a change in U.S. trade policy that virtually eliminated potential tariff increases on Chinese import. We find that foreign entrants benefit more from trade shock than domestic entrants. Entry rate and export propensity of new foreign firms are more responsive to trade shock than those of domestic firms. The effect of trade shock on export propensity of domestic entrants is dependent on local financial development, consistent with the notion that domestic entrants rely more on local financial resources. We further show that in undeveloped areas, foreign entrants are better capitalized and pay lower taxes. They also tend to grow faster than domestic entrants. Cities dominated by large firms are more responsive to trade shock, suggesting that lack of financial resources, rather than lack of entrepreneurial aptitude or appropriate suppliers (Chinitz, 1961), constrains domestic entrants from taking advantage of new export opportunities.

Prior literature identifies determinants of entrepreneurial activities in the U.S. and other developed economies. Less is known about how financial and institutional factors affect entrepreneurship and new firm creation in emerging markets, such as China. This paper uses cross-sectional variation in responses to trade shock to examine the roles of financial development and the Chinitz factors on entry and export activities of new firms in an emerging market.

Prior papers use the Chinese trade shock to document negative consequences of international trade in the United States, such as firm closures, unemployment, reduced innovative activities, reduced investment, and reduced sales growth and profitability. Our paper complements this literature by studying the behavior of firms in China where the import shock originates. Given that prior papers show that free trade is particularly detrimental to entrepreneurial firms in the U.S., one may conjecture that their counterparts in China would benefit more from free trade. Our paper shows that this conjecture is not true. In China, foreign firms, large firms, and firms in financially

developed areas have greater ability to respond to the trade shock. Furthermore, a large fraction of foreign firms in China is American multinationals, especially in industries that benefit most from the trade shock. Overall, free trade seems to increase corporate inequality both in the U.S. and in China.

Our finding that financial development affects the disparity between foreign and domestic firms has important policy implications. As the financial markets in China mature, funding exporting activities will be easier for small domestic firms. Increases in foreign entries following the trade shock can also lead to technological spillover, increasing productivity of domestic firms and reducing their needs for external financing. In the long run, the financial advantage of foreign firms in China may erode. If China can improve their financial system efficiency, well-funded Chinese competitors will put additional pressure on American businesses, accelerating the decline of U.S. manufacturing sector.

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Table 1

Foreign Presence in China's Manufacturing and Export Sectors.

This table describes the presence of foreign firms in China's manufacturing and export sectors. The sample consists of manufacturing firms during the period 1999 to 2003 in the China Census Database. The table reports total number of observations of all manufacturing firms (*Obs.*), manufacturing firms that export (*Exporting Obs.*), percentage of manufacturing firms that export (% *of Obs. Exporting*), manufacturing entries (*Entry*), manufacturing entries that export at the year of entry (*Export Entry*), and percentage of manufacturing entries that export at the year of entry (% *of Entry Export*ing), respectively. Columns (1)– (3) report statistics from the full sample, and the subsamples of foreign and domestic firms, respectively. Column (4) presents the percentage of foreign presence in corresponding sectors. Appendix 1 provides detailed definitions of all variables.

Summary Statistics	(1) All	(2) Foreign	(3) Domestic	(4) % Foreign
Obs.	670,049	131,142	538,907	19.57%
Exporting Obs.	172,621	78,491	94,130	45.47%
% of Obs. Exporting	25.76%	59.85%	17.47%	
Entry	142,663	23,536	119,127	16.50%
Export Entry	30,471	12,513	17,958	41.07%
% of Entry Exporting	21.36%	53.17%	15.07%	

Table 2

Summary Statistics.

This table reports the summary statistics of the main variables. The sample consists of manufacturing entries in the China Census Database during the period 1999 to 2003. Columns (1) to (6) report total number of observations, mean, standard deviation, and 25, 50, and 75 percentiles of the distribution, respectively. All variables except categorical variables are winsorized at the 1% and 99% levels. Appendix 1 provides detailed definitions of all variables.

Variable	(1) Obs.	(2) Mean	(3) Std. Dev.	(4) 25%	(5) 50%	(6) 75%
Export Indicator	142,663	21.36%	40.98%	0	0	0
NTR Gap	142,663	29.82%	15.07%	19.98%	32.13%	40.70%
Foreign Indicator	142,663	16.50%	37.12%	0	0	0
State Indicator	142,663	9.90%	29.86%	0	0	0
Private Indicator	142,663	46.25%	49.86%	0	0	1
Assets (Million RMB)	142,663	28.72	88.82	3.90	7.94	19.08
Employees	142,663	170	298	45	85	168
Development	103,484	0.69	0.09	0.63	0.67	0.72
Customs Bureaucracy	103,484	4.78	2.39	2.96	4.57	6.05
Infrastructure Development	103,484	0.70	0.13	0.60	0.74	0.80
Liabilities/Assets	142,663	57.44%	29.74%	35.90%	58.64%	78.61%
Corporate Taxes/Sales	142,663	0.57%	1.14%	0.00%	0.00%	0.68%
1-Year Performance	142,663	-0.94%	78.48%	-53.60%	0.49%	28.53%
2-Year Performance	142,663	2.63%	108.19%	-100.00%	-2.31%	46.85%
3-Year Performance	142,663	7.36%	132.89%	-100.00%	-16.38%	60.19%

Table 3

The Effect of Trade Shock on Entry.

This table examines changes in entry following the establishment of Permanent Normal Trade Relation (PNTR). The full sample consists of manufacturing firms during the period 1999 to 2003 in the China Census Database. Panel A presents the full sample results in Columns (1) – (3), and subsamples of foreign and domestic firms in Columns (4) – (6) and Columns (7) – (9), respectively. *Entry i*s defined as a firm that did not exist in the previous year but enters in the current year. *Entry Rate* is computed as *Entry* divided by *Obs*. Panel B presents OLS regression results of entry propensity based on the full sample in Column (1), subsamples of foreign and domestic firms in Columns (2) – (3), and subsamples broken down by development in Columns (4)-(7). The dependent variable is *Entry Indicator*, which equals one if a firm did not exist in the previous year but enters in the current year. Appendix 1 provides detailed definitions of all variables. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between subsamples in in odd and even columns are presented below the subsample regression results.

Panel A: Comparative Statistics

Row	Entry by Group	All			Foreign			Domestic		
		Obs.	Entry	Entry Rate	Obs.	Entry	Entry Rate	Obs.	Entry	Entry Rate
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	High NTR gap group, before granting PNTR	101,003	18,339	18.16%	22,442	3,838	17.10%	78,561	14,501	18.46%
2	High NTR gap group, after granting PNTR	180,022	41,158	22.86%	43,829	8,088	18.45%	136,193	33,070	24.28%
3	Difference: (2)-(1)			4.71%			1.35%			5.82%
4	Low NTR gap group, before granting PNTR	142,948	25,650	17.94%	22,689	3,925	17.30%	120,259	21,725	18.07%
5	Low NTR gap group, after granting PNTR	246,076	57,516	23.37%	42,182	7,685	18.22%	203,894	49,831	24.44%
6	Difference: (5)-(4)			5.43%			0.92%			6.37%
7	Difference in Difference: (3)-(6)			-0.72%			0.43%			-0.55%

Panel B: Regression Results

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0015	0.00819***	0.0028	0.00979**	0.0051	0.0030	0.0029
	(0.001)	(0.003)	(0.002)	(0.004)	(0.004)	(0.003)	(0.002)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	490,928	113,765	377,163	54,125	59,640	187,049	190,114
Adjusted R-sq	0.023	0.012	0.028	0.016	0.016	0.033	0.028
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -square		2.570		0.680		0.000	
P -Value		0.109		0.410		0.985	

Table 4

The Effect of Trade Shock on Export Propensity among Entries.

