Who Bears the Cost of Nationalism?
A Spatial Analysis on the Unintended Spillover Effects of Boycotts

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Abstract

Politically motivated boycotts aim to harm the sales of goods associated with foreign rivals, but can also harm the domestic economy if the goods are domestically produced. This paper examines the unintended effects of the 2012 Chinese boycott of Japanese cars on China's automobile supply chain. By comparing changes in employment between auto parts and non-parts industries located at various distances from Japanese joint ventures (JV), I find that auto parts manufacturers near the Japanese JVs experienced a 6-11% reduction in employment after the boycott. A back-of-the-envelope calculation shows that this equates to 2.2 billion to 7.6 billion yuan of forgone wages, equivalent to 1.5-5.3% of the profit in the Chinese auto parts industry in 2012.

Keywords — trade, political conflicts, regional labor market, development

JEL Codes — F16, F63, F66, R12

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1 Introduction

Consumer boycotts are used as punishment against the products associated with foreign competitors during international conflicts. By not purchasing foreign products, consumers aim to support local businesses and workers (Shimp and Sharma, 1987). However, since many countries produce components of these foreign products, boycotting them might inadvertently hurt the domestic economy. While numerous studies have explored boycotts' impact on product sales,[1] the broader consequences of boycotts, especially in our interconnected global production network, remain underexplored.

In developing economies, consumer boycotts can disrupt local labor markets integrated into foreign goods production. Countries like China, Vietnam, India, and others are key producers and consumers of these goods.[2] For example, two Vietnamese factories produced 182 million Samsung smartphones in 2020, constituting 61% of Samsung's production.[3] These phones represented 30% of Vietnam's cellphone market in 2021.[4] Thus, boycotting Samsung in Vietnam could harm local workers. However, identifying the spillover effects of boycotts is challenging without transaction-level data that shows the upstream and downstream manufacturers in a production chain like Samsung's. Thus, it is essential to explore other methods to trace these interconnected supply chain effects.

This paper uncovers the spatial linkage of supply chain and demonstrates that domestic economies can be negatively affected by consumer boycotts if boycotted goods have locally produced components. Specifically, I studied the 2012 Chinese boycott of Japanese cars using the spatial proximity of auto parts manufacturers to Japanese joint venture (JV) automakers and found it led to a 6% to 11% reduction in employment within the Chinese auto parts industry, particularly in those manufacturers near Japanese JV automakers.

The 2012 Chinese boycott of Japanese cars, triggered by the Senkaku Islands dispute, acted as an exogenous negative demand shock in China's automobile market.[5] From late August to mid-September in 2012, many Chinese protested by boycotting and damaging Japanese cars. This had a substantial impact on Japanese car sales, causing a global loss of over 250 million dollars in September[6] and a decrease in total car sales by 1.1 million units in China (Barwick et al., 2019).

I examined the boycott's effects on the Chinese auto parts industry, a significant labor market intertwined with Japanese and other foreign automobile supply chains. This focus is relevant as most Japanese cars sold in China are domestically produced.[7] In 2012, China's automobile industry employed about 4 million workers,[8] with Japanese JV manufacturers constituting 20% of

[1] See, for instance, Bentzen and Smith (2007), Ashenfelter et al. (2007), Chavis and Leslie (2009), Davis and Meunier (2011), Pandya and Venkatesan (2016), Heilmann (2016), Barwick et al. (2019), Luo and Zhou (2019), and Sun et al. (2021).
[2] Susan Lund et al., "Risk, Resilience, and Rebalancing in Global Value Chains," *McKinsey Global Institute*, August 6, 2020.
[3] Lee Sang Won, "Samsung to Shift Some Smartphone Production at Vietnam to India." *THE ELEC*, November 17, 2021.
[4] Minh-Ngoc Nguyen, *Mobile Vendors Market Share in Vietnam 2021*. Sep 27, 2021.
[5] Elizabeth Yuan, "Japan Deporting Chinese Held Over Island Landing," *CNN*, August 17, 2012.
[6] "Japanese Carmakers Face $\$250m$ in Lost China Output," *Arab News*, September 21, 2012.
[7] Yu Nnakamura, "China Rises to No. 2 Market for Japan Autos, Surpassing Home," *Nikkei Asia*, August 17, 2018.
[8] Statista Research Department, *Employment in the Automobile Industry in China 2002-2012*.

the industry.[9] Most of these employees worked in the auto parts industry, which included over $15,000$ manufacturers,[10] compared to a few hundred automakers in 2012. Thus, I focused on the boycott's effect on auto parts manufacturers instead of automakers.[11]

My baseline analysis explores the boycott's impact on auto parts suppliers to Japanese JV automakers. Lacking transaction-level data on buyer-supplier relationships, I used proximity between an auto parts maker and the nearest Japanese JV automaker to identify potential suppliers. This approach aligns with China's auto industry, where intermediate and final goods manufacturers often cluster together.[12] Thus, auto parts manufacturers nearer to Japanese automakers are more likely to be suppliers and subsequently impacted by the boycott.

The baseline analysis applies a difference-in-differences (DD) strategy, contrasting employment shifts between auto parts manufacturers and other manufacturers at various geographical proximities to Japanese JV automakers before and after the boycott. The treatment group includes auto parts manufacturers at specific distances from Japanese JVs, and the control group consists of food, electronics, electricity, clothing, and metal manufacturers with the same geographical criteria. The control industries resemble the auto parts industry in observable traits but were likely unaffected by the boycott. In a robustness check with varied control group compositions, the findings align with the baseline.

The baseline findings reveal that the boycott led to an average reduction of 47 to 57 workers per firm among $1,517$ domestic, private auto parts manufacturers located within 30 km of Japanese JV automakers. This represents a 6% to 11% size decrease for these firms. The boycott had no significant effect on revenue or assets. This may suggest that firms downsized their workforce to cut costs, while retaining assets and exploring new business avenues.

I further showed the boycott's heterogeneous impact based on the proximity of auto parts manufacturers to Japanese JV automakers. The auto parts manufacturers located within 30 km faced the most employment decline, while those located beyond 30 km remained largely unaffected. Moreover, auto parts manufacturers with older age and higher revenue before the boycott experienced more significant employment declines. This suggests established firms, likely direct suppliers to Japanese JV automakers, were most affected by the boycott.

A rough estimate puts the total job loss from the auto parts industry at $36,727$ to $126,518$, translating to forgone wages of 2.2 billion to 7.6 billion yuan ($\$300$ million to $\$1$ billion), or 0.1% to 0.3% of revenue and 1.5% to 5.3% of profit in China's auto parts industry in 2012. This is a partial equilibrium analysis that examines job losses at auto parts manufacturers near Japanese JV automakers within two years of the boycott. It does not consider the broader general equilibrium effects, such as potential employment gains at European or U.S. JV automakers.

[9] Carmen Lee, "Summary: Changing Composition of the Chinese Passenger Automobile Market from 2002 to 2012," *Gasgoo.com*, March 27, 2013.

[10] The Annual Survey of Industrial Enterprises (ASIE).

[11] Figure A1 shows a revenue decline for Japanese JV automakers compared to other JVs, implying a negative boycott impact. Due to the few automakers and low statistical power, this study concentrates on the boycott's effect on auto parts manufacturers.

[12] Prior studies by Cole (1999), Liker and Wu (2000), Gan and Li (2001), Tsuji and Quan (2005), Fleisher et al. (2010a), and Dai et al. (2020) found evidence of supply chain agglomeration in China. Section 2.3 explains more on distance as a proxy.

For robustness, I examined the boycott's impact on auto parts manufacturers near European, U.S. JV, and domestic Chinese automakers. I found no significant employment changes in these firms. However, when restricting the sample to auto parts manufacturers located 100 km away from Japanese JV automakers and within 30 km of European and U.S. JV automakers, employment rose by $21,816$ to $56,692$. This reflects a 40% to 60% recovery of losses from Japanese JV suppliers, shifting to those of other countries. However, it remains unclear when the job gains occurred post-boycott and how much additional job search cost was incurred by the displaced workers.

While there was no employment gain for auto parts manufacturers near domestic Chinese automakers and away from Japanese JV automakers, there was a decline for those near both Chinese domestic and Japanese JV automakers. This shows that, despite the boycott's intent to bolster the domestic industry at the expense of the Japanese products, it did not appear to benefit the Chinese auto sector. Instead, it caused an overall decline in employment for Chinese workers in the auto industry producing Japanese cars in China.

