Trade Policy and the China Syndrome *

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Abstract

The recent backlash against free trade is partially motivated by the decline in manufacturing employment due to rising import competition from China. Politicians in high-income countries have extensively used antidumping (AD) duties and other temporary trade barriers to protect their economies from rising Chinese imports. In this paper, I focus on the United States and show that protectionist trade policies have contained the "China Syndrome". To identify the causal effect of trade protection on employment, I construct two new instruments for AD duties, one based on the importance of an industry in swing states, the other based on an industry's experience at filing AD petitions. My baseline estimates imply that, when the moderating impact of AD duties is taken into account, the negative effect of Chinese import competition on US manufacturing employment is less than half the size estimated in previous studies, which neglect the impact of trade policy.

JEL Classification: F13, F14, F16, J20
Keywords: Antidumping, China, Import Competition, Labor Demand, Protectionism

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1 Introduction

Recent years have seen an unprecedented backlash against international trade and globalization more generally. The electoral victory of Donald Trump and the outcome of the Brexit vote are two major manifestations of this tendency. Rising competition from China has contributed to this backlash. Between 1990 and 2011 the share of global manufacturing exports originating from China surged from 2% to 16%. China's emergence as a trading power has been driven almost entirely by deep economic reforms that China enacted in the 1980s and 1990s, which were further extended by the country's joining the World Trade Organization (WTO) in 2001.

Politicians and economists alike are pointing at increasing Chinese import competition as the cause for the decline in manufacturing jobs in high-income countries. The US president Donald Trump has argued that trade with China is responsible for the "closure of more than 50,000 factories and the loss of tens of millions of jobs", concluding that the "WTO was not a good deal for America then and it's a bad deal now".[1] Following the seminal paper by Autor et al. (2013), a series of studies have examined the effects of the "China Syndrome", i.e. the negative effect of rising Chinese imports on US employment. In their paper, they focus on US local labor markets and estimate that the exposure to Chinese import competition explains 44% of the decline in manufacturing employment between 1991 and 2007. Looking across US manufacturing industries, Acemoglu et al. (2016) estimate that around 10% of the realized job decline in manufacturing between 1999 to 2011 was due to increased import penetration from China.

The political and academic debates about the China Syndrome have so far neglected the role of trade policy. However, trade policy can clearly play an important role, given that governments around the world have extensively use various forms of contingent protection to shelter domestic industries from increased import competition. For example, between 1991 and 2011, the number of antidumping duties used by United States against China increased by 440% (see Figure 1).

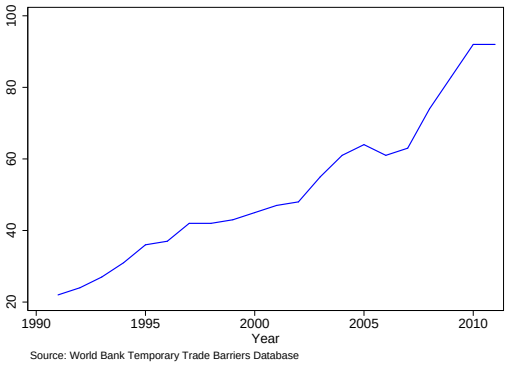
In this paper, I examine whether protectionist policies helped to contain the negative effects of Chinese import competition on manufacturing jobs in the United States. WTO rules allow member countries to use three forms of contingent protection: antidumping duties, countervailing duties, and safeguards.[2] I focus on antidumping duties, which are by far the most used protectionist measures against China. Figure 2 shows that the number of antidumping measures implemented by the United States against China has dramatically increased during the last two decades, while the use of countervailing duties and safeguards is a more recent phenomenon.[3]

[1] Donald J. Trump, "United States-China Trade Reform Plan."

[2] Antidumping duties are tariff that can be imposed when a product is sold by a foreign firm below a "fair value", that is below the price charged in their domestic market or, alternatively, below the production cost. Countervailing duties are tariffs that can be introduced when foreign producers benefit from illegal subsidies provided by their government. Safeguards are special measures that can be introduced when imports cause, or threaten to cause, domestic market disruption, even in the absence of unfair behavior by a foreign firm or government.

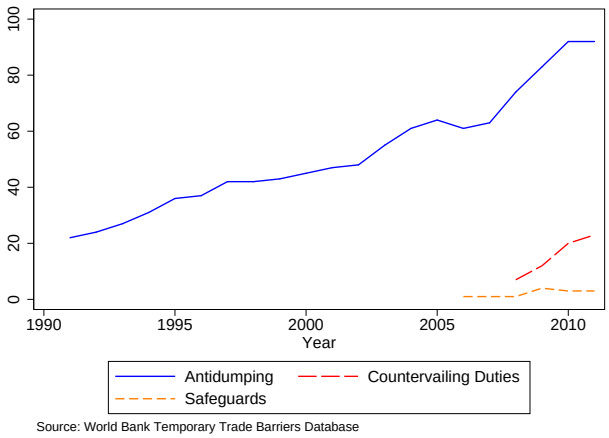
[3] The use of antidumping protection is not limited to the United States only. By the end of 2000s, more than 93 countries worldwide have adopted antidumping laws (Vandenbussche and Zanardi, 2010). Through the years,

Figure 1: Stock of US antidumping measures against China (1991-2011)



Understanding the impact of trade policy is important for two main reasons. First, President Trump and other politicians around the world have threatened to ignore the rules of the current world trading system, arguing that these do not allow them to protect their workers from unfair competition from China and other emerging economies. Showing that trade policy can be used to attenuate the effects of import competition can lessen the criticisms about the inadequacies of WTO rules. Second, if protectionist measures are effective in protecting manufacturing jobs, then previous studies may have overestimated the impact of Chinese import competition.

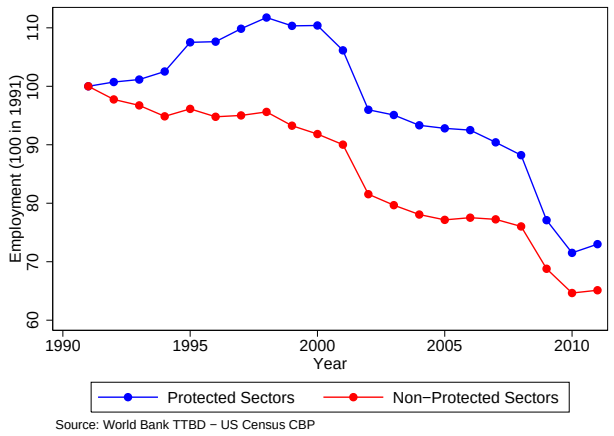
Figure 2: US antidumping duties, countervailing duties and safeguards against China (1991-2011)



antidumping has become the most commonly used policy tool by which industries seek and obtain protection from their governments (Zanardi, 2006).