This table examines changes in export propensity of entries following the establishment of Permanent Normal Trade Relation (PNTR). Panel A presents statistics from the full sample of manufacturing entries in Columns (1) – (3), and subsamples of foreign and domestic manufacturing entries in Columns (4) – (6) and Columns (7) – (9), respectively. *Entry i*s defined as a firm that did not exist in the previous year but enters in the current year. *Export Entry* is defined as a firm that did not exist in the previous year but enters and exports in the current year. *Export Rate* is computed as *Export Entry* divided by *Entry*. Panel B presents OLS regression results of export propensity based on the full sample of manufacturing entries in Column (1), subsamples of foreign and domestic entries in Columns (2) – (3), and subsamples broken down by development in Columns (4)-(7). Panel C presents OLS regression results of export propensity based on subsamples of entries broken down by other dimensions of development (i.e., *Customs Bureaucracy* in Columns (1) – (4) and *Infrastructure Development* in Columns (5) – (8)). The dependent variable is *Export Indicator* in Panels B and C, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between subsamples in odd and even columns are presented below the subsample regression results.

Panel A: Comparative Statistics

Row	Entry by Group	All			Foreign			Domestic		
		Entry	Export Entry	Export Rate	Entry	Export Entry	Export Rate	Entry	Export Entry	Export Rate
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	High NTR gap group, before granting PNTR	18,339	4,553	24.83%	3,838	2,098	54.66%	14,501	2,455	16.93%
2	High NTR gap group, after granting PNTR	41,158	10,750	26.12%	8,088	4,702	58.14%	33,070	6,048	18.29%
3	Difference: (2)-(1)			1.29%			3.47%			1.36%
4	Low NTR gap group, before granting PNTR	25,650	4,661	18.17%	3,925	1,898	48.36%	21,725	2,763	12.72%
5	Low NTR gap group, after granting PNTR	57,516	10,507	18.27%	7,685	3,815	49.64%	49,831	6,692	13.43%
6	Difference: (5)-(4)			0.10%			1.29%			0.71%
7	Difference in Difference: (3)-(6)			1.20%			2.19%			0.65%

Panel B: Regression Results

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0695***	0.0807***	0.0513***	0.0798**	0.0783**	0.0607***	0.0431***
	(0.00)	(0.015)	(0.003)	(0.011)	(0.019)	(0.003)	(0.005)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	19,731	83,751	9,681	10,050	41,208	42,543
Adjusted R-sq	0.139	0.152	0.108	0.121	0.173	0.098	0.119
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		2.810		0.020		17.600	
P -Value		0.094		0.905		0.000	

Panel C: Other Dimensions of Development

	Customs Bureaucracy				Infrastructure Development			
	Foreign		Domestic		Foreign		Domestic	
	Cities with Less Bureaucracy	Cities with More Bureaucracy	Cities with Less Bureaucracy	Cities with More Bureaucracy	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.0851***	0.0677***	0.0597***	0.0452***	0.0903***	0.0759***	0.0608***	0.0467***
	(0.010)	(0.015)	(0.005)	(0.004)	(0.015)	(0.010)	(0.005)	(0.004)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	14,181	5,550	37,318	46,433	7,664	12,067	37,919	45,832
Adjusted R-sq	0.106	0.190	0.077	0.136	0.104	0.184	0.084	0.129
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)		Columns (3)-(4)		Columns (5)-(6)		Columns (7)-(8)	
Chi -Square	3.080		12.520		4.960		1.740	
P -Value	0.080		0.000		0.026		0.187	

Table 5

Characterizing Foreign versus Domestic Entry.

This table compares the characteristics of foreign versus domestic entry. The sample consists of manufacturing entries in the China Census Database during the period of 1999 to 2003. *Entry* is defined as a firm that did not exist in the previous year but enters in the current year. Panel A reports the mean values of various characteristics (*Assets* in Column 1, *Liabilities/Assets* in Column 2, and *Corporate Taxes/Sales* in Column 3 for foreign and domestic entries), the difference in theses mean values, and *t*-statistics for testing whether these differences are statistically significant, respectively. Panels B reports OLS regression results with *Foreign Indicator* as the main explanatory variable in Columns (1), (3), and (5), and OLS regression results with the interaction of *Foreign Indicator* with *Development* in Columns (2), (4), and (6). Appendix 1 provides detailed definitions of all variables. Robust standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: Comparative Statistics

	Assets	Liabilities/Assets	Corporate Taxes/Sales
Ownership Groups	(1)	(2)	(3)
Foreign Plants	45.26	52.47%	0.29%
Domestic Plants	27.56	57.90%	0.63%
Difference	17.70	-5.43%	-0.35%
T-statistics	27.85	-28.18	-46.67

Panel B: Regression Results

	Assets		Liabilities/Assets		Corporate Taxes/Sales	
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)
Foreign Indicator	20.930***	37.929***	-0.0473***	-0.0388**	-0.00374***	-0.00662***
	(0.745)	(5.754)	(0.002)	(0.017)	(0.000)	(0.001)
Foreign Indicator		-24.529***		-0.012		0.00415***
*Development		(8.233)		(0.024)		(0.001)
Industry Dummies	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y
No. of Obs.	126,141	126,141	126,141	126,141	126,141	126,141
Adjusted R-sq	0.080	0.080	0.073	0.070	0.068	0.068

Table 6

Performance of Foreign versus Domestic Entrants.

This table assesses the one-year, two-year, and three-year performance of foreign and domestic entrants. Panel A compares the one-year, two-year, and three-year survival and growth rates of foreign versus domestic entrants. Panel B reports regression analysis results. The sample consists of manufacturing entries in the China Census Database during the period of 1999 to 2003. *Entry* is defined as a firm that did not exist in the previous year but enters in the current year. In Panel B, the dependent variable is *One-Year Performance*, *Two-Year Performance*, and *Three-Year Performance* in Columns (1) – (2), (3) – (4), (5) – (6), respectively. *One-Year Performance* is computed as the percentage change in total assets within a year of the entry, with the assumption that it takes the value of -100% if the entrant does not exist in the dataset one year after the entry. *Two-Year Performance* is computed as the percentage change in total assets within two years of the entry, with the assumption that it takes the value of -100% if the entrant does not exist in the dataset two years after the entry. *Three-Year Performance* is computed as the percentage change in total assets within three years of the entry, with the assumption that it takes the value of -100% if the entrant does not exist in the dataset three years after the entry. Appendix 1 provides detailed definitions of all variables.