I extend the literature on consumer boycotts by examining their indirect effects on the production chain. Prior research primarily focused on the direct impact on boycotted product markets.[13] For instance, the 2003 anti-French boycott by U.S. consumers was extensively studied by Bentzen and Smith (2007), Ashenfelter et al. (2007), Chavis and Leslie (2009), Davis and Meunier (2011), and Pandya and Venkatesan (2016), examining its impact on French goods sales. As highlighted by Pandya and Venkatesan (2016), the U.S. boycott unexpectedly reduced sales of American products with French-sounding names, resonating with findings from my paper. Other studies, such as Heilmann (2016), Michaels and Zhi (2010), and Davis and Meunier (2011), delve into whether consumer boycotts disrupt bilateral trade of targeted goods. Building on the research by Heilmann (2016), Barwick et al. (2019), Luo and Zhou (2019), and Sun et al. (2021), which identified a sales drop of Japanese cars in China post-2012 boycott, my work delves deeper into these effects.[14]

My paper delves deeper into boycotts' impact on a product's supply chain, moving beyond just product sales. While it may seem obvious that a boycott-induced drop in sales can impact a product's supply chain, its actual effect on employment remains unclear. Sales data is contemporary, while employment figures pertain to expectations for the subsequent year. Employment can be sticky, especially when hiring is costly due to the need for training. It is important to quantify this effect due to the intricate web of intermediate goods connections. If suppliers can swiftly switch to alternative buyers, the supply chain may be unaffected by boycotts. If boycotts disrupt suppliers and they cannot swiftly switch to alternative buyers, it points to market frictions, showcasing supply chain nuances through boycott effects.

Furthermore, my study underscores the unintended effects of boycott activism in developing economies, moving beyond just nationalist boycotts. For instance, anti-sweatshop activists in developed countries frequently boycott multinationals over questionable labor practices in de-

[13] My focus is on empirical boycott results. The theoretical foundation stems from works by Pollins (1989), Friedman (1991), Klein et al. (1998), Sen et al. (2001), Friedman (2002), John and Klein (2003), and Klein et al. (2004).

[14] Additionally, studies by Hong et al. (2011) and Fouka and Voth (2013) have explored boycotts related to the 2010 China-Japan Senkaku Islands dispute and the 2010 German-Greek tensions.

veloping nations.[15] My study suggests that despite aiming to improve labor conditions, activist boycotts might inadvertently harm labor markets in developing countries.

This paper also ties into the literature on labor impacts of trade shocks and politics. Numerous studies, notably by Autor et al. (2013, 2021), Acemoglu et al. (2016), Pierce and Schott (2016), and Asquith et al. (2019), explored China's economic reforms post-2001 World Trade Organization (WTO) entry and its effects on the U.S. labor market.[16] Another line of research probes the labor impacts of domestic protectionist policies.[17] For example, Flaaen and Pierce (2020) found that the 2018 U.S. tariff hike reduced its own manufacturing employment in affected industries, underscoring the unintended consequences of protectionist politics, a theme echoed in my study.

My research offers three key insights to the trade politics literature. First, I presented consumer boycotts as bottom-up trade shocks, contrasting top-down measures like tariffs and trade policies. Boycotts, unlike top-down policies, are direct local-level shocks to the product market, offering a clear lens to study supply chain effects beyond the product market. Second, the automobile industry's spatial agglomeration enables me to study trade's distributional impact across locations and the shock spread through local supply chains. Third, China's expanding auto parts industry since the 2000s, marked by supply chain issues and quality concerns as noted in Coffin (2019) and Tang (2009), sees workers vulnerable to workplace challenges and trade shocks (Chan et al., 2014). My study offers insights into trade shock effects in a burgeoning labor market of a developing economy.

My study also engages with the literature on regional economics and industrial clustering in developing countries. Krugman (1991) laid the groundwork for production's geographical concentration, with core manufacturers like automakers being close to peripheral ones like auto parts manufacturers. Krugman and Elizondo (1996) then posited that firms in developing countries choose locations based on demand and input linkages, causing a concentration in metropolitan areas. Furthermore, studies by Banerjee and Munshi (2004), Ruan and Zhang (2009), Fleisher et al. (2010a), Zhang et al. (2011), Zhang et al. (2019), and Dai et al. (2020) emphasize the proximity between intermediate and final goods manufacturers in developing economies.[18] Dai et al. (2020) highlights that firm agglomeration fosters buyer-seller networks via informal contracts. This foundation, along with other studies, guides my exploration of supply chain's geographical agglomeration in analyzing boycott effects.

My paper offers two key contributions to this literature. First, I used spatial clustering in China's automobile production chain to assess boycott exposure. I gauged this spatial link by analyzing intermediate goods manufacturers' reactions to boycott shocks on final goods manufacturers. Second, I studied a developing economy's regional production chain vulnerable to trade shocks.

[15] A study by Harrison and Scorse (2010) on 1990s anti-sweatshop activism found it improved wages in Indonesia without affecting employment.

[16] Regarding trade liberalization, Dix-Carneiro and Kovak (2017) found lasting labor market shifts after Brazil's 1990s reforms, complementing studies by Topalova (2010), Edmonds et al. (2010), and Kovak (2013).

[17] This aligns with research on domestic effects of protectionist policies, highlighted in works like Bown (2004), Huang et al. (2018), Amiti et al. (2019), Fajgelbaum et al. (2019), Fetzer and Schwarz (2020), Handley et al. (2020), and Barattieri and Cacciatore (2020).

[18] Additional research shows locations in developing countries with varied cross-country trade intensities experience different economic growth levels, as highlighted by Topalova (2010), Edmonds et al. (2010), Fajgelbaum and Redding (2014), Dix-Carneiro and Kovak (2015, 2017, 2019), Coşar and Fajgelbaum (2016), and Eberhard-Ruiz and Moradi (2019). For China, see Fleisher et al. (2010b) on post-1992 growth and Dai et al. (2021) on post-WTO 2001 growth.

Given similar production dynamics in countries like India, Vietnam, and Indonesia, my findings can resonate in other contexts.[19]

2 Background

2.1 The 2012 Chinese Boycott

The 2012 anti-Japanese boycott in China stemmed from the Senkaku Islands dispute. These islands, known as Diaoyu in Chinese, have historical ties with the Qing Dynasty using them against Japanese pirates.[20] [21] After the Qing Dynasty lost the First Sino-Japanese War in 1895, Japan controlled the Senkaku Islands. Post-WWII, the U.S. took them, only to return them to Japan in 1972. Since then, both China and Taiwan have claimed ownership, leaving sovereignty disputed.

In 2012, the Senkaku Islands dispute escalated due to Tokyo governor Shintaro Ishihara's announcement to buy the islands, later confirmed by Prime Minister Yoshihiko Noda, sparking anti-Japanese protests and boycotts in China.[22] In August, Hong Kong activists planted a Chinese flag on a Senkaku Island,[23] leading to Japanese detentions and sparking widespread Chinese protests from August 19th.[24] On September 11th, recalling the 1931 Japanese occupation of Manchuria, demonstrators intensified, boycotting Japanese products and vandalizing Japanese cars.[25] According to the China Association of Automobile Manufacturers (CAAM), Japanese car sales in September 2012 plummeted from the previous year: Toyota by 49.8%, Honda by 40.5%, and Nissan by 35%.

Although the boycott targeted Japanese businesses like Sony, Panasonic, Canon, and Uniqlo,[26] Japanese car vandalism was most prominent. Cars and dealerships were easily identified, and a Toyota outlet was even set on fire.[27] Additionally, Uniqlo claimed no boycott impact on sales, while Sony and Panasonic did not disclose sales figures.[28] Thus, this study focuses on the auto industry for examining boycott effects.