A first look at the data shows systematic differences in the evolution of protected versus non-protected sectors: as shown in Figure 3, employment fell by 17% in industries in which at least one antidumping measure was in force against China, and by 25% in non-protected industries. In order to establish a causal link, I build on the empirical methodology by Acemoglu et al. (2016), constructing an econometric model to study the impact of import penetration and antidumping on employment growth across US manufacturing sectors. To be able to compare my results with their findings, I focus on the same sample period (1991-2011).

Figure 3: Changes in US Manufacturing Employment: Protected vs Non-Protected Sectors



The main econometric challenge is to show a causal effect of the key variables of interest. Indeed, the identification of the impact of Chinese import competition and antidumping protection is problematic as employment, import penetration, and antidumping are all simultaneously determined, leading to inconsistent estimates of their coefficients when using ordinary least squares (OLS) regressions. I thus follow an instrumental variable approach, exploiting exogeneous variation in Chinese import penetration and in the determinants of AD protection.

To run two-stage least squares (2SLS) regressions, I need at least two instruments: one for import penetration, and one for antidumping. To instrument for the degree of Chinese competition faced by US industries, I follow previous studies (Autor et al., 2013; Acemoglu et al., 2016), using information on Chinese exports to other high-income countries. Since antidumping has not been used so far as explanatory variable in the literature of the "China syndrome", I constructed two new instruments for it. This is also one of the main contributions of the paper. The first instrument exploits variation in the political importance of US industries, proxied by employment in swing states. The idea behind this instrument is that the key institutions involved in antidumping decisions in the United States — the US Department of Commerce (USDOC) and the US International Trade Commission (ITC)

— are more likely to respond positively to antidumping petitions coming from industries that are important in key battleground states. That builds on earlier work with coauthors (Conconi et al., 2017), in which we show that the importance of an industry in swing states affects the initiation of WTO disputes by the United States. The second instrument exploits cross-industry variation in antidumping experience. Previous studies suggest that, due to the legal and institutional complexity of the antidumping process, industries with prior experience in antidumping cases face lower costs of filing and a higher probability of success in new cases (Bloningen and Park, 2004). Based on this idea, I construct my second instrument using information on antidumping petitions filed by US industries against Japan in the 1980s. At that time, Japan accounted for around 20% of US imports, the largest share from any country (the corresponding share for China was less than 2%), while around 21% of the antidumping measures targeted Japanese firms (the share of measures targeting Chinese firms was around 6%).

The estimates of my baseline regressions indicate that antidumping duties increases manufacturing jobs by around 7.5% per year during my sample period. I run a counterfactual exercise to evaluate by how much trade policy contained the China Syndrome. My estimates imply that, when the moderating impact of these protectionist measures is taken into account, the negative effect of Chinese import competition on US manufacturing employment is less than half the size estimated by Acemoglu et al. (2016).

My results should not be interpreted as suggesting that trade protection is beneficial for the economy, since they capture only the direct partial-equilibrium effects of antidumping on protected industries. Indeed, protection can have large efficiency costs. Access to low-cost goods from China has clearly benefited US consumers (e.g., Amiti et al., 2017), as well as downstream firms (e.g., Gallaway et al., 1999; Erbahar and Zi, 2017). However, it is not possible to ignore that international trade has also had important distributional effects, displacing American workers who have faced difficult and prolonged periods of job transition. It is thus important to develop effective tools for managing and mitigating the costs of trade adjustment. The US Trade Adjustment Assistance (TAA) program should be improved, to address the needs of all workers to gain skills and mobility to cope with the consequences of globalization. My study shows that temporary trade measures like antidumping duties can also be used to smooth adjustment costs.

The rest of the paper is organized as follows. Section 2 briefly discusses the related literature. Section 3 describes the institutional procedure for the introduction of antidumping duties in the United States. Section 4 presents the data used in the econometric analysis. Section 5 discusses the empirical methodology. Section 6 presents the main results. Section 7 concludes.

2 Related Literature

My paper builds on two main streams of literature. The first focuses on the effects of the rise of China as a trading power. In their seminal contribution, Autor et al. (2013) show that rising competition from Chinese imports had differential effects across US commuting zones. These are aggregates of counties, comprising well-defined local labour markets, that differ in their exposure to import competition as a result of regional variation in the importance of different manufacturing industries for local employment. My study is most closely related to the one by Acemoglu et al. (2016), who aim to understand the puzzling slowdown of the US employment rate during the 2000s, overturning the realized gains during the so-called "Roaring Nineties" (Krueger and Solow, 2002). They estimate that 837,000 US manufacturing jobs were lost as the direct effect of Chinese import penetration during the period from 1991 to 2011. Pierce and Schott (2016a) also attribute the drop in US manufacturing employment to rising imports from China, using an alternative identification strategy, based on the conferral of permanent Most Favored Nation status to China upon entry into the WTO.

There also exists a growing literature that examines the effects of rising Chinese imports on other outcomes. Pierce and Schott (2016b) study the effects of the China shock on mortality rates across US counties, while Colantone et al. (2017) consider the impact on mental health in the United Kingdom. Another stream of the literature focuses on political outcomes. Autor et al. (2017b) show a positive impact of the "China Syndrome" on political polarization in US, while Che et al. (2017) report an increase in turnout, Democratic vote shares, and probability of electing a Democratic candidates in US counties most affected by the China shock. Autor et al. (2017a) document a negative impact of the China shock on marriage stability in the United States. Rohlf (2017) attributes the reallocation of production to less polluting sectors in Germany to the rising Chinese import penetration. My paper is the first to analyze the role of trade policy in smoothing the labor market effects of the increasing import penetration by Chinese products.

My analysis also contributes to the literature on antidumping protection. This can be divided in two main strands. The first studies the direct effects of antidumping and finds a general reduction in imports from the targeted countries, and an increase in profits and employment for the protected industries. Gallaway et al. (1999) use a computable general equilibrium (CGE) model to quantify the effects of removing antidumping and countervailing duties in the United States. According to their estimates, antidumping was the second most distortionary trade policy used in the United States.[4] Welfare losses are induced by the higher prices paid by consumers and downstream firms on imported products. On the other hand, they show that protected industries experience employment and output gains, with an average of 14,250 jobs saved per year in protected sectors.[5]

[4] In Gallaway et al. (1999), the most costly trade policy was the Multi Fibre Agreement. Since it expired in the 2005, nowadays antidumping is likely to be the trade policy inducing the highest welfare loss in the United States.

[5] A connected research question is whether the increase in revenues is attributable to an increase in productivity.

In parallel to the studies that use computational general equilibrium models, a large body of the antidumping literature tries to understand partial equilibrium effects, using econometric analysis to establish a causal link between antidumping duties and trade flows. Prusa (2001) estimates that imports of products targeted by US antidumping measures decreased by 30 to 50%. On the extensive margin, Besedes and Prusa (2017) find that antidumping increases the probability of exit by targeted products by more than 50%. Lu et al. (2013) use detailed transaction data on all Chinese firms exporting to the United States and find that an increase in US antidumping duties leads to a significant drop in Chinese exports.