Panel A: Comparative Statistics

	Foreign Plants	Domestic Plants	Difference: (1)-(2)
Growth Perspectives	(1)	(2)	(3)
No. of Entries between 1999 to 2003	28,846	149,960	
One-Year Performance Following Entry			
No. of Entries Existing after 1 Yr.	24,333	113,268	
% Existing after 1 Yr.	84.35%	75.53%	8.82%
Median Asset Growth Rate of Surviving Entries	10.97%	9.03%	1.94%
Std Dev. of Asset Growth Rate of Surviving Entries	67.58%	73.30%	-5.72%
Two-Year Performance Following Entry			
No. of Entries Existing after 2 Yrs.	22,020	93,940	
% Existing after 2 Yrs.	76.34%	62.64%	13.69%
Median 2-Yr. Asset Growth Rate of Surviving Entries	25.41%	25.01%	0.40%
Std Dev. of Asset Growth Rate of Surviving Entries	1.08	1.18	-10.36%
Three-Year Performance Following Entry			
No. of Entries Existing after 3 Yrs.	20,317	80,745	
% Existing after 3 Yrs.	70.43%	53.84%	16.59%
Median 3-Yr. Asset Growth Rate of Surviving Entries	44.05%	40.75%	3.30%
Std Dev. of Asset Growth Rate of Surviving Entries	1.51	1.70	-18.76%

Panel B: Regression Results

	One-Year Performance		Two-Year Performance		Three-Year Performance	
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)
Foreign Indicator	0.0928***	0.178***	0.152***	0.350***	0.192***	0.458***
	(0.006)	(0.046)	(0.008)	(0.063)	(0.010)	(0.078)
Foreign Indicator		-0.123*		-0.286***		-0.384***
*Development		(0.066)		(0.091)		(0.111)
Industry Dummies	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y
No. of Obs.	126,141	126,141	126,141	126,141	126,141	126,141
Adjusted R-sq	0.025	0.025	0.036	0.036	0.040	0.040

Table 7

The Effects of Trade Shock by Size Groups.

This table examines changes in entry (Panel A) and export propensity (Panel B) of new firms following the trade shock by size groups. In Panel A, the full sample consists of manufacturing firms during the period 1999 to 2003 in the China Census Database. The dependent variable is *Entry*, which equals one if a firm that did not exist in the previous year but enters in the current year. In Panel B, the full sample consists of manufacturing entrants during the period 1999 to 2003 in the China Census Database. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between the subsamples in odd and even columns are presented following the subsample regression results.

Panel A: Entry Results by Size Groups

	Foreign				**Domestic**			
	1-49	*50-99*	*100-249*	*250+*	*1-49*	*50-99*	*100-249*	*250+*
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	-0.0001	0.0084	0.0169***	0.0128***	-0.0030	0.0022	0.0040	0.0028
	(0.009)	(0.007)	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	17,363	24,179	37,040	35,182	78,253	90,181	115,367	93,359
Adjusted R-sq	0.016	0.020	0.021	0.019	0.045	0.036	0.032	0.029
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)	Columns (2)-(3)	Columns (3)-(4)		Columns (5)-(6)	Columns (6)-(7)	Columns (7)-(8)	
Chi -Square	0.410	1.320	0.240		0.800	0.310	0.230	
P -Value	0.521	0.250	0.627		0.372	0.629	0.629	

Panel B: Export Propensity Results by Size Groups

	Foreign				**Domestic**			
	1-49	*50-99*	*100-249*	*250+*	*1-49*	*50-99*	*100-249*	*250+*
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.0539***	0.0392**	0.0882***	0.117***	0.0227***	0.0495***	0.0642***	0.0764***
	(0.018)	(0.017)	(0.015)	(0.017)	(0.005)	(0.005)	(0.006)	(0.011)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	4,710	4,953	6,035	4,015	24,715	24,913	22,855	11,266
Adjusted R-sq	0.104	0.115	0.142	0.224	0.083	0.109	0.167	0.146
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)	Columns (2)-(3)	Columns (3)-(4)		Columns (5)-(6)	Columns (6)-(7)	Columns (7)-(8)	
Chi -Square	0.540	6.770	1.360		9.300	3.520	0.500	
P -Value	0.462	0.009	0.244		0.002	0.061	0.482	

Table 8

The Effect of Initial City Development.

This table examines changes in entry (Panel A) and export propensity (Panel B) of new firms following the trade shock based on differences in pre-shock city development. City development is measured by *Population of Private Small Business* (Columns (1) – (4) of Panels A and B), and *Population of Private Export Business* (Columns (5) – (8) of Panels A and B), respectively. *Fraction of Private Small Business (Export Business)* is measured by the fraction of private firms that have less than 50 employees (that are exporting) in 1999. In Panel A, the full sample consists of manufacturing firms during the period 1999 to 2003 in the China Census Database. The dependent variable is *Entry*, which equals one if a firm that did not exist in the previous year but enters in the current year. In Panel B, the full sample consists of manufacturing entrants during the period 1999 to 2003 in the China Census Database. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between the subsamples in odd and even columns are presented following the subsample regression results.

Panel A: Entry Results by Initial City Development

	Population of Private Small Buinesss				**Population of Private Export Business**			
	Foreign		Domestic		Foreign		Domestic	
	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.003	0.0133**	0.003	0.003	0.00756**	0.010	0.005	-0.001
	(0.004)	(0.004)	(0.005)	(0.007)	(0.002)	(0.012)	(0.006)	(0.006)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	57,492	56,269	210,018	167,144	95,831	17,924	235,716	141,443
Adjusted R-sq	0.012	0.014	0.021	0.037	0.011	0.022	0.030	0.033
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)		Columns (3)-(4)		Columns (5)-(6)		Columns (7)-(8)	
Chi -Square	3.970		0.000		0.04		14.75	
P -Value	0.047		0.974		0.845		0.000	

Panel B: Export Propensity Results by Initial City Development

	Population of Private Small Buinesss				Population of Private Export Business			
	Foreign		Domestic		Foreign		Domestic	
	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population	Cities with Higher Fraction of Such Population	Cities with Lower Fraction of Such Population
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.0637**	0.0961***	0.0409***	0.0610***	0.0815***	0.0783**	0.0621***	0.0330***
	(0.022)	(0.008)	(0.004)	(0.004)	(0.014)	(0.024)	(0.005)	(0.003)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	9,419	10,298	43,163	40,586	16,384	3,331	54,504	29,244
Adjusted R-sq	0.113	0.153	0.113	0.097	0.103	0.096	0.092	0.043
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)		Columns (3)-(4)		Columns (5)-(6)		Columns (7)-(8)	
Chi -Square	5.390		18.070		0.00		24.04	
P -Value	0.020		0.000		0.944		0.000	

Table 9

The Effect of Trade Shock on Export Propensity among Incumbents.

This table examines changes in propensity to start exporting by incumbent firms following the trade shock. The sample consists of incumbent non-exporters during the period 1999 to 2003 in the China Census Database in Column (1), subsamples of foreign and domestic incumbent non-exporters in Columns (2) – (3), and subsamples further broken down by development in Columns (4)-(7). The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) between subsamples are presented following the subsample regression results.

	All	**Ownership**		**Foreign**		**Domestic**	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0663***	0.0678***	0.0516***	0.0634***	0.0719***	0.0549***	0.0491***
	(0.001)	(0.006)	(0.002)	(0.004)	(0.009)	(0.003)	(0.001)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	276,133	58,533	217,600	26,903	31,630	105,360	112,240
Adjusted R-sq	0.144	0.146	0.102	0.146	0.144	0.098	0.104
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		9.180		0.000		27.290	
P -Value		0.002		0.979		0.000	

Table 10

Comparing Foreign Direct Investment Projects in China by Home Countries.