Before my research, Barwick et al. (2019) and Sun et al. (2021) studied the 2012 anti-Japanese boycott's impact on auto sales, comparing Japanese and non-Japanese brand sales pre- and post-August 2012. Barwick et al. (2019) reported a decline of 1.1 million in local Japanese car sales from August 2012 to the end of 2013. Sun et al. (2021) showed a 60% decline in Japanese car market share, with Chinese cars gaining only 5%. Both highlight a prolonged sales decline for Japanese cars over two years. Furthermore, Sun et al. (2021) found a 4.2% overall sales decline across all brands, suggesting a broader economic backlash in China. Luo and Zhou (2019) decomposed the

[19] Matthias Lomas, "Which Asian Country Will Replace China as the 'World's Factory'?" *The Diplomat*, February 18, 2017.
[20] According to Suganuma's "Sovereign Rights and Territorial Space in Sino-Japanese Relations," ancient Chinese used the islands as navigational markers before the Qing Dynasty (p. 49, University of Hawaii Press, 2001).
[21] "Diaoyu Dao, an Inherent Territory of China", State Council Information Office, The People's Republic of China, September, 2012.
[22] "Japan Protests at Chinese Ships Near Disputed Islands", *BBC News*, July 12, 2012.
[23] Sheila A. Smith, "Why Japan, South Korea, and China Are So Riled Up Over a Few Tiny Islands," *The Atlantic*, August 16, 2012.
[24] He Yuan, "Territorial Tensions Flare between China and Japan", *LA Times*, August 19, 2012.
[25] Brian Spegele and Takashi Nakamichi, "Anti-Japan Protests Mount in China", *Wall Street Journal*, September 16, 2012.
[26] Elaine Kurtenbach, "Japan Businesses Shuttered in China as Protests Rage," *Toronto Star*, September 18, 2012.
[27] "Carmakers Brace for Bashing in China," *The Japan Times*, September 20, 2012.
[28] Kazunori Takada, "Discretion pays for Japanese brands in China amid territorial dispute," *Reuters*, May 21, 2014.

overall sales decline and found consumers opted not to buy cars rather than switch from Japanese to non-Japanese brands. Hence, the boycott negatively affected China's auto market, not just consumer brand preferences.

The boycott's effect on Japanese auto parts suppliers remains unclear beyond its impact on the car market. On one hand, a demand drop from Japanese automakers might lead suppliers to cut costs by laying off workers, given over 95% of cars sold in China were made locally in 2012.[29] On the other hand, auto parts manufacturers might remain unaffected if they anticipate growth with Chinese or other foreign automakers or expect the boycott's effects to be short-lived. In other words, suppliers might adjust by redirecting their supply to other automakers, maintaining profits, and avoiding major layoffs. Thus, my study aims to discern the boycott's impact on the Japanese car supply chain, given the surface ambiguity.

2.2 The Chinese Automotive Industry

Since China's 1978 reforms and its 2001 WTO entry, it has produced Japanese cars for over two decades, drawing significant foreign investment. The Chinese government promotes its automotive sector by allowing joint venture (JV) firms such as Shanghai Automotive Industry Corporation (SAIC) Motor, Dongfeng Motor Corporation, Guangzhou Automobile Group (GAC), "First Automobile Works" (FAW) Group Corporation, and Chang'an Automobile to collaborate with foreign auto firms. Consequently, JV firms launched brands like Dongfeng Honda, GAC Toyota, FAW Toyota, and SAIC Volkswagen and sold them domestically.

Figure A1 presents the average revenues of 53 JV automakers from 2008 to 2014, categorized by country brands: Dongfeng Honda as "Japanese," SAIC Volkswagen as "European," and Chang'an Ford as "U.S.A." The graph highlights a 2013 revenue decline for Japanese JVs, contrasting with the steady growth of non-Japanese JVs from 2011 to 2014.

Figure A2, replicated from Barwick et al. (2019), illustrates the 2012 car sales decline across Chinese cities. It also maps 24 Japanese JV automakers distributed across various Chinese regions in 2012. Cities proximate to these automakers observed sales reductions between 10% to 60%. This spatial closeness indicates that both automakers and their suppliers might have swiftly perceived and reacted to the boycott-induced sales decline.

To identify the boycott's effects, I focused on the auto parts sector over the auto industry for three reasons. First, auto parts manufacturers have strong ties to automakers due to production agglomeration in developing countries, as observed in China's auto chain. Consequently, as seen in Figure 1, the auto parts sector faced revenue and employment decline post-2012, unlike other industries. Second, the 2012 ASIE data lists just 24 Japanese JV automakers, a small sample for analysis. In contrast, about $15,000$ domestic auto parts manufacturers from 2008-2014 ASIE offer greater statistical depth. Thus, using the ASIE's auto parts data is a more effective approach to examine the boycott's impact. Lastly, analyzing auto parts manufacturers sheds light on labor market frictions in China. A decline in employment suggests potential transaction costs or search frictions in China's auto supply chain. Without these frictions, firms could easily redirect supplies to alternative automakers anticipating consumer preference shifts.

[29] The China Association of Automotive Manufacturers (CAAM).

2.3 The Geographic Agglomeration of Auto and Auto Parts Industries

A major challenge in my research is identifying the auto parts manufacturers impacted by the boycott. Lacking supply chain data, I used geographical proximity to Japanese JV automakers as a proxy. For example, manufacturers within a 30 km radius of a Japanese JV automaker are considered its suppliers.

Due to industrial clustering in developing countries, distance is a practical proxy. Auto parts makers and automakers cluster in China for efficient production, as highlighted by studies like Sonobe et al. (2002) and Huang et al. (2008). Additionally, Japanese automotive supply chains adopt a lean manufacturing system, emphasizing closeness (Cole, 1999; Liker and Wu, 2000) - Japanese parts makers cluster near automakers for efficient collaboration (Zou, 2013; Gan and Li, 2001). Hence, parts makers near Japanese JV automakers likely supply them. In Section 6.3, I further demonstrated the revenue link between these automakers and proximate parts suppliers.

Figure 2 displays the locations of 24 Japanese, 13 European, 9 U.S., 4 South Korean JV automakers, 7 Chinese foreign-invested automakers, and 50 Chinese domestic automakers in 2012. JV automakers were primarily near major provincial cities, while Chinese domestic automakers were more dispersed but mainly in the central, eastern, and southern regions.

Figure 3 shows the locations of 15,707 auto parts manufacturers along with the 24 Japanese JV automakers in 2012. The parts manufacturers predominantly clustered in eastern and southern China, especially near Japanese JV automakers in suburban areas of cities like Beijing, Shanghai, Guangzhou, Chongqing, and Chengdu. Many were also in inner provinces such as Shandong, Anhui, Hunan, and Jiangxi, despite the absence of Japanese JV automakers there.

In Figure 2, many JV automakers, including Japanese, European, and U.S., as well as domestic Chinese automakers were located near each other in 2012. Auto parts suppliers near multiple automakers could switch supply if affected by the boycott. Laid-off workers from Japanese JV suppliers might be quickly hired by nearby non-Japanese or domestic suppliers, potentially underestimating the boycott's impact. Due to the clustering of various automakers, I conducted a robustness check in Section 6.1, confirming the boycott had generally insignificant impact on suppliers close to non-Japanese JV or domestic automakers. However, auto parts manufacturers near European and U.S. automakers, but distant from Japanese JVs, saw an employment rise post-boycott.

3 Data

This study utilizes the Annual Survey of Industrial Enterprises (ASIE), a mandatory annual census conducted by China's National Bureau of Statistics (NBS). The ASIE spans from 1998 to 2014, capturing firms in manufacturing, mining, and utilities, with over 90% from the manufacturing sector. The data provides firm details like name, code, establishment date, contact, postal code, industry and ownership type, and employee count. It also includes firms' financial information like annual revenue, costs, profits, fixed and total assets, taxes, subsidies, and wages.

The ASIE, while comprehensive, poses challenges like data selection issues, inconsistent sampling, and questions on authenticity. A major challenge with the ASIE is the missing employment data

from 2011. To address this, I verified consistent employment trends for auto parts and non-parts manufacturers from 2008-2010 in Section 5.1 and ensured no significant 2011 events influenced the boycott in Section 6.4. Moreover, Appendix C offers a detailed discussion on the data limitations and their resolutions. Acknowledging the limitations of the ASIE, this study focuses on data from 2008-2014, analyzing employment, revenue, and assets of auto-parts and non-parts manufacturers. Despite these limitations, I have made the best use of the available data.

This study utilizes observations of auto parts and non-auto parts manufacturers from the 2008-2014 ASIE. To prepare the data for analysis, I performed several cleaning procedures. First, I matched 2008-2009 data using postal codes and phone numbers to create a panel since the 1998-2009 ASIE data lacks panel IDs, while the 2010-2014 data is in panel (Nie et al., 2012). Second, due to missing 2011 employment data, I excluded that year from the employment impact analysis. Third, I primarily focused on the impact on privately-owned[30] domestic auto parts manufacturers. Private businesses, being less prone to governmental subsidies or foreign investments, should be more vulnerable to the boycott. Fourth, I included only firms with 50 or more employees, as they typically have a formal assembly line.[31]

The final sample has $203,209$ observations: $28,910$ from auto parts and $174,299$ from non-auto parts. In Table B1, I compared the original and analysis samples based on revenue, employment, assets, and age. Although both samples are generally similar, the analysis sample has slightly lower revenue, assets, and number of employees, mainly because of the exclusion of foreign-owned firms.