Another strand of the literature identifies other channels through which antidumping can affect trade, besides the first-order effects of targeted products and countries. How effective antidumping duties are at protecting manufacturing jobs depends crucially on these effects. Various studies stress that antidumping can give rise to trade diversion (e.g., Konings et al, 2001; Prusa, 1997): antidumping duties targeting one country can lead to an increase in imports from non-targeted countries. Besides, antidumping has chilling effect on aggregate trade: it can have a deterrent effect even on foreign firms that not actually targeted. Vandenbussche and Zanardi (2010) estimate these chilling effects to be around 6% of aggregate imports.

3 Antidumping in the United States

Under article VI of the General Agreement on Tariffs and Trade and US trade laws, dumping is the sale of products by foreign producers and exporters in the United States at a price below the normal value. The rationale of antidumping law is preventing predatory behavior by foreign firms as it might lead to the shutdown of a domestic industry in the United States. Although the rationale behind antidumping laws is to create an equal "level playing-field" for American firms, nowadays it is considered as one of the main tool to protect US companies.

The authorities impose an antidumping measure if two conditions are met: (1) the products are sold at "less than fair value" (LTFV) or dumped in the US market; and (2) the LTFV sales must be causing or threatening to cause material injury to the US industry producing like products. If these two conditions are met, an anti-dumping duty order is issued imposing duties equal to the amount by which the normal value exceeds the export price, as determined by sales to the United States.

In the United States, antidumping is administrated by two separated agencies, each with different competences: the US Department of Commerce (USDOC),[6] and the US International Trade

Using US plant-level data, Pierce (2011) shows that the increase in revenue is driven by an increase in markups, while there is a decrease in physical productivity. Konings and Vandenbussche (2008) show that, following the introduction of an antidumping duty, firms with initial high productivity experience productivity losses. The reverse is true for the low productivity firms.

[6]Before 1980, the US Department of Treasury was in charge of the dumping investigation. However, the US

Commission (ITC). An antidumping case starts with a petition to the USDOC and the ITC, claiming that there is unfair competition in one or more product markets by imports from a specific country. Entitled to be a petitioners are US manufacturers, producers or wholesalers of a like product.

The USDOC is the first institution to decide about the outcome of an antidumping case. Specifically, it decides whether a product is imported at a price below the "fair value". However, the calculation of the dumping margin involves a considerable amount of complexity in defining what is the "fair value" for goods sold in the United States. According to the law, the USDOC defines as "fair value" the foreign firm's price of the same good in its home country. However, this price is not always available either because foreign firm's sales in the home market are negligible or because the home country is a non-market economy. If this is the case, the USDOC can base the calculation of the "fair value" price on the exporting firm's price in third countries or on a constructed value for based on the foreign firm's costs, when this information is provided. A product is declared to be dumped if the dumping margin is above the threshold established by the USDOC. Due to these practices to define dumping, the USDOC concludes that products were dumped in almost all cases.

The final stage of the antidumping process ITC's decision on the injury investigation. Under the Title II, Section 201 of the Trade Act of 1974, the USITC "determines whether an article is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat there-of, to the domestic industry producing an article like or directly competitive with the imported article." In other words, there is an antidumping measure only if the unfair import competition by a foreign firm is a major threat to a domestic industry. Here, the burden of proof is clearly more demanding than for the dumping investigation and the fraction of cases passing the injury test is lower than those that passes the dumping investigation.

Chinese firms have a special status in the US antidumping legislation. To accede to the WTO, China committed to reform its governmental policies and practices as they were inconsistent with WTO principles and, at the same time, allowed WTO member to treat China as a non-market economy (NME). Given the NME status, the USDOC automatically relies on third surrogate countries to determine the dumping margin. This implies the imposition of larger duties to Chinese products. In December 2016, the provision regulating the China's non-market economy status expired. However, to this date, China's largest trade partners — the United States and the European Union — have refused to grant the status of a market economy to China. They claim that Chinese firms are still receiving subsidized credit, energy and raw materials as China has still to reform its economy as they committed to do in 2001. Nowadays, China status as NME is the main critical point in the China-US international trade relationship.

Congress decided to strip this competences from the Treasury to the Department of Commerce, because it was seen by the legislators more incline to protect US business and workers than the Department of Treasury.

4 Data

For the empirical analysis, information is collected from four data sources. The first source of information is the World Bank Temporary Trade Barriers Database (TTBD). The TTBD (Bown, 2014) provides detailed information on antidumping cases for more than thirty countries in the world. For each case, it is available the date of initiation of the investigation, the date of imposition of final antidumping measure (if approved), the product's country of origin, and the description of the product under investigation with a correspondent Harmonized System (HS) codes. For the US, product data are extremely detailed with around 80% of petitions identified at the 10-digit Harmonized Tariff Schedule (HTS) level. Thanks to this granularity, it is possible to link each investigation with the correspondent 4-digit Standard Industrial Classification (SIC) code.

The matching is executed with the following procedure:

1. Each 6-digit HS code is matched with one or more 4-digit SIC code using the crosswalk file by Autor et al. (2013).[7] Around 95% of antidumping cases against China are mapped using this correspondence table.[8]

2. The remaining "unmatched" cases are mapped to a SIC code using the concordance tables by Pierce and Schott (2009).[9]

Between 1991 and 2011, the US initiated 138 cases in which China is among one of the countries accused of dumping (corresponding to 19% of the total new antidumping cases). Of those cases, the US imposed 100 measures (72% affirmative), 97 of which were in force during my sample period (1991-2011). Investigations cover a large variety of products, mainly in the manufacturing sector. Table 1 shows the distribution of antidumping measures in force against Chinese firms among the 2-digit SIC sectors. Although some antidumping measures were in force in all sectors, three sectors received more protection than the others: fabricated and primary metals, and chemical products (almost 67% of the antidumping measures in force concern products belonging to these three sectors).

To construct a measure of import penetration from China, I use as second source of data the United Nation (UN) Comtrade Database.[10] This provides information on bilateral trade-flows for 6-digit HS codes. All imports are expressed in real 2007 dollars. To build the import penetration ratio,

[7] It is possible to download the crosswalk file to concord HS codes to SIC codes on the David Dorn's website: http://ddorn.net/data.htm.

[8] For years up until 1988, the description of the products is provided according to the Tariff Schedule of the United States Annotated (TSUSA) classification. Then, for antidumping cases before 1988 I match each TSUSA code with a correspondent HS code using the correspondence table provided by Feenstra (1996). It is possible to download the crosswalk file to concord TSUSA codes to HS codes on the UC Davis - Centre for International Data website: http://cid.econ.ucdavis.edu/usix.html.