This table compares the target industry and location of foreign direct investment projects in China by home countries. The sample consists of foreign direct investment projects in China in year 2003. Panel A breaks down the number of foreign direct investment projects by home countries. Panel B reports regression results on target industry NTR gap and city development of foreign direct investment projects in Columns (1)-(3) and (4)-(6), respectively. *NTR Gap* is the difference between NTR and Non-NTR tariff. *Development* is measured by the city-level index on financial market access by the World Bank investment climate survey (2004). Main explanatory variables include whether investment home country is the US (US Indicator) and Japan (Japan Indicator). *Size* is measured by the number of jobs created by the project. OLS regression results are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: Distribution of Projects by Home Countries

Rank	Home Country	No. of Projects	% of Projects
1	Japan	322	23.92
2	United States	320	23.77
3	Germany	79	5.87
4	Taiwan	78	5.79
5	Hong Kong	70	5.20
6	South Korea	63	4.68
7	France	53	3.94
8	United Kingdom	42	3.12
9	Singapore	38	2.82
10	Canada	32	2.38
11	Others	249	18.50
	Total	1346	100

Panel B: Regression Results

	NTR Gap			Development		
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)
US Indicator	0.069***		0.069***	-0.158***		-0.132***
	(0.01)		(0.01)	(0.031)		(0.033)
Japan Indicator		-0.027**	-0.0002		0.124***	0.077**
		(0.01)	(0.01)		(0.04)	(0.004)
Size	-0.006	-0.007	-0.006	0.026***	0.031***	0.028***
	(0.004)	(0.004)	(0.004)	(0.009)	(0.009)	(0.009)
No. of Obs.	648	648	648	958	958	958
Adjusted R-sq	0.050	0.012	0.050	0.031	0.021	0.035

Appendix Table 1

Variable Definitions.

Variable	Definition
	Panel A: Dedependent Variables
Entry Indicator	An indicator that equals one if a firm did not exist in the Census in the previous year but enters the dataset in the current year, and zero otherwise.
Export Indicator	An indicator that equals one if a firm exports during a specific year, and zero otherwise.
Assets	Total value of assets, in million RMB.
Liabilities/Assets	Total liabilities divided by total assets.
Corporate Taxes/Sales	Corporate income tax divided by net sales.
One (Two/Three)-Year Performance	The percentage change in total assets within one year (two/three years) of the entry, except that it takes the value of -100% for firms that do not exist in the dataset in year t+1 (t+2/t+3).
One (Two/Three) -Year Export Propensity	An indicator that equals one if a firm starts to export within one (two/three) year after its entry, and zero otherwise.
Employees	Total number of employees.
Employee Group	A categorical variable that equals one if employees are less than 50, two if employees between 50 and 100, three if employees between 100 and 250, and four if employees more than 250.
Propensity of Being Acquired by a Foregin Individual or Entity	An indicator that equals one if a firm was controlled by a domestic individual or entity in the previous year, but became controlled by a foreign individual or entity in the current year, and zero otherwise.
	Panel B: Explanatory Variables
PstPNTR	An indicator that equals one for all years from or after 2001 and zero otherwise.
NTR Gap	The gap between NTR tariff and non-NTR tariff.
High NTR Gap	An indicator that equals one if a firm operates in an industry with higher (lower) than median NTR gap within each two-digit SIC industry group, and zero otherwise. To ensure firms from the treatment and control groups are matched based on the two-digit SIC industry group, we exclude industry groups with no variation in NTR gap (e.g., tobacco products, printing and publishing, petroleum and coal products, leather and leather products, transportation equipment, and instruments and related products).
PstPNTR*High NTR Gap	The interaction term between *PstPNTR* and *High NTR Gap* .
Foreign Indicator	An indicator that equals one if a firm has the FIE (Foreign-Invested Enterprise) status and zero otherwise. FIEs refer to enterprises that receive investment from foreign (including Hong Kong, Macau, and Taiwan) entities or individuals and are registered as one of the following four types: equity joint ventures, cooperative joint ventures, wholly-owned foreign enterprises, and foreign-invested companies limited by shares (i.e., public listed companies with foreign shares).

Appendix Table 1 (Continued)

Variable	Definition
Foreign-HMT Indicator	An indicator that equals one if a firm receives investment from Hong Kong, Macau, and Taiwan, and are registered as one of the following four types: equity joint ventures, cooperative joint ventures, wholly-owned foreign enterprises, and foreign-invested companies limited by shares (i.e., public listed companies with foreign shares).
Foreign-Controlling Indicator	An indicator that equals one if a firm has at least 25% of the capital stock invested by foreign individuals or entities, including individuals or entities from Hong Kong, Macau, and Taiwan, and zero otherwise.
State Indicator	An indicator that equals one if a firm's ultimate owner is the central or local government or a government agency, and zero otherwise.
Private Indicator	An indicator that equals one if a firm's ultimate owner is a private entity or individual, and zero otherwise.
Net Income/Sales	Net income divided by net sales.
Development	The city-level index on financial market access by the World Bank investment climate survey (2004). It is computed as the average score on financial market access by enterprises that particpated in the survey in a specific city.
Customs Bureaucracy	The city-level index on the inefficiency of the local customs office by the World Bank investment climate survey (2004). It is computed as the average number of days customs clearance takes for enterprises that particpated in the survey in a specific city.
Infrastructure Development	The city-level index on infrastructure development by the World Bank investment climate survey (2004). It is computed as the average score on infrastructure development by enterprises that particpated in the survey in a specific city.
Liberalization	An indicator variable that equals one if a plant is located in a liberalized city that allows foreign bank to issue loans in the domestic currency in a specific year, and zero otherwise.
Liberalization*PstPNTR*High NTR Gap	The triple interaction term among *Liberalization* , *PostPNTR* and *High NTR Gap* .
Foreign Indicator*Development	The interaction term between *Foreign Indicator* and *Development* .
Contract Intensity	Industry level variable on contractibility as in Nunn (2007).
PstPNTR*Contract Intensity	The interaction term between *PstPNTR* and *Contract Intensity* .
Δ China Import tariffs	Change in Chinese import tariffs.
PstPNTR * Δ China Import tariffs	The interaction term between PstPNTR and Δ China Import tariffs.
Advanced Technologies	An indicator that equals one if the industry contains advanced technology products.
PstPNTR*Advanced Techonologies	The interaction term between *PstPNTR* and *Advanced Technologies* .
MFA Exposure	Industry-year level exposure to the expiration of Multi Fiber Arrangement quotas, measured as import-weighted quota fill rates.
China Export Licensing Shock	An indicator that equals one if a firm has direct exporting right in a specific year in China, and zero otherwise.
Subsidy Rate	Government subsidy divided by net sales.

Appendix Table 2

Distribution of NTR Gap and Export Propensity by Industry Groups.

This table describes the NTR gap and export propensity by two-digit SIC industry groups. The sample consists of manufacturing entries in the China Census Database during the period 1999 to 2003. *Entry* is defined as a firm that did not exist in the previous year but enters in the current year. *NTR Gap* is the gap between NTR tariff and non-NTR tariff. *Export Indicator* equals one if a firm exports and zero otherwise. *Avg. Export Propensity* refers to the mean value of *Export Indicator* within a specific two-digit SIC industry group. Two-digit SIC code, industry description, number of entries, percentage of total entries, average and standard deviation of NTR gap, and average export propensity are presented in Columns (1)– (7), respectively.