The non-parts sample comprises private domestic firms in electronics, electricity, clothing, metal, and food. These industries were chosen for their similarity to the auto parts sector in employment, revenues, and assets before the boycott. The non-parts industries act as a control group, unlikely to face immediate impacts from the boycott. A concern is that these industries might follow different trends. Additionally, industries like electronics might be affected by the boycott, as products from Sony and Canon were also targeted.[32] Both concerns violate the parallel trends assumption required for the DD estimate. To tackle these issues, Section 6.6 compares employment changes between auto parts manufacturers and control groups by excluding one non-parts industry at a time. Another approach is using auto parts manufacturers far from Japanese JVs but near European and U.S. JVs as the control group. In various control group setups, my baseline results remain consistent.

Table 1 summarizes the average revenue, assets, employment, and age across industries. All characteristics between the auto parts and non-parts industries are comparable. However, firms in electronics, electricity, and food industries are slightly larger in revenue, assets, and employees, while metal and clothing industries are a bit smaller in revenue and assets. The average age of firms across all industries is around 8 to 9 years.

[30] This is based on the categorization of firm ownership into private, state-owned, Taiwan/Hong Kong/Macau investors, or foreign-owned.

[31] The benchmark of 50 workers as the minimum for an assembly line is backed by various reports on Chinese manufacturers, including the 2015 Footwear Factory Survey from the Footwear Distributors & Retailers of America.

[32] As mentioned in Section 2.1, there is limited information available on the impact of the boycott on products other than automobiles. However, it is evident that the automobile industry was more severely impacted by the boycott than other industries. If the boycott had also affected other industries, my estimates would provide a lower bound of its impact.

I geocoded firm addresses to measure their proximity to Japanese JV automakers. The bottom part of Table 1 shows the percentage of firms by distance band from their nearest Japanese JV automaker. The distance bands are specified as 0 to 30 km, 30 to 60 km, and so on with 30 km increments until 210 km. Around 13% to 15% of auto parts, electricity, electronics, and metal firms are within 30 km of a Japanese JV automaker, while fewer clothing and food firms are in this range.

Table 2 details average revenue, assets, employment, and firm ages for both auto parts and non-parts manufacturers based on their proximity to the nearest Japanese JV automakers. Auto parts manufacturers within 30 km of Japanese JV automakers have higher average revenue, assets, and employee counts than those further away, but the differences are not statistically significant. These auto parts manufacturers might have long-term contracts with Japanese JV automakers, explaining their proximity and scale. The table also indicates that up to the 150-210 km distance band, there are 1,000 to 1,500 auto parts manufacturers per distance band. Beyond this, only 500 to 700 manufacturers per distance band, implying reduced business opportunities or higher costs when distant from Japanese JV automakers. For non-parts manufacturers, average characteristics stay consistent across distance bands.

4 Empirical Specification

My identification strategy consists of two parts. The first part uses a difference-in-differences (DD) approach to compare the employment levels between auto parts and non-parts manufacturers before and after the boycott. The second part uses distance as a proxy for the auto parts suppliers to the Japanese JV automakers, serving as a measure of treatment intensity from the boycott. Specifically, the distance variable for a firm is labeled as "near Japanese" if it is located within a pre-specified distance, such as 30 km, from its nearest Japanese JV automaker. This is equivalent to drawing a circle with a pre-specified radius around each Japanese JV automaker and labeling all the auto parts and non-parts manufacturers within the circle as "near Japanese."

The key assumption using distance as a proxy is that auto parts manufacturers closer to a Japanese JV automaker are more likely to be its suppliers, as discussed in detail in Section 2.3. It is important to note that this is not a triple difference strategy, as the only control group in this case consists of the non-parts manufacturers. The auto parts suppliers located at further distances are not considered as valid controls, as they could also have been impacted by the boycott, but with a weaker intensity.

My main empirical specification is

$$\begin{aligned} \textit{outcome}_{jt} = \alpha &+ \textit{boycott}_t \times \textit{near Japanese}_{jc} \times \textit{auto parts}_j \times \delta \\ &+ \textit{boycott}_t \times \textit{near Japanese}_{jc} \times \gamma_1 + \textit{boycott}_t \times \textit{auto parts}_j \times \gamma_2 \\ &+ \boldsymbol{X}_{jt} + \lambda_j + \gamma_t + \psi_{pt} + \epsilon_{jt} \end{aligned} \tag{1}$$

where $\textit{boycott}_t$ is a dummy equal to 1 if $t \geq 2012$, and t represents each year from 2008 to 2014. $\textit{auto parts}_j$ is a dummy equal to 1 if firm j is an auto parts manufacturer. $\textit{near Japanese}_{jc}$ is a dummy equal to 1 if firm j is located within the distance cutoff c km, 0 if not. I specified the distance cutoff $c \in C = \{30\text{km}, 60\text{km}, 90\text{km}, 120\text{km}, 150\text{km}\}$, and each cutoff corresponds to a distinct regression

for Equation (1). The listed cutoffs, while appearing arbitrary, illustrate the boycott's impact on auto parts manufacturers by distance. For robustness, I detail additional cutoffs in Section 5.1. δ measures the boycott's impact on auto parts manufacturers within a given distance cutoff.

The outcome variable, $outcome_{jt}$, covers employment, logged employment, logged revenue, and logged assets. Employment counts the workers at manufacturer j in year t, excluding 2011 due to lacking ASIE data. Revenue and assets data spans 2008 to 2014.

Additionally, $\boldsymbol{X}_{jt}$ represents time-variant firm characteristics like age and administrative affiliation.[33] It also includes firm j's distance to European and U.S. JV automakers. γ_1 captures the boycott effect for all firms within the cutoff c. γ_2 captures the boycott impact on all auto parts manufacturers, regardless of distance. λ_j and γ_t represent firm and year fixed effects. ψ_{pt} represents city-year trends to capture regional growth over time. For example, if a JV automaker is in Guangzhou, then ψ_{pt} captures Guangzhou's unobserved economic trends over time. ϵ_{jt} captures firms' time-varying unobserved traits. Standard errors are clustered at city level to address regional spillovers and economic activities among firms.

An important feature of Equation (1) is that $near\ Japanese_{jc}$ is a discrete cutoff, not a continuous dose treatment. This is because auto parts manufacturers located farther from the Japanese JV automakers may "dilute" the treatment effect. As seen in Table 1, over 60% of auto parts manufacturers are located at least 90 km away from their nearest Japanese JV automaker. If the boycott's impacts are concentrated among auto parts manufacturers located within 30 to 90 km and quickly fade for those located outside 90 to 150 km, then a continuous dose treatment would not be able to effectively capture the treatment effects for auto parts suppliers located near the Japanese JV automakers.

Theoretically, δ measures the boycott's impact on *suppliers* to Japanese JV automakers by comparing relative employment changes between nearby and distant auto parts suppliers. Due to data constraints, proximity to these automakers was used as a supplier proxy. Thus, $\hat{\delta}$ captures the boycott's impact on auto parts manufacturers within distance c. The concept is explained in more detail in Appendix D.

Since δ captures relative employment changes, I further investigated their origins and validated the robustness of Equation (1). Specifically, I estimated the boycott's heterogeneous effects on auto parts manufacturers at different distance bands using the following equation

$$employment_{jt} = \alpha + \sum_{b \in B} \sigma_b [boycott_t \times \mathbb{1}(j \in b) \times auto\ parts_j] + \boldsymbol{X}_{jt} + \lambda_j + \gamma_t + \psi_{pt} + \epsilon_{jt} \quad (2)$$

in which distance band $b = (d, d+30]$ with $d = \{0, 30, 60, 90, 120, 150, 180\}$ in km. I choose the auto parts manufacturers located outside of 210 km to serve as the base. In this way, σ_b measures the treatment effects of the boycott on the auto parts manufacturers located in b relative to those located outside of 210 km. Additionally, since auto parts manufacturers beyond 210 km likely are not suppliers, their treatment effects are assumed zero. For instance, if $b = (30, 60]$, then σ_b captures the effect on auto parts manufacturers between 30 and 60 km from Japanese JV automakers,

[33] The administrative affiliation indicates whether a firm is affiliated with the state, county, or district level of administration.

relative to those beyond 210 km. $employment_{jt}$ denotes the worker count for firm j in year t, excluding 2011. Equation (2) uses employment as the only outcome, expecting other results to align with Equation (1). $\boldsymbol{X}_{jt}$, λ_j, γ_t, ψ_{pt}, and ϵ_{jt} are the same as in Equation (1).