[9] The correspondence tables HS-SIC by Pierce and Schott are available at Peter Schott's website: http://faculty.som.yale.edu/peterschott.

[10] https://comtrade.un.org/

Table 1: US antidumping measures in force against China across 2-digit SIC industries (1991-2011)

Sector (SIC2)	Description	Measures in force	Percent of total
20	Food and Kindred Products	7	6,03%
22	Textile Mill Products	4	3,45%
23	Apparel, Finished Products from Fabrics & Similar Materials	3	2,59%
24	Lumber and Wood Products, Except Furniture	2	1,72%
25	Furniture and Fixtures	5	4,31%
26	Paper and Allied Products	7	6,03%
27	Printing, Publishing and Allied Industries	4	3,45%
28	Chemicals and Allied Products	30	25,86%
30	Rubber and Miscellaneous Plastic Products	5	4,31%
31	Leather and Leather Products	1	0,86%
32	Stone, Clay, Glass, and Concrete Products	9	7,76%
33	Primary Metal Industries	27	23,28%
34	Fabricated Metal Products	27	23,28%
35	Industrial and Commercial Machinery and Computer Equipment	10	8,62%
36	Electronic & Other Electrical Equipment & Components	7	6,03%
37	Transportation Equipment	3	2,59%
38	Measuring, Photographic, Medical, & Optical Goods, & Clocks	2	1,72%
39	Miscellaneous Manufacturing Industries	11	9,48%

this information are completed with industry-level data on production provided by retrieved from the NBER - Center for Economic Studies (CES) Manufacturing Industry Database. Furthermore, the NBER-CES Database provides a rich set of information on industry performance and features from 1971 to 2011 that will later be useful for the construction of industry-level controls. The object of my analysis is explaining employment dynamics in the US, so, as last source of information, data on US employment come from the US Census County Business Patterns (CBP). The CBP is an annual data series providing information on employment, number of establishments, first quarter payroll, and annual payroll by industry.

5 Empirical Methodology

I study the impact of trade policy and US manufacturing employment, examining whether protectionist measures used against China played a role in offsetting the negative effect of the China Syndrome. To address this question, I follow the methodology used by Acemoglu et al. (2016), including industry-level information on antidumping protection in their framework.

As benchmark regression, I estimate the following equation:

$$\Delta L_{i,t} = \alpha_t + \beta_1 \Delta IP_{i,t} + \beta_2 AD_{i,t} + \gamma X_i + \delta_{k(i)} + \varepsilon_{i,t}. \tag{1}$$

Each industry i is defined at 4-digit SIC. The dependent variable ($\Delta L_{i,t}$) is 100 times the annual log change in employment in industry i over period t. The key variables of interest are: $\Delta IP_{i,t}$,

defined as 100 times the annual change in import penetration from China in industry i over period t; and $AD_{i,t}$, a dummy equal to 1 if a sector i received a new AD measure against China imports over time period t. To control for the presence of time trends, period dummies (α_t) are included in all the specifications. To account for broad sectoral trends, I also include 1-digit SIC manufacturing sector dummies ($\delta_{k(i)}$). X_i is a matrix of industry controls, and $\varepsilon_{i,t}$ is the error term.

The matrix X_i includes all the industry-level controls used by Acemoglu et al. (2016), all defined the 4-digit SIC level: the log of average wage in 1991, the ratio of capital on value added in 1991, the ratio of production workers over total employment in 1991, computer investment as share of the total in 1990, and high tech investment as share of the total in 1990. These variables are meant to control for the potential exposure to technological change in capital-, computer- and skill-intensive sectors. X_i also includes pre-trend controls: the logarithm of average wage in 1976-1991, and the logarithm of average industry's share of total employment. Pre-trend controls are included for two reasons. The first is that many US industries started to already decline since the 1980s, so there is a need to control for secular employment trends. Second, the estimated effect of $AD_{i,t}$ is cleaned from the effects of any other policy designed to support declining industries. In all the specifications, I also include the industry's share of total US employment in 1991 to control for any policies supporting large industries in the United States.[11]

Following Autor et al. (2013) and Acemoglu et al. (2016), the employment and import penetration variables are expressed as stacked differences for the two sub-periods (1991-1999 and 1999-2011). This specification has the advantage of imposing less restrictive assumptions on the error term.[12] In all the regressions, observations are weighted by using employment level in 1991 and standard errors are clustered at the 3-digit SIC level.

As a robustness check, I restrict the sample to end in 2007. This is to verify that my estimates are unaffected when excluding the effects of the global financial crisis, which had disruptive effects on both imports and employment (US manufacturing employment declined by 12% from 2008 to 2009, while imports fell by 22%).

Compared to previous studies, I face additional identification concerns, given that the two controls of interest ($\Delta IP_{i,t}$ and $AD_{i,t}$) suffer both from endogeneity concerns. Concerning the import penetration variable, an increase in imports from China can be due to an increase in productivity of Chinese firms, a decrease in productivity of US firms, or to shocks in US demand. With respect to the antidumping variable, shrinking industries are more likely to pass the injury test carried out by the International Trade Commission, given that employment is one of the key variables used to determine if imports have caused material injury to a US industry. To obtain consistent estimates

[11] I can thus isolate the importance of an industry in the United States at large from its importance in key swing states (see discussion below).

[12] Panel models with fixed effects are assuming serially uncorrelated errors, while a model with first differences is more efficient if errors are distributed as a random walk (Wooldridge, 2002). In a stacked differences model with standard errors clustered at 3-digit SIC, standard errors estimates should be robust to both errors structure.

of the combined impact of import penetration and antidumping on employment, I thus follow an instrumental variable (IV) approach.

First, I need an instrument for import penetration. In my econometric model, the change in import penetration from China is defined as:

$$\Delta IP_{i,t} = \frac{\Delta M_{i,t}^{US,CH}}{Y_{i,91} + M_{i,91} - E_{i,91}}, \tag{2}$$

where $\Delta M_{i,t}^{US,CH}$ is the change in bilateral import from China to the United States for industry i in period t, $Y_{i,91} + M_{i,91} - E_{i,91}$ is the initial absorption, i.e. sum of the value of shipments plus the net imports for industry i in 1991, which is chosen as the beginning of our sample period because is the first year for which disaggregated data on Chinese trade with the US are available on UN Comtrade. To isolate the impact of an increase in Chinese supply on US employment, I follow Acemoglu et al. (2016), instrumenting trade exposure with:

$$\Delta IPO_{i,t} = \frac{\Delta M_{i,t}^{US,OC}}{Y_{i,88} + M_{i,88} - E_{i,88}}. \tag{3}$$

In equation (3), $\Delta M_{i,t}^{US,OC}$ is the change in imports to the United States from a basket of eight high-income countries excluding the United States.[13] The denominator of $\Delta IPO_{i,t}$ is the initial absorption for industry i in year 1988.