2-Digit SIC Code	Industry Description	Entry	% Entry	Avg. NTR Gap	Stdev. of NTR Gap	Avg. Export Propensity
(1)	(2)	(3)	(4)	(5)	(6)	(7)
20	Food and kindred products	14,020	8.73%	14.01%	7.10%	15.93%
21	Tobacco products	126	0.08%	67.05%	0.00%	7.94%
22	Textile mill products	23,075	14.37%	49.39%	5.83%	42.91%
23	Apparel and other textile products	16,211	10.09%	46.27%	7.93%	28.84%
24	Lumber and wood products	11,756	7.32%	21.19%	5.40%	25.60%
25	Furniture and fixtures	4,827	3.01%	39.16%	2.98%	24.61%
26	Paper and allied products	6,594	4.11%	19.55%	14.33%	9.30%
27	Printing and publishing	3,183	1.98%	28.91%	0.00%	6.09%
28	Chemicals and allied products	18,660	11.62%	22.70%	11.29%	13.70%
29	Petroleum and coal products	754	0.47%	3.56%	0.00%	5.17%
30	Rubber and misc. plastics products	11,656	7.26%	30.43%	8.79%	29.88%
31	Leather and leather products	586	0.36%	21.48%	0.00%	24.23%
32	Stone, clay, and glass products	13,503	8.41%	22.06%	19.06%	11.09%
33	Primary metal industries	9,525	5.93%	28.07%	9.69%	9.18%
34	Fabricated metal products	10,317	6.42%	36.04%	3.02%	22.79%
35	Industrial machinery and equipment	7,073	4.40%	28.75%	16.81%	19.78%
36	Electronic & other electric equipment	6,281	3.91%	30.93%	5.50%	33.90%
37	Transportation equipment	1,807	1.13%	22.22%	0.00%	20.97%
38	Instruments and related products	304	0.19%	40.69%	0.00%	10.86%
39	Miscellaneous manufacturing industries	360	0.22%	43.66%	5.23%	42.50%
Total		160,618	100.00%	27.89%	16.03%	21.08%

Appendix Table 3

The Effect of Trade Shock on Entry and Export Propensity Based on an Alternative Measure for Entry.

This table reports robustness results of Table 3 Panel B (in Panel A) and Table 4 Panel B (in Panel B) based on an alternative measure for entry. In Panel A, the dependent variable is *Alternative Entry Indicator*, which equals one if a firm's age is younger than or equal to two years based on its founding date, and zero otherwise. The full sample consists of manufacturing firms during the period 1999 to 2003 in the China Census Database. In Panel B, the dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. The full sample consists of manufacturing entries during the period 1999 to 2003 in the China Census Database. Appendix 1 provides detailed definitions of all variables. In Panels A and B, OLS regression results based on the full sample are presented in Column (1), subsamples of foreign and domestic firms in Columns (2) – (3), and subsamples broken down by development in Columns (4)-(7). Robust standard errors are presented in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between subsamples in in odd and even columns are presented below the subsample regression results.

Panel A: Entry Results

	All	**Ownership**		**Foreign**		**Domestic**	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	-0.0019	0.00462*	-0.0021	0.0050	0.0033	-0.0033	-0.0007
	(0.001)	(0.003)	(0.002)	(0.004)	(0.004)	(0.002)	(0.002)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	489,830	113,461	376,369	53,883	59,578	186,693	189,676
Adjusted R-sq	0.017	0.022	0.019	0.025	0.020	0.025	0.014
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -square		2.980		0.120		0.690	
P -Value		0.084		0.732		0.450	

Panel B: Export Propensity Results

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0793***	0.0876***	0.0620***	0.0804***	0.0754***	0.0942**	0.0488**
	(0.004)	(0.013)	(0.010)	(0.009)	(0.007)	(0.023)	(0.013)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	72,969	15,673	57,295	7,705	28,522	7,968	28,773
Adjusted R-sq	0.144	0.137	0.115	0.133	0.114	0.128	0.116
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		2.910		0.520		12.540	
P -Value		0.088		0.469		0.000	

Appendix Table 4

The Effect of Trade Shock on Entry and Export Propensity Using Alternative Samples.

This table reports robustness results of Table 3 Panel B (in Panel A) and Table 4 Panel B (in Panel B) based on alternative samples. The full sample consists of manufacturing firms (in Panel A) and manufacturing entries (in Panel B) during the period 1999 to 2003 in the China Census Database, excluding industries whose foreign investment restrictions have been relaxed. OLS regression results of entry propensity (in Panel A) and export entry propensity (in Panel B) based on the full sample are presented in Column (1), subsamples of foreign and domestic firms in Columns (2) – (3), and subsamples broken down by development in Columns (4)-(7). In Panel A, the dependent variable is *Entry Indicator*, which equals one if a firm did not exist in the previous year but enters in the current year. In Panel B, the dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between subsamples in in odd and even columns are presented below the subsample regression results.

Panel A: Entry Results

	All	**Ownership**		**Foreign**		**Domestic**	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0013	0.00878***	0.0026	0.0114**	0.0046	0.0026	0.0027
	(0.002)	(0.003)	(0.002)	(0.005)	(0.004)	(0.003)	(0.003)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	464,241	105,028	359,213	50,107	54,921	179,163	180,050
Adjusted R-sq	0.023	0.012	0.028	0.016	0.016	0.033	0.027
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -square		2.990		1.890		0.000	
P -Value		0.083		0.169		0.980	

Panel B: Export Propensity Results

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0493***	0.0579***	0.0297***	0.0649***	0.0471***	0.0499***	0.0101**
	(0.003)	(0.009)	(0.003)	(0.013)	(0.013)	(0.005)	(0.004)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	18,237	79,702	8,992	9,245	39,527	40,175
Adjusted R-sq	0.139	0.151	0.099	0.121	0.171	0.097	0.102
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		8.700		0.980		38.130	
P -Value		0.003		0.323		0.000	

Appendix Table 5

The Effect of Financial Liberalization on Entry and Export Entry.

This table reports regression results on entry (Columns (1)-(2)) and export propensity of entrants (Columns (3)-(4)) following the trade shock and liberalization. The sample consists of manufacturing plants and manufacturing entries during the period 1999 to 2003 in the China Census Database in Columns (1) and (3), and manufacturing plants and manufacturing entries located in nine pilot cities (Shanghai, Shenzhen, Dalian, Tianjin, Qingdao, Wuhan, Guangzhou, Nanjing, and Zhuhai) during the period of 1999 to 2003 in the China Census Database in Columns (2) and (4), respectively. Among the nine pilot cities, four pilot cities (Shanghai, Shenzhen, Dalian, Tianjin) and five additional ones (Qingdao, Wuhan, Guangzhou, Nanjing, and Zhuhai) were liberalized in 2002 and 2003, respectively. The dependent variable is *Entry Indicator* in Columns (1) and (2), and *Export Indicator* in Columns (3) and (4), respectively. *Liberalization* equals one if a plant is located in a liberalized city in a specific year. *Liberalization*PstPNTR*Higher NTR Gap* is the triple interaction term between *Liberalization, PostPNTR* and *High NTR Gap*. Appendix 1 provides detailed definitions of all variables. OLS regression results are presented with robust standard errors in parentheses after controlling for the following fixed effects: *Liberalization*Year, Liberalization*Industry, Liberalization*City, Industry*Year, Industry*City,* and *Year*City*. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively.