δ and σ_b differ in their reference groups for measuring boycott effects. δ measures the boycott's impact within distance cutoff c, referencing auto parts manufacturers outside c and non-parts manufacturers. σ_b measures the impact for auto parts manufacturers within a distance band, referencing those beyond 210 km from Japanese JV automakers. If the boycott affects neither reference group, δ and σ_b captures the same impact for the same auto parts manufacturer subset. For example, if both δ and σ_b measures auto parts manufacturers within 0-30 km, and no effect exists outside this range, they align.

My DD approach relies on the parallel trends assumption: without the boycott, auto parts and non-parts manufacturers' employment would have evolved similarly within a distance range. This is "distance-specific," permitting varied trends across distance ranges but similar within distance ranges. For example, auto parts and non-parts manufacturers within 30-60 km should have had similar employment trends, but identical trends are not required between the 30-60 km range and the 60-90 km range.

There is a concern that the parallel trends assumption may be valid one year post-boycott but less so two years after, due to possible cross-industry skill transfers. If the boycott caused layoffs, workers might reskill and move to the non-parts sector. Moreover, the boycott might deter newcomers from the auto parts industry, pushing them to non-parts sectors. This could understate the boycott's impact for the control industries. Section 5.1 visually depicts the parallel trend assumption and assesses potential biases in my DD estimates.

The DD assumption also necessitates no concurrent events influencing outcomes besides the boycott. A potential confounder is the 2011 Tōhoku tsunami, which might have impacted the global Japanese auto supply chain. I can not directly analyze the tsunami's effect on Chinese manufacturing due to missing 2011 ASIE employment data. Yet, Barwick et al. (2019) found no notable decline in 2011 Japanese car sales, suggesting that China's auto supply chain remained unaffected by the tsunami. This is further explored in Section 6.4.

5 Main Results

5.1 Baseline Results

Figure 4 visually depicts employment trends, categorizing auto parts and non-parts manufacturers by distance cutoffs of 30 km, 90 km, and 150 km. The graph shows a pronounced employment decrease post-2012 for auto parts manufacturers situated within 30 km of their nearest Japanese JV automaker. The effect is less pronounced at the 90 km cutoff and barely noticeable at 150 km.

Prior to the 2012 boycott, from 2008 to 2010, employment trends for both auto parts and non-parts manufacturers were similar, regardless of their proximity, reinforcing the parallel trend assumption for the DD strategy. In 2014, non-parts manufacturers outside the 30 km boundary exhibited a minor employment surge, hinting at a possible job reallocation.

To complement Figure 4, Figure A3 illustrates employment changes relative to 2012 for auto parts manufacturers at 30 km, 90 km, and 150 km distance cutoffs. Employment for those within 30 km significantly dipped in 2013 following the boycott. On the other hand, the employment changes within 90 km and 150 km cutoffs are not statistically significant. Although there was a positive employment change in 2010 for auto parts manufacturers within 30 km, this should be expected given the employment decline starting at the end of 2012 due to the boycott. Moreover, the employment change in 2010 is not statistically different from those in 2008 and 2009.

Figure 5 plots baseline estimates $\hat{\delta}$ from Equation (1) over various distance cutoffs for employment levels. The figure shows that auto parts manufacturers closer to Japanese JV automakers had larger employment declines, with the effect reducing over distance.

Table 3 complements the figure, detailing $\hat{\delta}$ estimates for distance cutoffs of 30 km, 60 km, 90 km, 120 km, and 150 km for employment levels and logged employments. Each row showing $\hat{\delta}$ is a separate regression from Equation (1). Column (1) uses only firm and year effects. Columns (2) to (3) respectively add time-variant city characteristics controls, distance to European and U.S. JV automakers, and city-year trends. Columns (5) to (8) display these as semi-elasticities with logged employment outcome.

Two insights can be drawn from Table 3. First, auto parts manufacturers within 30 km of Japanese JV automakers saw a 47 to 57 worker decline per firm, equating to a 6% to 11% firm size reduction. The employment loss in the Chinese auto parts sector hints at labor market frictions, as suppliers would not face this if they could swiftly switch among JV automakers. Second, as the distance from automakers increases beyond 30 km, the employment decline approaches zero, validating that those closer were likely suppliers affected directly by the boycott, while those further away were less likely to be suppliers.

Table B2 shows the boycott's one-year effect using the 2008-2013 sample. Compared to Table 3, auto parts manufacturers near Japanese JV automakers saw larger and more significant employment decline two years post-boycott than one year. Two reasons could explain this. First, laid-off workers from suppliers within the distance cutoff might find jobs outside it. Second, laid-off workers might acquire new skills and seek jobs in non-parts manufacturers, or newcomers might find jobs in unaffected manufacturers due to the boycott. The time needed for job transitions and skill learning suggests the labor reallocation due to the boycott could surface after a year. If these reasons hold true, they might bias the actual boycott impact on suppliers to Japanese JVs.

However, bias might be reduced by excluding firms near Japanese JV automakers in the Yangtze River Delta (YRD), a region with higher density, growth, and urbanization compared to the rest of China.[34] After removing YRD firms and comparing one-year and two-year impacts from Table B2 and Table 3, the difference between the effects disappears. One reason for this can be that labor market reallocation primarily took place in the YRD. Another reason can be the clustering of Japanese and other JV automakers in the YRD; suppliers serving multiple JVs both suffered and benefited from the boycott, offsetting boycott's immediate effects. By omitting YRD observations, I might capture the boycott's impacts with reduced bias.

[34] Advanced development in the YRD is detailed in Zhu and Zheng (2012) and Liu (2012). While the Pearl River Delta (PRD) has similar economic traits to the YRD, its labor market might differ due to climate, geography, and distance from China's inner provinces. Excluding samples near the PRD or elsewhere in China still presents bias.

Besides its impact on employment, Table B3 shows that the boycott did not significantly affect the assets of auto parts manufacturers near Japanese JV automakers. While the effect on revenue appears significant at first, it becomes insignificant after controlling for city-year trends. This may imply manufacturers prioritized cost-cutting, quickly laying off workers post-boycott while seeking new automakers to stabilize assets and revenue. Another possibility is that two years may be too short to assess the boycott's effect on revenue or assets, as a firm's performance can take longer to manifest.

Evaluating the boycott's impact using the 95% confidence interval for its estimated effects from Table 3, a back-of-the-envelope calculation indicates an employment loss of $36,727$ to $126,518$ for the $1,517$ auto parts manufacturers within 30 km. This reflects a differential effect, showing the employment decline for auto parts manufacturers within 30 km of their closest Japanese JV automakers, relative to those outside 30 km and those in the control industry.

In 2012, auto parts assembly line workers earned an average of $30,000$ yuan (roughly $\$4,700$) annually.[35] In addition, the auto parts industry totaled approximately 2.2 trillion yuan (about $\$300$ billion) in sales revenue in 2012.[36] Using wage and revenue data, the boycott led to forgone wages of 2.2 billion yuan ($\$300$ million) to 7.6 billion yuan ($\$1$ billion), or 0.1% to 0.3% of China's 2012 auto parts industry revenue. With a 6.5% profit margin in the 2012-2013 auto parts industry, the forgone wages represent 1.5% to 5.3% of total profit.

It is important to note that the employment loss and forgone wages calculations reflect the partial equilibrium impact of the boycott on potential auto parts suppliers to the Japanese JV automakers. Additionally, considering beneficiaries like European or U.S. JV automakers and Chinese domestic automakers is crucial. Hence, in Sections 6.1 and 6.2, I analyzed the boycott's impact on auto parts manufacturers near European, U.S. JV, and Chinese domestic automakers.