This instrument is built under the hypothesis that supply shocks in China are affecting trade flows in high-income country in a comparable way. The variable $\Delta IPO_{i,t}$ is correctly identifying import penetration in the US if industry import demand shocks are uncorrelated across high-income economies and in absence of strongly increasing returns to scale in Chinese manufacturing industries. Indeed, increasing returns to scale imply that a demand shock in the United States will increase the productivity of affected Chinese industries and so lead them to export more to other high-income countries.

To deal with concerns about the endogeneity of $AD_{i,t}$, two instruments for antidumping protection are constructed. The first instrument captures variation in the importance of different industries in swing states. Antidumping is a policy that is set at the federal level; the broad idea behind this instrument is that the US President and the political parties in Congress have incentives to implement policies that increase their probability of winning votes in battleground states. Given the geographical variation in the importance of different manufacturing industries, antidumping

[13] The set of countries included to build the instrument are Australia, Denmark, Finland, Germany, Japan, New Zealand, Spain, and Switzerland. Those countries are including all high-income countries, which disaggregated bilateral trade data are available at the 6-digit HS level in 1991.

can be used to foster employment in particular states.

This instrument is inspired by the existing literature on the political economy of trade policy. Various studies suggest that antidumping decisions respond to domestic political interests. Despite the technical nature of their assessment of the injury test, the International Trade Commission (ITC) is influenced by industry size and concentration (Finger et al., 1982). Moreover, the decisions of ITC commissioners are affected by the interests of leading Democratic or Republican Senators (Moore, 1992; Aquilante, 2017). Several studies have also highlighted how trade policy can be shaped by the interests of swing states (Muûls and Petropoulou, 2013; Ma and McLaren, 2016; Conconi et al., 2017).

To define swing states, I follow a procedure similar to Conconi et al. (2017):

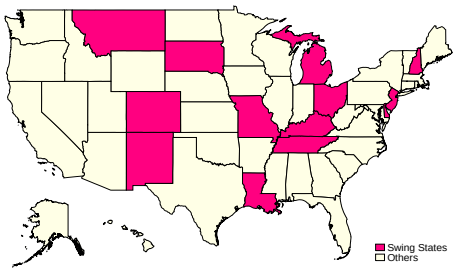
1. For each year and each state, I collect information on the vote shares of the two major parties in the previous presidential elections.

2. I compute the average vote share of each party during the two stacked periods (1991-1999 and 1999-2011).

3. I define a state to be swing in one period if the difference in the average vote shares of two parties is less than 5%.

Figure 4: Swing States (1991-1999 and 1999-2011)

(a) Period: 1991-1999



(b) Period: 1999-2011

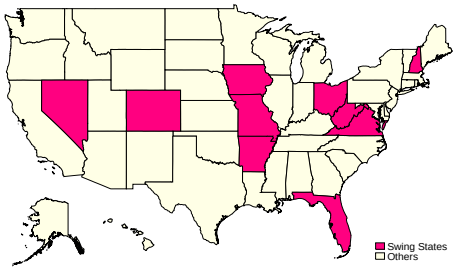


Figure 4 illustrates which states are classified as swing in the two periods based on the above definition. My first instrument measures the importance of an industry in swing states. It is constructed as the ratio of the total number of workers employed in industry i in all swing states s, over the total number of workers in tradable sectors in swing states s:

$$Swing\ Industry_{i,t} = 100 * \frac{\sum_s L_{s,i,t}}{\sum_s \sum_i L_{s,i,t}}, \tag{4}$$

To ensure the exogeneity of my instrument, I fix industry employment to 1991 levels. The variation in the importance of the industry thus comes from variation in the identity of swing states, driven by electoral outcomes. The instrument $Swing\ Industry_{i,t}$ captures the positive correlation between being an important industry in swing states and the probability of being protected by an antidumping duties in a given period. The key identification assumption is that the set of swing states – the time-varying component of my instrument – is not affected by trends in employment at the US level.

The second instrument for antidumping aims to capture exogenous variation in demand for protectionism. An important strand of the antidumping literature provides evidence that prior experience in antidumping filings helps to explain future ability in getting antidumping protection (Bloningen and Park, 2004; Bloningen, 2006). The process leading to an antidumping proceeding involves an high degree of legal and institutional complexity. When an industry is involved in an antidumping case, it acquires knowledge about the relevant legal and institutional procedures; this decreases the costs of future filings and increases the likelihood of successful outcomes and the magnitude of the applied duty. Following this idea, I build as second instrument for antidumping protection:

$$Experience_i = \sum_{yr=1980}^{1990} Petition_{i,yr}, \tag{5}$$

which is the count of antidumping filings against Japan for industry i for the years before the China shock (1980-1990). The spectacular rise of Japan as a world manufacturing power in the 1980s led to a shock to US industries similar to the one they experienced in the last decades due to increased competition from Chinese firms. During the 1980's, Japan accounted for around 20% of US imports, the largest share from any country. Rising import competition from Japan led to an increase in demand for protection (US industries initiated 68 antidumping cases against Japanese firms).

To ensure the exogeneity of the instrument, I exclude petitions that led to antidumping measures in force during the years 1991-2011. A possible drawback of this instrument is that might capture declining industries, which have a higher probability of petitioning for antidumping. However, recall that pre-trend controls for employment and wages at industry level (4-digit SIC) are included in all

Table 2: Descriptive Statistics

Variables	Obs.	Mean	S.D.	Median	Min	Max
Full Sample						
$\Delta IP_{i,t}$	784	0.466	1.097	0.133	-2.875	14.03
$\Delta IPO_{i,t}$	784	0.393	0.842	0.120	-1.510	13.34
$\Delta L_{i,t}$	784	-2.310	4.186	-1.898	-58.63	14.18
$AD_{i,t}$	784	0.181	.385	0	0	1
$Swing\ Industry_{i,t}$	784	0.786	0.963	0.120	0	4.795
$Experience_i$	784	0.348	0.814	0	0	4
$AD_{i,t} = 1$						
$\Delta IP_{i,t}$	142	0.579	1.114	0.322	-0.268	7.677
$\Delta IPO_{i,t}$	142	0.470	0.841	0.266	-0.205	6.375
$\Delta L_{i,t}$	142	-2.304	3.499	-2.860	-12.90	9.319
$Swing\ Industry_{i,t}$	142	1.217	1.298	0.156	0.00735	4.795
$Experience_i$	142	0.673	1.133	0	0	4
$AD_{i,t} = 0$						
$\Delta IP_{i,t}$	642	0.428	1.090	.087	-2.875	14.03
$\Delta IPO_{i,t}$	642	0.368	0.842	.093	-1.510	13.34
$\Delta L_{i,t}$	642	-2.312	4.394	-1.749	-58.63	14.18
$Swing\ Industry_{i,t}$	642	0.642	0.772	0.109	0	3.775
$Experience_i$	642	0.241	0.643	0	0	4

the specifications. Moreover, in the first stage, the coefficient $Experience_i$ is positive and significant as it is shown in Section 6.