	Entry Indicator		**Export Indicator**	
	Full Sample	Pilot-City Subsample	Full Sample	Pilot-City Subsample
Explanatory Variables	(1)	(2)	(3)	(4)
Liberalization*Pst PNTR*High NTR Gap	-0.0039	-0.0040	0.0804***	0.0798***
	(0.004)	(0.004)	(0.011)	(0.011)
No. of Obs.	490,924	115,879	103,437	21,389
Adjusted R-sq	0.067	0.045	0.173	0.141

Appendix Table 6

The Effect of Trade Shock on Export Propensity among Entries in Eastern and Coastal Provinces.

This table examines changes in export propensity among entries in eastern and coastal provinces following the trade shock. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. The full sample consists of manufacturing entries located in eastern and coastal provinces (including Zhejiang, Shanghai, Guangdong, Jiangsu, Shandong, Liaoning, Beijing, Fujian, Hebei, Tianjin, Hainan) during the period 1999 to 2003 in the China Census Database. Appendix 1 provides detailed definitions of all variables. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*Higher NTR Gap*) differ between subsamples are presented following the subsample regression results.

	Eastern and Coastal Provinces						
	All	**Ownership**		**Foreign**		**Domestic**	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0752***	0.0783***	0.0553***	0.0757***	0.0771**	0.0689***	0.0423***
	(0.003)	(0.014)	(0.002)	(0.010)	(0.021)	(0.002)	(0.003)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	81,991	18,096	63,895	9,041	9,055	33,742	30,153
Adjusted R-sq	0.120	0.131	0.099	0.094	0.160	0.087	0.116
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		3.140		0.010		88.730	
P -Value		0.070		0.930		0.000	

Appendix Table 7

The Effect of Trade Shock on Export Propensity among Entries Using Alternative Specifications.

This table reports robustness results of Table 4 Panel B based on alternative specifications. Panel A presents probit regression results. Panel B presents OLS regression results using shock term based on raw NTR gap as the main explanatory variable. Panel C presents OLS regression results based on triple interaction terms between foreign ownership (*Foreign*) and the shock term (*PstPNTR*High NTR Gap*). Panel D presents OLS regression results with additional controls for contemporaneous shocks. Panels E and F reports OLS regression results after controlling for *City*Year* fixed effects and firm characteristics including size, leverage, and profitability, respectively. Panel G reports OLS regression results after controlling for differences in linear time trends between treatment and control industries. Panel H reports OLS regression results with standard errors clustered at the industry levels. The full sample consists of manufacturing entries in the China Census Database during the period 1999 to 2007. *Entry* is defined as a firm that did not exist in the previous year but enters in the current year. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Explanatory variables are defined in Appendix 1. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term between subsamples in odd and even columns are presented following the subsample regression results.

Panel A: Probit Regression Results

	All	**Ownership**		**Foreign**		**Domestic**	
				Developed	Undeveloped	Developed	Undeveloped
		Foreign	Domestic	Cities	Cities	Cities	Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.253***	0.232***	0.223***	0.229***	0.229***	0.256***	0.194***
	(0.011)	(0.024)	(0.014)	(0.033)	(0.035)	(0.019)	(0.019)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,181	19,682	83,462	9,657	10,025	40,921	42,541
Pseudo R-sq	0.131	0.123	0.121	0.097	0.145	0.107	0.137

Panel B: Regression Results Based on NTR Gap

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * NTR Gap	0.241***	0.307***	0.181***	0.283***	0.189***	0.336***	0.179***
	(0.012)	(0.037)	(0.012)	(0.053)	(0.017)	(0.053)	(0.016)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	111,687	20,548	91,137	10,095	44,576	10,451	46,561
Adjusted R-sq	0.142	0.156	0.109	0.127	0.100	0.178	0.119
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		35.190		0.760		0.450	
P -Value		0.000		0.384		0.501	

Panel C: Regression Results Using Triple Interaction Terms

	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)
Pst PNTR * High NTR Gap	0.0588***	0.0417***
	(0.005)	(0.004)
Foreign * Pst PNTR * High NTR Gap	0.0304**	0.0454***
	(0.013)	(0.013)
Industry*Foreign Dummies	Y	Y
Year*Foreign Dummies	Y	Y
City Dummies	Y	Y
No. of Obs.	50,890	52,593
Adjusted R-sq	0.217	0.218
Tests for *Differences* in Coefficient Estimates for Foreign * Pst PNTR * High NTR Gap		
	Columns (1)-(2)	
Chi -Square	33.770	
P -Value	0.000	

Panel D: Regression Results after Controlling for Contemporaneous Shocks

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0519***	0.0748***	0.0321***	0.0717***	0.0710***	0.0540***	0.0114**
	(0.004)	(0.009)	(0.003)	(0.013)	(0.014)	(0.005)	(0.005)
PstPNTR * Contract Intensity	Y	Y	Y	Y	Y	Y	Y
PstPNTR * Δ China Import tariffs	Y	Y	Y	Y	Y	Y	Y
PstPNTR * Advanced Techonologies	Y	Y	Y	Y	Y	Y	Y
MFA Exposure	Y	Y	Y	Y	Y	Y	Y
China Export Licensing Shock	Y	Y	Y	Y	Y	Y	Y
Subsidy Rate	Y	Y	Y	Y	Y	Y	Y
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	98,394	18,306	80,087	9,020	9,286	39,534	40,553
Adjusted R-sq	0.146	0.154	0.121	0.126	0.175	0.110	0.137
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		18.840		0.000		37.260	
P -Value		0.000		0.971		0.000	

Panel E: Regression Results with Controls for City*Year Fixed Effects

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0704***	0.0813***	0.0507***	0.0808***	0.0809**	0.0614***	0.0436***
	(0.001)	(0.015)	(0.003)	(0.010)	(0.019)	(0.002)	(0.006)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City* Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	19,697	83,704	9,671	10,026	41,208	42,543
Pseudo R-sq	0.145	0.163	0.150	0.133	0.181	0.105	0.127
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		7.550		0.120		7.200	
P -Value		0.006		0.730		0.007	

Panel F: Regression Results with Controls for Firm Characteristics

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0705***	0.0822***	0.0521***	0.0810***	0.0797***	0.0615***	0.0440***
	(0.003)	(0.008)	(0.003)	(0.012)	(0.012)	(0.004)	(0.004)
Assets	Y	Y	Y	Y	Y	Y	Y
Liabilities/Assets	Y	Y	Y	Y	Y	Y	Y
Net Income/Sales	Y	Y	Y	Y	Y	Y	Y
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	19,731	83,751	9,681	10,050	41,208	42,543
Pseudo R-sq	0.156	0.153	0.129	0.123	0.174	0.117	0.143
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		11.550		0.010		7.910	
P -Value		0.001		0.936		0.005	

Panel G: Regression Results after Controlling for Differences in Linear Time Trends

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.00837***	0.0158***	0.000962***	0.0000296***	0.0244***	0.00279***	-0.00175***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Linear Trend * High NTR Gap	Y	Y	Y	Y	Y	Y	Y
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	19,731	83,751	9,681	10,050	41,208	42,543
Adjusted R-sq	0.141	0.153	0.109	0.123	0.174	0.100	0.120
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		3.930		7.400		16.340	
P -Value		0.047		0.007		0.000	

Panel H: Regression Results with Standard Errors Clustered at the Industry Levels

	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * High NTR Gap	0.0695***	0.0807***	0.0513**	0.0798***	0.0783***	0.0608***	0.0431
	(0.024)	(0.024)	(0.023)	(0.025)	(0.026)	(0.023)	(0.028)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	19,731	83,751	9,681	10,050	41,208	42,543
Pseudo R-sq	0.139	0.152	0.108	0.121	0.173	0.098	0.119
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		5.340		1.250		16.600	
P -Value		0.021		0.269		0.000	

Appendix Table 8

The Effect of Trade Shock on Export Propensity among Entries by Detailed Ownership Types.