5.2 Heterogeneous Impacts by Distance Band

Table 4 shows the boycott's employment impact on auto parts manufacturers across distance bands of 0-210 km in 30 km increments, compared to those beyond 210 km, using Equation (2). Consistent with main estimates, auto parts manufacturers within 30 km experienced a 46 to 56 employment decrease per firm. For auto parts manufacturers between 30-90 km, there was a negative impact, though it was statistically insignificant. This might be due to a mix between suppliers and non-suppliers, as workers from affected suppliers quickly found jobs in neighboring non-suppliers, mitigating the boycott's effects. For manufacturers between 90-150 km, employment mildly increased, hinting at potential job reallocation. However, the estimates remain inconclusive due to noise.

Surprisingly, manufacturers between 180-210 km saw a notable employment decline. Yet, after excluding firms with Japanese JV automakers in the YRD, this effect diminished in significance. As mentioned earlier, since the YRD is an economically active area with numerous auto manufacturing plants, these might violate the distance assumption. Auto parts manufacturers beyond 180 km may strategically serve all Japanese JV manufacturers in the YRD, optimizing supply routes.

[35] I referenced the 2012 Puxin Research Institute report on auto parts for accurate worker wage data. ASIE's wage records, which might include manager and executive salaries, could inflate the wage estimate.
[36] *2018 Auto Parts Industry Report*, Guoyuan Securities Co., LTD.

If all Japanese JV automakers in the YRD were affected by the boycott, their auto parts suppliers might have been impacted as well.

In addition, auto parts manufacturers beyond 180 km might have seen employment decline due to regional economic trends, unrelated to the boycott. This notion is validated in Section 6.5, where a robustness check in alternating boycott years still shows significant employment reduction for firms between 180-210 km, suggesting these declines were likely boycott-independent.

5.3 Heterogeneous Impacts by Age and Size

I further examined the boycott's heterogeneous effects on auto parts manufacturers by age and size before the boycott. Table B4 outlines the impact by firm age using Equation (1), categorizing ages into four quartiles: bottom 25^{th} (below 3 years), 25^{th}-50^{th} (3 to 7 years), 50^{th}-75^{th} (7 to 16 years), and above 75^{th} (older than 16 years). Firms over 7 years old, located within 30 km of Japanese JV automakers, experienced the most employment decline after the boycott, highlighting that older firms were more affected. While logging employee numbers, firms aged 7-16 years within 30 km of Japanese JV automakers experienced a 14% employment decline, whereas firms above 16 years had fewer significant findings.

Further analysis of the boycott's effects on auto parts manufacturers by revenue size pre-boycott mirrored patterns observed by age. Table B5 categorizes effects by revenue size. Firms in the top 25^{th} for revenue within 30 km of Japanese JV automakers experienced a 14% size reduction.

The age and revenue results indicate that the larger and more experienced firms near Japanese JV automakers were hardest hit by the boycott. Supporting this, Table 2 shows that auto parts manufacturers closer to Japanese JV automakers have greater revenue, assets, and number of employees - a pattern not seen in non-parts industries. This proximity suggests that these large manufacturers likely supply directly to Japanese JV automakers, indicating long-term collaborations and suggesting their extensive experience over time. Consequently, these firms would be more susceptible to the boycott's impact.

6 Additional Results and Robustness

6.1 Distance to European and U.S. JV Automakers

Auto parts manufacturers near Japanese JV automakers can also be near European, U.S., and domestic Chinese automakers, particularly in economically vibrant regions like YRD and PRD, as illustrated in Figure 2. This proximity could challenge the distance assumption if auto parts suppliers serve multiple automakers or swiftly switch between them. Despite controlling for distance to European and U.S. JV automakers in the baseline estimation, biases in the estimates can still arise.

Table B6, columns (1)-(3) show the boycott's impacts on auto parts manufacturers based on their proximity to European and U.S. JV automakers using Equation (1). None of the estimates are significant under any distance cutoff. This can be because the boycott did not affect manufacturers near European and U.S. JV automakers, or employment losses at Japanese JV automakers were offset by gains at European and U.S. ones, neutralizing the overall effect.

Table B6, column (4) shows treatment effects for auto parts manufacturers near European and U.S. JV automakers but beyond 100 km from Japanese JV automakers. There was a significant employment gain, between 37 to 73 per firm across all distance cutoffs. Figure A4 further illustrates the difference between columns (3) and (4). There were notable employment increases for auto parts manufacturers close to European and U.S. JV automakers but distant from Japanese ones, highlighting a post-boycott employment shift from Japanese to European and U.S. JV suppliers. This also suggests that firms near European or U.S. JVs should not be a valid control group for examining the boycott's impact, given their own influence by the boycott.

Delving deeper into the impacts by distance band, Table B7, columns (1) to (4) reveal that auto parts manufacturers located within 30 km of their nearest European/U.S. JV automakers and at least 100 km away from Japanese JV automakers experienced significant employment gains. This observation aligns with the distance assumption: manufacturers closer to European or U.S. automakers are more likely their suppliers.

There are 400 auto parts manufacturers situated within 30 km of European or U.S. JV automakers and at least 100 km from Japanese JV automakers from the 2008-2014 ASIE. Based on the 95% confidence interval for the estimates, the estimated employment gain for these manufacturers ranges between $21,816$ and $56,692$. This represents 40% to 60% of the job losses from auto parts manufacturers near Japanese JV automakers, indicating only a partial recovery. However, it remains uncertain when these gains took place post-boycott, especially considering the prior employment losses and the associated job-search costs for workers.

6.2 Distance to Chinese Domestic Automakers

Table B6, columns (5) to (8) offer an examination of the boycott's effects on auto parts manufacturers near Chinese domestic automakers using Equation (1). Results indicate a decline in employment for manufacturers within 30 km of Chinese domestic automakers. However, this decline is not observed for those beyond 100 km from Japanese JV automakers but near Chinese domestic automakers. This suggests that many auto parts manufacturers were located near both Japanese JV automakers and Chinese domestic automakers. As illustrated in Figure 2, many Japanese JV and Chinese domestic automakers were near each other. Not excluding the auto parts manufacturers near Japanese JV automakers could bias the boycott's impact intended for those near Chinese domestic automakers.

To pinpoint the source of employment decline, I analyzed the effects on auto parts manufacturers based on their proximity to Chinese domestic automakers, further conditioning on their location relative to Japanese JV automakers. Table B8 reveals the decline originates from manufacturers within 30 km of Japanese JV automakers, regardless of their distance from Chinese domestic automakers. No employment effect is observed for those along Chinese domestic automakers but beyond 30 km from Japanese JV automakers. This further indicates that the boycott did not benefit the Chinese domestic auto industry.

To complement the results above, Table B7 reveals that for manufacturers 100 km from Japanese JV automakers, the boycott's impact was insignificant across all distance bands from Chinese domestic makers. Thus, potential suppliers to Chinese domestic automakers were not substantially

affected by the boycott. This aligns with a prior study by Luo and Zhou (2019), which found the boycott led many consumers to defer car purchases rather than switch to domestic brands, suggesting a preference for foreign over domestic brands among many Chinese consumers, backed by ample evidence.[37] Therefore, despite the boycott's intent to bolster the domestic industry at the expense of the Japanese cars, it did not appear to benefit the Chinese auto sector. Instead, it caused an overall decline in employment for Chinese workers in the auto industry producing Japanese cars in China.

6.3 Distance Assumption Revisit

According to the main results, auto parts manufacturers located within 30 km of Japanese JV automakers experienced the highest loss in employment after the boycott. However, it is unclear whether they were actually suppliers to the Japanese JV automakers. While my distance assumption suggests that auto parts manufacturers located closer to Japanese JV automakers are more likely to be suppliers, additional evidence is needed to confirm the close connection between Japanese JV automakers and nearby auto parts manufacturers.

I reassessed my distance assumption by analyzing revenue correlations between Japanese JV automakers and auto parts manufacturers across various distance bands. For example, I analyzed manufacturers within 10 km of Japanese JV automakers, regressing their revenues on the prior year's earnings of Japanese automakers. Next, I analyzed manufacturers between 10 km and 20 km from Japanese JV automakers, repeating the same procedure. In each distance band, I ran the following panel fixed effects model:

$$revenue_{jt} = \beta_0 + \beta_1 \cdot Japanese\ revenue_{j,t-1} + \boldsymbol{Z}_{jt} + \lambda_j + \gamma_t + \epsilon_{jt} \tag{3}$$

where $revenue_{jt}$ represents the auto parts manufacturer j's revenue in thousand yuan in year t ranged from 2008 to 2012. I confined the study to years before the boycott to avoid potential supplier switches post-boycott. $Japanese\ revenue_{j,t-1}$ represents the prior year's revenue in million yuan[38] from the nearest Japanese JV automaker to j. $\boldsymbol{Z}_{jt}$ is a vector of time-variant firm characteristics including employments, total assets, and age for auto parts manufacturer j from 2008 to 2012. λ_j and γ_t respectively represent firm and year fixed effects.