Table 2 shows the descriptive statistics of the key variables used in the estimation of (1).

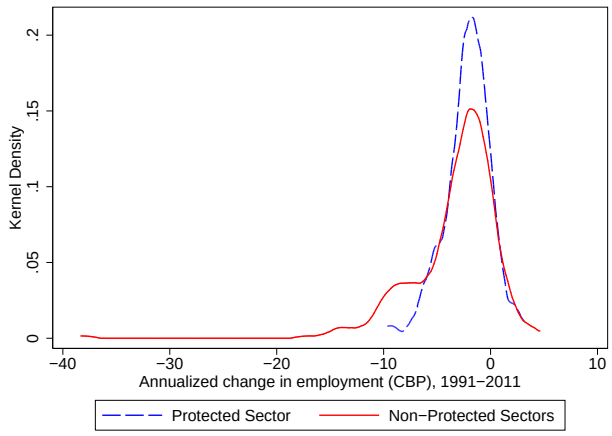
Starting from the dependent variable, on average, US manufacturing sectors shrank by a mean of 2.3 percentage points during the 1991-2011 period. This average does not change significantly between protected ($AD_{i,t} = 1$) and non-protected sectors ($AD_{i,t} = 0$). However, the distributions of the employment growth rates is very different among them. In fact, the distribution of non-protected sectors more skewed to the left than the protected ones. This is shown in the data by, first, looking at the difference between mean and median which is larger for non-protected sectors. And second, the minimum value of the variable $\Delta L_{i,t}$ is -58.63 percentage points among the non-protected industries that is much larger than the correspondent value for the protected sectors (-13). Figure 5 shows this path clearly. There are confronted the kernel density for the employment growth rates among sectors that received antidumping protection and the ones who did not. The distribution of the non-protected sectors is more skewed to the left with a longer left tail than the protected sectors. These descriptive statistics suggest that antidumping may have protected employment by smoothing the effect of Chinese import penetration.

Concerning import penetration, it has risen by an average of 0.47 percentage points during the sample period. The average growth rate is higher for protected than non-protected sectors: import

penetration for protected sectors has risen by 0.58 percentage points, and only by 0.43 percentage points for non-protected sectors. The instrument for capturing variation in US imports from China, $\Delta IPO_{i,t}$, is showing an average growth rate of 0.4 percentage points.

With respect to the $AD_{i,t}$ variable, sectors that received new antidumping measures targeting Chinese firms represent 18.1% of my sample. By looking at the two proposed instruments for antidumping, their means are higher for the protected sectors than for the non-protected ones: in the case of $Swing\ Industry_{i,t}$, the mean is 1.22 for protected sectors, and 0.64 for non-protected ones; the mean of $Experience_i$ is 0.67 for protected sectors, versus 0.24 for non protected ones (for both variables, the difference between the two values is statistically different from zero).

Figure 5: Distribution of Changes in Employment across US Manufacturing Industries



6 Empirical Results

As mentioned in the empirical methodology section, the two key independent variables suffer from endogeneity concerns, leading to inconsistent estimates of their coefficients when using OLS regressions. In this section, I thus present the results of the two-stage least squares (2SLS) estimation of (1).[14]

In Table 3, the estimated effects of Chinese import penetration and antiduming are provided for the econometric model described in (1). All the six specifications include as controls industry i's share of US employment in manufacturing, pre-trend controls, and broad industry fixed effects.

[14]The results of the OLS regressions are available in Table A1 in the Appendix. Both antidumping and import penetration are significant at least 10% significance level, and the sign of the coefficient is as expected, i.e. negative for import penetration and positive for antidumping protection.

Table 3: Main Results

Dep. Var.: $\Delta L_{i,t}$	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta IP_{i,t}$	-0.749***		-1.049***	-0.809***		-1.218***
	(0.220)		(0.294)	(0.244)		(0.346)
$AD_{i,t}$		7.534***	7.490***		8.834***	8.282***
		(1.870)	(1.819)		(2.802)	(2.512)
$\alpha_{1991-1999}$	1.738***	2.059*	1.914*	1.286***	0.940	0.690
	(0.316)	(1.102)	(1.105)	(0.293)	(1.127)	(1.059)
$\alpha_{1999-2011}$	-1.994***	-3.775***	-3.502***			
	(0.345)	(1.133)	(1.129)			
$\alpha_{1999-2007}$				-1.575***	-3.100***	-2.615**
				(0.320)	(1.202)	(1.093)
J-statistic (p-value)	.	0.255	0.200	.	0.224	0.210
Industry US Employment	Yes	Yes	Yes	Yes	Yes	Yes
Pre-trend controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	784	784	784	784	784	784
Period	1991-2011	1991-2011	1991-2011	1991-2007	1991-2007	1991-2007

*S*tandard errors in parentheses are clustered at the 3-digit SIC level, * $p < .10$, ** $p < .05$, *** $p < .01$.
All observations are weighted by 1991 industry employment

In the first column, the model of Acemoglu et al. (2016) is replicated by estimating the effect of the China Syndrome without including antidumping protection. In this regression, a 1 percentage point change in import penetration from China leads to a reduction of employment of around 0.75 percentage points. This result is consistent with the finding of Acemoglu et al. (2016) where a 1 percentage point increase in import penetration from China leads to a reduction of employment of around 0.76 percentage points. The coefficient is significant at 1% significance level. Since the model is exactly identified, the result for the overidentifcation test is not reported. The results of the first stage of the 2SLS estimation are presented in Table A2 in the appendix and the sign $\Delta IPO_{i,t}$ is positive at significant as expected.

In column (2), I consider the net impact of antidumping duties in a specification where import-penetration is not included in the analysis. The coefficient measuring the impact of $AD_{i,t}$ is positive and significant at the 1% significance level. Based on this specification, the introduction of new antidumping duties leads to a mean annual within-industry increase in employment of 7.5 percentage points. The reported p-value of the Hansen J-statistic is such that we can reject the hypothesis that at least one of the instruments is endogenous. In the first stage, presented in the appendix Table A2, it is shown the behavior of two instruments $Swing\ Industry_{i,t}$ and $Experience_i$, which capture exogenous variation in supply and demand for antidumping duties across sectors. As expected, both

instruments are positive and significant.