This table examines changes in export propensity among entries following the trade shock for subsamples of varying ownership types in developed versus undeveloped cities. Panel A reports regression results based on the subsamples of firms with varying ownership types. Panel B compares regression results based on the subsamples of firms with varying ownership types in developed versus undeveloped cities. The full sample consists of manufacturing entries during the period 1999 to 2003 in the China Census Database. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) between subsamples are presented following the subsample regression results.

Panel A: Subsamples of Firms across Ownership Types

	Foreign				**Domestic**	
	HMT	Non-HMT	Controlling	Non-Controlling	State	Private
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)
Pst PNTR * High NTR Gap	0.0841***	0.0727***	0.0808***	0.0675***	0.0258***	0.0577***
	(0.012)	(0.012)	(0.009)	(0.024)	(0.011)	(0.004)
Industry Dummies	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
No. of Obs.	10,496	9,234	17403	2319	8,540	47,130
Adjusted R-sq	0.175	0.140	0.153	0.142	0.093	0.123
Tests for *Differences* in Shock Term Coefficient Estimates						
	Columns (1)-(2)		Columns (3)-(4)		Columns (5)-(6)	
Chi -Square	0.470		0.280		6.870	
P -Value	0.491		0.598		0.008	

Panel B: Subsamples of Firms in Developed versus Undeveloped Cities

	Foreign								Domestic			
	HMT		Non-HMT		Controlling		Non-Controlling		State		Private	
Explanatory Variables	Developed Cities (1)	Undeveloped Cities (2)	Developed Cities (3)	Undeveloped Cities (4)	Developed Cities (5)	Undeveloped Cities (6)	Developed Cities (7)	Undeveloped Cities (8)	Developed Cities (9)	Undeveloped Cities (10)	Developed Cities (11)	Undeveloped Cities (12)
Pst PNTR * High NTR Gap	0.0884***	0.0785***	0.0689***	0.0731***	0.0806***	0.0780***	0.0595*	0.0725**	0.0393**	0.0231*	0.0702***	0.0468***
	(0.017)	(0.016)	(0.016)	(0.018)	(0.012)	(0.013)	(0.033)	(0.037)	(0.016)	(0.014)	(0.006)	(0.006)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	4,677	5,819	5,003	4,231	8,410	8,993	1,269	1,050	3,407	5,133	24,736	22,394
Adjusted R-sq	0.139	0.206	0.110	0.148	0.116	0.177	0.121	0.155	0.127	0.071	0.113	0.139
Tests for Differences in Shock Term Coefficient Estimates												
	Columns (1)-(2)		Columns (3)-(4)		Columns (5)-(6)		Columns (7)-(8)		Columns (9)-(10)		Columns (11)-(12)	
Chi -Square	0.180		0.030		0.020		0.070		0.590		8.490	
P -Value	0.668		0.858		0.887		0.784		0.444		0.004	

Appendix Table 9

The Propensity of Switching to Export for Non-Export Entrants.

This table assesses the one-year, two-year, and three-year propensity of switching to export for non-export entrants following the trade shock. The sample consists of manufacturing entrants that do not export immediately in the first year of entry in the China Census Database during the post-shock period of 2001 to 2003. *Entry* is defined as a firm that did not exist in the previous year but enters in the current year. The dependent variable is *One-Year Export Propensity*, *Two-Year Export Propensity*, and *Three-Year Export Propensity* in Columns (1) – (2), (3) – (4), (5) – (6), respectively. *One-Year (Two-Year/Three-Year) Export Propensity* is equal to one if the firm starts to export within one (two/three) year after its entry. Appendix 1 provides detailed definitions of all variables. Robust standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively.

	One-Year Export Propensity		Two-Year Export Propensity		Three-Year Export Propensity	
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)
Foreign Indicator	0.173***	0.159***	0.232***	0.217***	0.258***	0.246***
	(0.005)	(0.007)	(0.006)	(0.008)	(0.006)	(0.009)
Foreign Indicator *		0.0327***		0.0429***		0.0375***
High NTR Gap		(0.010)		(0.011)		(0.012)
Industry Dummies	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y
No. of Obs.	35,809	29,992	35,809	29,992	35,809	29,992
Adjusted R-sq	0.084	0.073	0.118	0.104	0.159	0.143

Appendix Table 10

Characteristics and Performance of Entrants by Ownership Types.

This table compares the characteristics and performance of entrants by detailed ownership types. The sample consists of manufacturing entries in the China Census Database during the period of 1999 to 2003. *Entry* is defined as a firm that did not exist in the previous year but enters in the current year. Panel A reports OLS regression results of *Assets* in billion RMB (Columns (1) – (3)), *Liabilities/Assets* (Columns (4) – (6)), and *Corporate Taxes/Sales* (Columns (7) – (9)), respectively. Panel B reports OLS regression results of *One-Year Performance* (Columns (1) – (3)), *Two-Year Performance* (Columns (4) – (6)), and *Three-Year Performance* (Columns (7) – (9)), respectively. *One (Two/Three)-Year Performance* is computed as the percentage change in total assets within one (two/three) year of the entry, with the assumption that it takes the value of -100% if the entrant does not exist in the dataset one (two/three) year after the entry. Appendix 1 provides detailed definitions of all variables. Robust standard errors are reported in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: Characteristics across Ownership Types

	Assets			Liabilities/Assets			Corporate Taxes/Sales		
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Foreign Indicator	20.930***			-0.0473***			-0.00374***		
	(0.745)			(0.002)			(0.000)		
State Indicator		66.711***			0.0817***			-0.00159***	
		(1.005)			(0.003)			(0.000)	
Private Indicator			-25.742***			-0.0198***			0.00100***
			(0.592)			(0.002)			(0.000)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	126,141	126,141	126,141	126,141	126,141	126,141	126,141	126,141	126,141
Adjusted R-sq	0.080	0.077	0.088	0.073	0.075	0.071	0.068	0.056	0.056

Panel B: Performance across Ownership Types

	One-Year Performance			Two-Year Performance			Three-Year Performance		
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Foreign Indicator	0.0928***			0.152***			0.192***		
	(0.006)			(0.008)			(0.010)		
State Indicator		-0.102***			-0.191***			-0.259***	
		(0.008)			(0.011)			(0.013)	
Private Indicator			0.0397***			0.0722***			0.113***
			(0.005)			(0.007)			(0.008)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	126,141	126,141	126,141	126,141	126,141	126,141	126,141	126,141	126,141
Adjusted R-sq	0.025	0.025	0.024	0.036	0.035	0.034	0.040	0.040	0.038

Appendix Table 11

The Effects of Trade Shock by Size Groups with Controls for Changes in Export Licensing Policies in China.