Table B9 shows the estimated revenue correlations, $\hat{\beta}_1$, between Japanese JV automakers and auto parts manufacturers from 2008 to 2012. The pattern confirms the distance assumption: Manufacturers within 0-30 km correlates with Japanese JV automakers in revenue, whereas those beyond 30 km typically do not. The correlation is substantial: A 1 million yuan increase in a Japanese JV automaker's previous year revenue relates to a 5 thousand yuan increase in revenue for auto parts manufacturers within 10 km of that automaker. However, manufacturers within 80-90 km and 200-210 km also show positive correlations with Japanese JV automakers, hinting they might be suppliers too. This suggests that while the distance assumption is effective for identifying suppliers near Japanese JV automakers, it might not fully capture the relationships of those situated beyond 30 km.

[37] Keith Bradsher. "China's Embrace of Foreign Cars." *The New York Times*. April 8, 2014.

[38] Due to scale and revenue disparities between JV automakers and auto parts manufacturers, their RMB units differ. This simplifies interpretation of the β_1 estimates.

6.4 The 2011 Japanese Tsunami and Earthquake

In addition to the 2012 boycott, the 2011 Japanese tsunami also had the potential to disrupt China's automotive supply chain, especially considering its impact on Fukushima's industries and associated Chinese manufacturers.[39] I aimed to assess if the 2011 tsunami impacted Chinese auto parts industry employment like the 2012 boycott. Due to missing 2011 employment data from ASIE, I used Equation (1) with revenue as the outcome. If the tsunami impacted the Japanese auto industry, it likely affected the revenue of its global supply chain. Thus, I would expect a revenue decline for auto parts manufacturers near Japanese JV automakers in 2011 and 2012.

Figure A5 suggests the tsunami had little impact on the Chinese auto parts industry in 2011 and 2012, with no revenue decline near Japanese JV automakers. However, in 2013, a minor, though statistically insignificant, revenue decline appeared within 30 km and 90 km from these auto parts manufacturers, likely due to the 2012 boycott. Additionally, Figure A6 shows consistent revenue growth for auto parts manufacturers across all distance cutoffs. If anything, a disruption emerged in 2014 for those within 30 km, pointing to a lagged, minor revenue decrease after the employment decline two years after the boycott. Together, the results indicate that the 2012 anti-Japanese boycott, not the 2011 tsunami, influenced the revenue of auto parts suppliers to Japanese JV automakers, albeit statistically insignificant.

6.5 Alternative Treatment Years

To confirm the employment decline was from the 2012 boycott alone, I ran a placebo test, altering the boycott year to 2010 and 2013 in Equation (1). Table B10 shows no significant treatment effects at any distance cutoff when altering the treatment year. Additionally, Table B11 shows heterogeneous treatment effects by distance bands using alternative treatment years in Equation (2). Results reveal mostly small, insignificant effects for all bands within 180 km.

Table B11 shows a significant employment decline for manufacturers between 180 and 210 km, regardless of the treatment year change. This indicates regional economic factors influenced this distance band. Conversely, for those within 30 km, the employment decline was likely due solely to the boycott.

6.6 Alternative Control Groups

One concern is that the control groups in the baseline analysis might not be valid if there are differing employment trends in industries like electronics, electricity, clothing, metal, and food compared to the auto parts industry. Though Figure 1 shows consistent revenue and employment trends across industries, verifying baseline findings with alternative control groups is essential. Therefore, I reanalyzed the baseline excluding each non-parts industry from the control group, rather than merging them as in prior analyses.

Table B12 shows the boycott's effects of excluding each industry - electronics, electricity, food, metal, clothing - from the control group in columns (1) to (5). The effects, ranging from a 40 to 60

[39] Dennis Fisher, "Japan Disaster Shakes Up Supply-Chain Strategies," *HBS Working Knowledge*, May 31, 2011.

employment decline in auto parts manufacturers within 30 km, remain consistent and significant, irrespective of the excluded industry.

Using an alternative approach, I used auto parts manufacturers at greater distances from Japanese JV automakers, thus less likely to be suppliers, as the control group. Column (6) uses those outside pre-specified distance cutoffs as controls, while the treatment group remains as those within these cutoffs from Japanese JV automakers. The effects align with the baseline. It is important to note that auto parts manufacturers near European or U.S. JV automakers were not used as controls because they likely experienced employment reallocation resulting from the boycott.

7 Discussion

In conclusion, this research underscores the paradox where consumer boycotts can hurt the very domestic economy they aim to support, especially when the boycotted items have significant domestic production. The 2012 anti-Japanese boycott in China serves as an illustration. Auto parts manufacturers located within 30 km of Japanese JV automakers in China faced a sharp decline in employment. The $1,517$ such manufacturers experienced a 6% to 11% employment reduction, leading to a loss of $36,727$ to $126,518$ jobs. This translated to a wage loss ranging from 2.2 billion yuan ($300 million) to 7.6 billion yuan ($1 billion), impacting up to 5.3% of the auto parts industry's 2012 profit gains.

The boycott disproportionately affected auto parts manufacturers based on their proximity to Japanese JV automakers. Manufacturers within 0-30 km suffered the most significant job losses, suggesting their role as suppliers to these automakers. In contrast, those beyond 30 km experienced minimal and insignificant effects.

Evidence suggests employment reallocation from auto parts manufacturers near Japanese JV automakers to those near European or U.S. JV automakers. Specifically, those within 30 km of European or U.S. JV automakers and beyond 100 km from Japanese JV automakers saw job gains of $21,816$ to $56,692$, offsetting 40% to 60% of job losses from counterparts near Japanese JV firms. However, the timing, duration of job search, and associated costs for workers remain unclear.

Additionally, no such employment reallocation was observed near Chinese domestic automakers. Therefore, despite the boycott's intent to bolster the domestic industry at the expense of the Japanese cars, it did not appear to benefit the Chinese auto industry. Instead, it caused employment declines for Chinese workers producing auto parts for Japanese cars.

My study underscores the unintended effects of boycotts and trade policies on domestic labor markets within the production chains of targeted products. My research can be applied to many similar instances. For example, after the 2020 Chinese-India skirmishes, there was an Indian boycott of Chinese tech products, like Xiaomi and Oppo phones. Yet, 65% of Xiaomi's components were made in India.[40] Similarly, in 2021, Chinese state media promoted boycotting brands like Nike and H&M due to international concerns over Xinjiang's human rights.[41] If such brands

[40] Himanshi Lohchab and Romit Guha, "Boycott China: Xiaomi More Indian than Local Handset Companies, Says India MD." *The Economic Times*, June 25, 2020.

[41] Sui-Lee Wee and Keith Bradsher, "Why Are China's Consumers Threatening to Boycott H&M and Other Brands?" *New York Times*, March 25, 2021.