Column (3) is the benchmark regression chosen for my study. This specification accounts for the combined effect of import penetration and antidumping protection. The 2SLS coefficients for $AD_{i,t}$ and $\Delta IP_{i,t}$ are significant at the 1% significance level. According to the p-value of the Hansen J-statistic, I can exclude problems related to the endogeneity of the instruments. In column (3) of Table A2, I can examine the contemporaneous impact of the three instruments.The coefficient of antidumping protection is stable between column (2) and column (3), while the impact of import penetration is increasing about 40% between column (1) and (3), with a 1 percentage point change in import penetration inducing a 1 percentage point reduction in employment. This is because in column (3), the coefficient β_1 captures the negative effect of a rise in Chinese import penetration on non-protected industries. For the first stage of $AD_{i,t}$ both $Swing\ Industry_{i,t}$ and $Experience_i$ are positive and significant; while $\Delta IPO_{i,t}$ is not significant. For the fist stage of $\Delta IP_{i,t}$, as we would expect, only $\Delta IPO_{i,t}$ is able to significantly capture variation in Chinese import penetration, while the two instruments for antidumping are not significant.

The results of the first three columns of Table 3 suggest that trade policy was able to partially smooth the negative effects of the China Syndrome. In the next three columns, I exclude the years of the financial crisis from the sample. As discussed in the previous section, the financial crisis had dramatic effects on imports and employment, so it is important to verify that my results are not affected by this historical phenomenon. Table 3 shows that the results are qualitatively invariant when I exclude the years from 2008 to 2011, though the estimated effects of import penetration and antidumping protection are larger.[15] The J-statistic at the bottom of the table indicates that the test of the endogeneity of the instruments is rejected at the 1% significance level.

The results from column (4) to (6) in Table 3 can have two interpretations. The first is that the larger impact of Chinese import penetration if I exclude the financial crisis can be attributed to the drop in Chinese imports to the US due to the so-called "Great Trade Collapse"[16], i.e. the collapse in trade flows during the global financial crisis. This could have effect also for $AD_{i,t}$, as lower pressure from Chinese imports could have driven down the demand for new antidumping measures. Second, relative to the increased coefficient for $AD_{i,t}$, developed countries committed to limit the use of protectionist tools during the financial crisis. [17] Indeed, Bown (2011) shows that, among the G20

[15] In column (3), a 1 percentage point increase in import penetration from China induces a decline in employment of 1.06 percentage points; the corresponding effect in columns (6) is 1.22. Concerning the impact of trade policy, antidumping is estimated to increase the growth rate of employment by about 8.2% in column (6), compared to 7.5% in column (3).

[16] R. Baldwin, "The great trade collapse: What caused it and what does it mean?", Vox, November 27, 2009.

[17] Indeed, the 15 November 2008, the G20's Washington concluded with a commitment of the participant countries to limit the use of trade remedies during the financial crisis. In their final declaration they stated that "[w]e underscore the critical importance of rejecting protectionism and not turning inward in times of financial uncertainty. In this regard, within the next 12 months, we will refrain from raising new barriers to investment or to trade in goods and services, imposing new export restrictions, or implementing World Trade Organization (WTO) inconsistent measures to stimulate exports." (G-20, 2008, p. 4).

members, developed countries increased the stock of products covered by temporary trade barriers by only 5% with respect to the level before the crisis, while the developing countries by 40%. This might led to a reduced antidumping activity and so to smaller coefficient in column (3) with respect to (6).

Technological change is another main driver of the decline of jobs in manufacturing. In Table 4, I run another set of robustness check by including the analysis a set of several industry controls that are capturing the industry's exposure to technological change by controlling for the intensity of use of production labor, capital and their R&D investments. The set of production controls includes the following variables: production workers as a share of total employment in 1991; the log average wage in 1991; the ratio of capital to value added in 1991; computer investment as a share of total investment in 1990; and high-tech equipment as a share of total investment in 1990. Both import-penetration and antidumping have the expected sign, positive for $AD_{i,t}$ and negative for $\Delta IP_{i,t}$, and they are significant at 1% significance level. The coefficient for import-penetration is qualitative invariant to the inclusion of this additional controls, while the estimated coefficient of antidumping (8) is larger than the estimated value in Table 3 (7.5).

Table 4: 2SLS Estimates with Additional Industry Controls

Dep. Var.: $\Delta L_{i,t}$	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta IP_{i,t}$	-0.728***		-1.059***	-0.806***		-1.218***
	(0.228)		(0.327)	(0.258)		(0.382)
$AD_{i,t}$		7.914***	8.033***		9.025***	8.822***
		(2.471)	(2.427)		(3.294)	(3.096)
$\alpha_{1991-1999}$	-9.037	-10.64	-0.275	0.00988	-23.39	-7.466
	(14.88)	(17.60)	(17.40)	(17.50)	(20.79)	(21.19)
$\alpha_{1999-2011}$	-12.78	-16.57	-5.818			
	(15.02)	(17.59)	(17.42)			
$\alpha_{1999-2011}$				-2.853	-27.45	-10.82
				(17.69)	(21.00)	(21.42)
J-statistic (p-value)	.	0.153	0.122	.	0.154	0.151
Industry US Employment	Yes	Yes	Yes	Yes	Yes	Yes
Pre-trend controls	Yes	Yes	Yes	Yes	Yes	Yes
Production controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	784	784	784	784	784	784
Period	1991-2011	1991-2011	1991-2011	1991-2007	1991-2007	1991-2007

*S*tandard errors in parentheses are clustered at the 3-digit SIC level, * $p < .10$, ** $p < .05$, *** $p < .01$.
All observations are weighted by 1991 industry employment

The last part of this section is devoted to the estimation of the size of the combined effect of antidumping protection and import penetration on employment growth in US manufacturing. Using

as benchmark the results in column (3) of Table 3, the economic magnitude of the 2SLS estimates is evaluated by building the counter-factual changes in employment that would have occurred in the absence of increases in Chinese import competition and antidumping protection. Since in equation (3), the dependent variable is the log-difference in employment, the two coefficients β_1 and β_2 are interpretable as the growth rate for employment continuously compounded. Following Acemoglu et al. (2016), I calculate as counter-factual the difference between employment in a year $yr = 1999, 2011$ and its value discounted for the estimated change in employment:

$$\Delta L_{yr}^{cf} = \sum_i L_{i,yr}(1 - e^{-\beta_1 \Delta \widetilde{IP}_{i,yr} - \beta_2 \widetilde{AD}_{i,yr}}.) \tag{6}$$

The coefficients β_1 and β_2 are estimated in the econometric model defined in equation (1), $\Delta \widetilde{IP}_{i,yr}$ is the change in import penetration for industry i between 1991 (or 1999) and the year yr, weighted for the partial R-squared associated to the variable $\Delta IP_{i,yr}$ calculated in the first stage of equation (1), and $\widetilde{AD}_{i,yr}$ is a dummy equal to one if a new antidumping measure is in force between 1991 (or 1999) and the year yr, weighted for the partial R-squared associated to the variable $AD_{i,t}$.

If my proposed instruments are valid and there is no measurement error, the counter-factual is calculated using a consistent estimation for the impact of import penetration and antidumping. The implicit assumption behind my quantification exercise is that the other factors influencing employment and the unobserved shocks estimated in the error term of equation 1 are not affected by an artificial reduction in import penetration and antidumping protection.