This table reports robustness results of Table 7 Panel B after controlling for changes in export licensing policies in China. The full sample consists of manufacturing entrants during the period 1999 to 2003 in the China Census Database. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. OLS regression results based on the subsamples of domestic firms with (without) direct exporting rights are reported in Columns (1)-(4) ((5)-(8)). Explanatory variables are defined in Appendix 1. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between the subsamples in odd and even columns are presented following the subsample regression results.

	Domestic Firms with Direct Exporting Rights				**Domestic Firms without Direct Exporting Rights**			
	1-49	*50-99*	*100-249*	*250+*	*1-49*	*50-99*	*100-249*	*250+*
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.0203**	0.0281***	0.0365***	0.0739***	0.0231***	0.0595***	0.0887***	0.0732***
	(0.010)	(0.009)	(0.009)	(0.013)	(0.005)	(0.007)	(0.009)	(0.019)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	4,384	6,722	8,802	7,292	20,330	18,191	14,053	3,973
Adjusted R-sq	0.060	0.068	0.130	0.125	0.088	0.121	0.193	0.230
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)	Columns (2)-(3)	Columns (3)-(4)		Columns (5)-(6)	Columns (6)-(7)	Columns (7)-(8)	
Chi -Square	0.350	0.460	5.500		17.450	6.780	0.550	
P -Value	0.559	0.499	0.019		0.002	0.009	0.458	

Appendix Table 12

The Effects of Trade Shock by Size Groups and Ownership Types.

This table examines changes in export propensity among entries following the trade shock by size groups and ownership types. The full sample consists of manufacturing entrants during the period 1999 to 2003 in the China Census Database. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results after controlling for industry, year and city fixed effects are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) differ between the subsamples in odd and even columns are presented following the subsample regression results.

	Domestic State Firms				**Domestic Private Firms**			
	1-49	*50-99*	*100-249*	*250+*	*1-49*	*50-99*	*100-249*	*250+*
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.015	0.033	0.0366*	0.0433*	0.0232***	0.0602***	0.0786***	0.0868***
	(0.010)	(0.021)	(0.019)	(0.024)	(0.006)	(0.007)	(0.008)	(0.016)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	2,175	1,428	1,985	2,939	14,313	15,367	13,036	4,412
Adjusted R-sq	0.052	0.037	0.119	0.122	0.089	0.118	0.174	0.181
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)	Columns (2)-(3)	Columns (3)-(4)		Columns (5)-(6)	Columns (6)-(7)	Columns (7)-(8)	
Chi -Square	0.680	0.020	0.050		22.670	77.790	0.630	
P -Value	0.410	0.893	0,818		0.000	0.000	0.426	

Appendix Table 13

The Effects of Trade Shock by Size Groups and Development.

This table examines changes in export propensity among entries following the trade shock by size groups in developed versus undeveloped cities. The full sample consists of manufacturing entries during the period 1999 to 2003 in the China Census Database. The dependent variable is *Export Indicator*, which equals one if a firm exports and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results based on the subsamples of size groups in developed and undeveloped cities are reported in Columns (1)– (4) and (5)– (8), respectively with robust standard errors in parentheses. Size groups are based on the number of employees. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*High NTR Gap*) between subsamples are presented following the subsample regression results.

	1-49		***50-99***		***100-249***		***250+***	
	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pst PNTR * High NTR Gap	0.0490***	0.0168***	0.0638***	0.0524***	0.0891***	0.0809***	0.109***	0.0950***
	(0.005)	(0.001)	(0.012)	(0.006)	(0.004)	(0.009)	(0.012)	(0.012)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	14,345	15,085	14,922	14,948	14,197	14,696	7,426	7,862
Adjusted R-sq	0.088	0.070	0.111	0.106	0.177	0.192	0.216	0.247
Tests for *Differences* in Shock Term Coefficient Estimates								
	Columns (1)-(2)		Columns (3)-(4)		Columns (5)-(6)		Columns (7)-(8)	
Chi -Square	59.500		2.720		1.130		4.420	
P -Value	0.000		0.099		0.289		0.036	

Appendix Table 14

The Effect of Trade Shock on Initial Size.

This table examines the effect of trade shock on the initial size of entrants. The full sample consists of manufacturing entries during the period 1999 to 2003 in the China Census Database. Regression results based on the full sample of new entries in Column (1), subsamples of new foreign and domestic firms in Columns (2) – (3), and subsamples broken down by development in Columns (4)-(7). The dependent variable is a categorical variable (*Employee Group*) that equals one if employees are less than 50, two if employees between 50 and 100, three if employees between 100 and 250, and four if employees more than 250. Appendix 1 provides detailed definitions of all variables. OLS regression results are presented with robust standard errors in parentheses after controlling for industry, year, and city fixed effects. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*Higher NTR Gap*) differ between subsamples are presented following the subsample regression results.

	Employee Group						
	All	Ownership		Foreign		Domestic	
		Foreign	Domestic	Developed Cities	Undeveloped Cities	Developed Cities	Undeveloped Cities
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pst PNTR * NTR Gap	0.0217**	0.0938**	-0.007	0.111***	0.079	0.019	-0.033
	0.00	(0.03)	(0.01)	(0.018)	(0.038)	(0.010)	(0.022)
Industry Dummies	Y	Y	Y	Y	Y	Y	Y
City Dummies	Y	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y	Y
No. of Obs.	103,483	19,731	83,751	9,681	10,050	41,208	42,543
Adjusted R-sq	0.099	0.132	0.100	0.107	0.160	0.092	0.110
Tests for *Differences* in Shock Term Coefficient Estimates							
		Columns (2)-(3)		Columns (4)-(5)		Columns (6)-(7)	
Chi -Square		7.750		1.620		8.030	
P -Value		0.005		0.203		0.005	

Appendix Table 15

The Propensity of Being Acquired by a Foreign Individual or Entity among Domestic Incumbents.

This table examines changes in propensity of domestic incumbents being acquired by a foreign individual or entity following the trade shock. The sample consists of domestic incumbent firms, domestic incumbent exporting firms and non-exporting firms during the period 1999 to 2003 in the China Census Database in Columns (1)-(3), respectively. The dependent variable is *Propensity of Being Acquired by a Foreign Individual or Entity*, which equals one if a firm was controlled by a domestic individual or entity in the previous year, but became controlled by a foreign individual or entity in the current year, and zero otherwise. Appendix 1 provides detailed definitions of all variables. OLS regression results are presented with robust standard errors in parentheses. Coefficients marked with *, **, and *** are significant at the 0.1, 0.05, and 0.01 levels, respectively. *Chi*-square statistics and *P*-values associated with the test of whether the coefficient estimates of the shock term (*PstPNTR*Higher NTR Gap*) differ between subsamples are presented following the subsample regression results.

	Propensity of Being Acquired by a Foreign Individual and Entity		
	All	Exporters	Non-Exporters
Explanatory Variables	(1)	(2)	(3)
Pst PNTR * High NTR Gap	0.00144***	-0.00042	0.00117***
	(0.00)	(0.00)	(0.00)
Industry Dummies	Y	Y	Y
Year Dummies	Y	Y	Y
City Dummies	Y	Y	Y
No. of Obs.	287,872	60,443	227,429
Adjusted R-sq	0.004	0.011	0.002
Tests for *Differences* in Shock Term Coefficient Estimates			
		Columns (2)-(3)	
Chi -Square		3.420	
P -Value		0.064	