Results are presented in Table 5. The first column is presenting the combined effect of trade policy and the China Syndrome. This is quantified as a decline of about a 226 thousand workers in the manufacturing sector. The steel and metal sector (2-digit SIC 33 and 34), which is known for its political importance, shows a positive gain of 39 thousand worker units.

Column (2) is showing the second counter-factual, where antidumping is artificially removed for all the industries during my sample period. The effect of trade exposure to China is almost three times larger than the case when I am antidumping protection is taken in account.

Lastly, in column (3), it is replicated the econometric model proposed by Acemoglu et al. (2016). In this specification only import-penetration is included and this is corresponding to the estimated coefficient for import-penetration in column (1), Table 2. In a model without trade policy, the net effect of almost 400 thousand jobs lost during the period 1991-2011 is in the middle of what estimated in columns (1) and (2). Therefore, the inclusion of trade policy reduces the direct impact of Chinese import-penetration on jobs of about half of what is estimated by Acemoglu et al. (2016).

Table 5: Quantification of the Effect of AD Protection on Employment

		(1) Estimated effect on Employment	(2) Counterfactual: $AD_{i,t} = 0$	(3) Acemoglu et al. (2016)
Full Sample		-226k	-600k	-417k
SIC 2-Digit Industries				
20	Food and Kindred Products	22	-4	-3
21	Tobacco Products	0	0	0
22	Textile Mill Products	-2	-3	-2
23	Apparel, Finished Products from Fabrics & Similar Materials	-26	-32	-22
24	Lumber and Wood Products, Except Furniture	-9	-11	-8
25	Furniture and Fixtures	-34	-50	-35
26	Paper and Allied Products	13	-6	-4
27	Printing, Publishing and Allied Industries	17	-5	-4
28	Chemicals and Allied Products	25	-11	-8
29	Petroleum Refining and Related Industries	0	0	0
30	Rubber and Miscellaneous Plastic Products	-2	-34	-24
31	Leather and Leather Products	-16	-16	-11
32	Stone, Clay, Glass, and Concrete Products	-10	-15	-10
33	Primary Metal Industries	18	-9	-6
34	Fabricated Metal Products	21	-52	-37
35	Industrial and Commercial Machinery and Computer Equipment	-55	-102	-70
36	Electronic & Other Electrical Equipment & Components	-148	-161	-111
37	Transportation Equipment	21	-16	-11
38	Measuring, Photographic, Medical, & Optical Goods, & Clocks	-20	-27	-19
39	Miscellaneous Manufacturing Industries	-41	-46	-32

Note: Calculations in columns (1) and (2) are based on estimated coefficients from Table 2, column 3. Calculations in column (3) are are based on estimated coefficients from Table 2, column 1

Results are consistent if I consider column (3) of Table 4 where additional industry controls are included. In this specification, the combined effect of $AD_{i,t}$ and $\Delta IP_{i,t}$ is a drop of about a 207 thousand jobs. Removing all the new antidumping measures will amplify this effect of about three times with an estimated job loss of 607 thousand units. The combined effect of antidumping and trade policy is still half of what it would be if the model of Acemoglu et al. (2016) is replicated where the decline in employment is estimated to about a 600 thousand jobs.

7 Conclusion

In this paper I show how trade policy, specifically antidumping protection, has smoothed the negative effects of the China Syndrome. My estimates suggest that the overall effect of the Chinese import would have been almost three times larger in absence of any trade policy. This results are derived by a novel empirical strategy with two new proposed instrumental variables for antidumping protection.

My findings contribute to the scientific debate on the effects of the rise of China as one of the world trade leaders. The economic literature has stressed the negative effects of import penetration, but has so far neglected the role of the government in reacting to trade shocks.

This debate has been gaining more importance since December 2016. Based on the Protocol of Accession of China in the WTO, starting from this date, other WTO members are meant to treat China as a market economy. If the United States does grant China the status of market economy, this would make the implementation of antidumping duties targeting Chinese firms. This paper suggests that this might have a negative impact on employment, with possible political consequences in terms of a further backlash against trade.

This paper shows that antidumping protects jobs, but does not engage into an estimation of the related efficiency costs. Taking in account the welfare effects of protectionism is important because trade policy is not the best way to help workers struggling because of increased foreign competition. Indeed, the literature suggests that welfare programs directly aiming at helping individual workers and their families would be more efficient instruments. However, direct transfers to workers are often not easy to implement, so an important avenue for future research is to analyze what is the optimal second-best policy, including trade policy tools, to protect workers from trade shocks.

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Appendix

Table A1: China Syndrome, Antidumping, and Employment (OLS)

Dep. Var.: $\Delta L_{i,t}$	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta IP_{i,t}$	-0.542***		-0.568***	-0.478***		-0.526***
	(0.116)		(0.108)	(0.149)		(0.151)
$AD_{i,t}$		0.627*	0.760**		0.916***	1.169***
		(0.365)	(0.368)		(0.327)	(0.322)
$\alpha_{1991-1999}$	1.766***	1.858***	1.784***	1.363***	1.419***	1.281***
	(0.319)	(0.354)	(0.365)	(0.295)	(0.331)	(0.342)
$\alpha_{1999-2011}$	-2.046***	-2.315***	-2.200***			
	(0.342)	(0.379)	(0.392)			
$\alpha_{1999-2007}$				-1.685***	-1.975***	-1.836***
				(0.316)	(0.330)	(0.341)
Industry US Employment	Yes	Yes	Yes	Yes	Yes	Yes
Pre-trend controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	784	784	784	784	784	784
Period	1991-2011	1991-2011	1991-2011	1991-2007	1991-2007	1991-2007

*Standard errors in parentheses are clustered at the 3-digit SIC level, * $p < .10$, ** $p < .05$, *** $p < .01$.

All observations are weighted by 1991 industry employment

Table A2: First-Stage of Table 3

	(1)	(2)	(3)	(4)	(5)	(6)
			Endogenous Var.: $\Delta IP_{i,t}$			
$\Delta IPO_{i,t}$	0.961***		0.962***	1.162***		1.163***
	(6.63)		(6.61)	(8.30)		(8.31)
$Swing\ Industry_{i,t}$			-0.0341			-0.0879
			(-0.50)			(-1.11)
$Experience_i$			0.0241			-0.0151
			(0.69)			(-0.48)
			Endogenous Var.: $AD_{i,t}$			
$\Delta IPO_{i,t}$			0.0371			0.0559**
			(1.36)			(2.14)
$Swing\ Industry_{i,t}$		0.165***	0.160***		0.119**	0.115**
		(3.87)	(3.75)		(2.34)	(2.26)
$Experience_i$		0.101**	0.104**		0.0974*	0.0996*
		(2.02)	(2.06)		(1.81)	(1.86)
Period	1991-2011	1991-2011	1991-2011	1991-2007	1991-2007	1991-2007