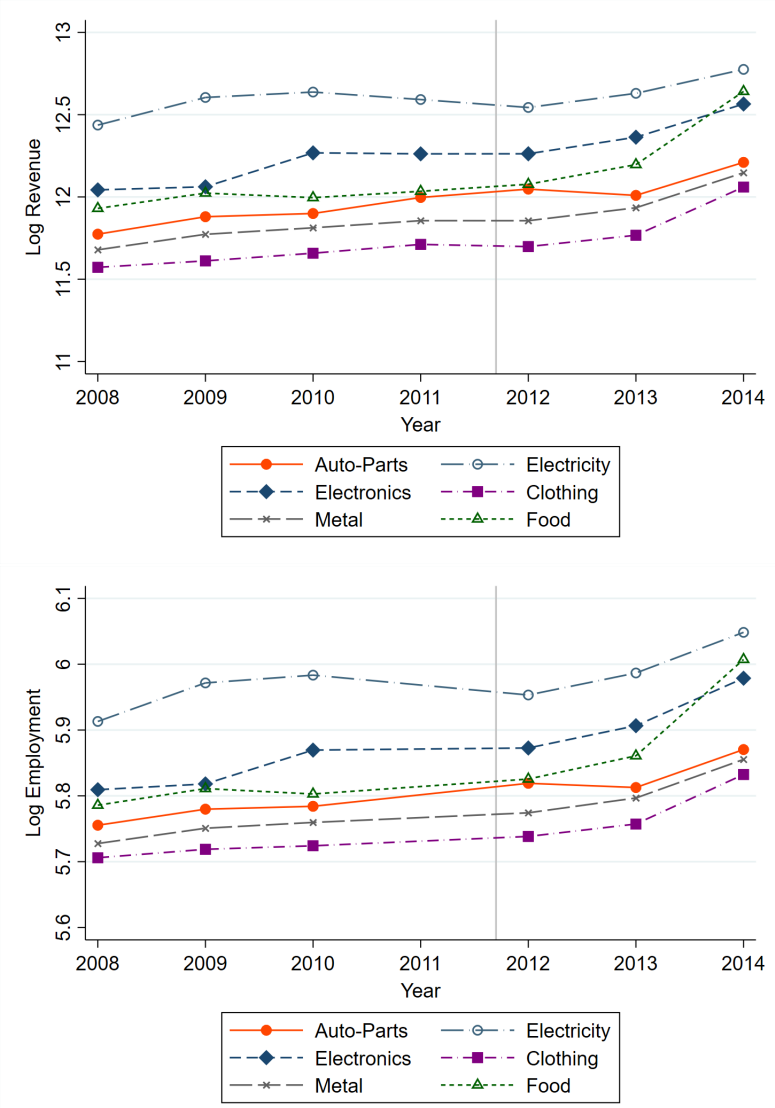
significantly offshore production to domestic markets, boycotts could adversely impact the local labor markets of boycotting nations.

Many studies, including Feiler (2013), Barwick et al. (2019), and Ali (2021), suggest that states might leverage consumer boycotts as political tools to deter escalating conflicts, with cases like the Arab boycott of Israel and the anti-Japanese boycott in China as references. Yet, my research points out that while these boycotts may achieve diplomatic objectives, they can also result in domestic job losses, indicating welfare issues. Hence, policymakers should weigh the internal repercussions of such boycotts on their economies.

Lastly, and importantly, this study made a concerted effort to use distance as a proxy to identify auto parts suppliers, addressing the challenge of unobserved buyer-supplier transactions in the production chain. Future research can delve deeper into Chinese and global automotive supply chain structures. By integrating supply chain data with geographical locations of automakers and manufacturers, nuanced trade responses within the integrated supply chain can be examined.

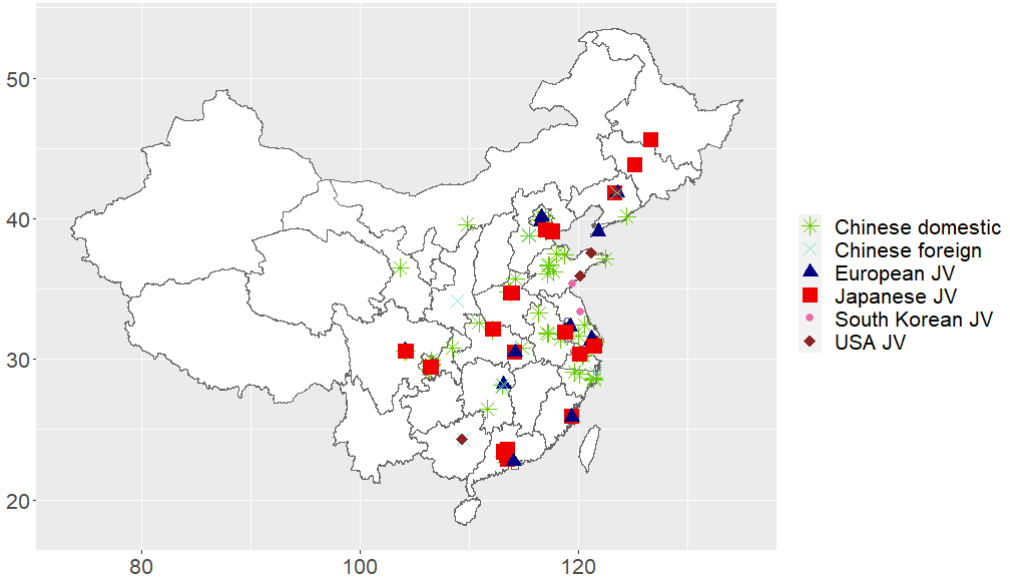
Main Figures & Tables

Figure 1: Revenues and Employment by Industry, 2008-2014



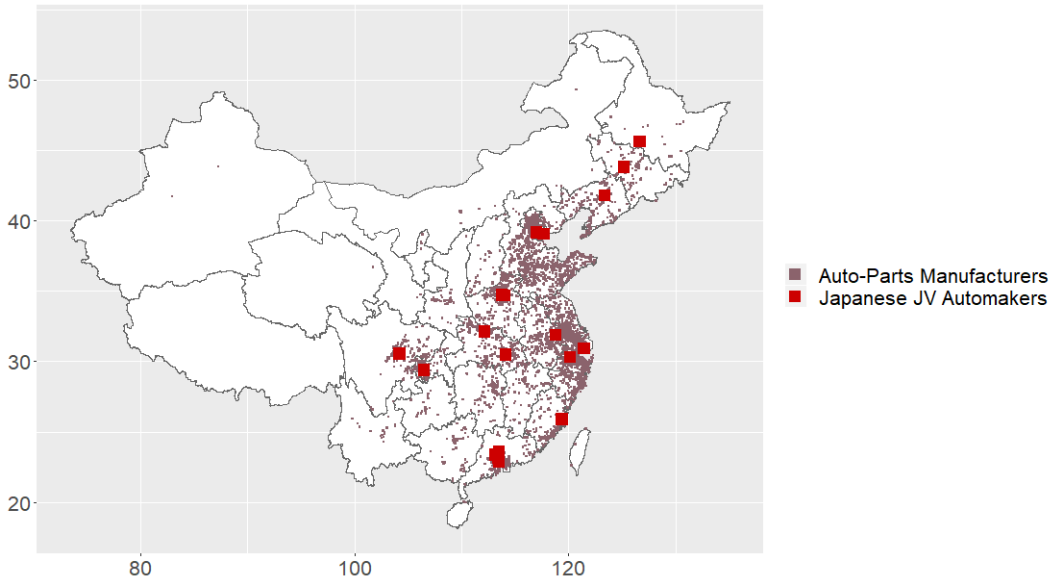
Notes: This figure shows revenue and employment trends by industry from 2008 to 2014, using data from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) on privately-owned domestic firms across auto parts, electronics, clothing, metal, and food sectors. Revenues and employment are displayed in log form, adjusted for firm characteristics and fixed effects. Values are in million yuan, adjusted using the 2010 CPI. 2011 lacks employment data. The grey line marks the 2012 boycott.

Figure 2: Locations of Joint Venture and Chinese Domestic Automakers in 2012



Notes: The sample shows locations of 107 automakers in China (2012) from the ASIE data: 24 Japanese, 13 European (10 German, 2 French, and 1 Italian), 9 U.S., and 4 South Korean JVs, as well as 7 Chinese foreign-invested and 50 Chinese domestic automakers. The figure's axis labels indicate geographic coordinates.

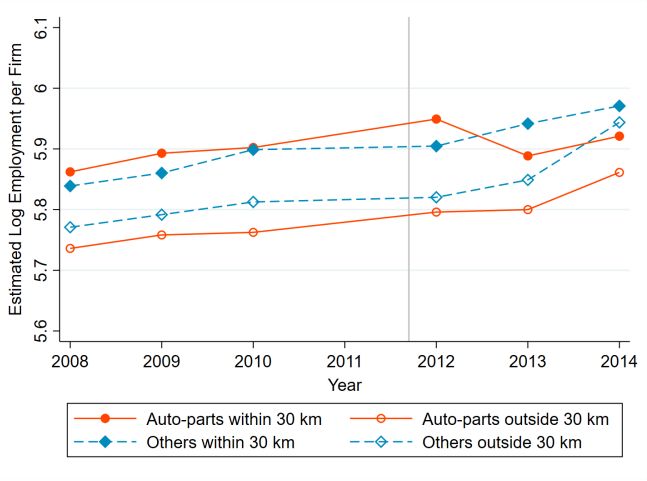
Figure 3: Locations of Auto Parts Manufacturers and Japanese JV Automakers in 2012



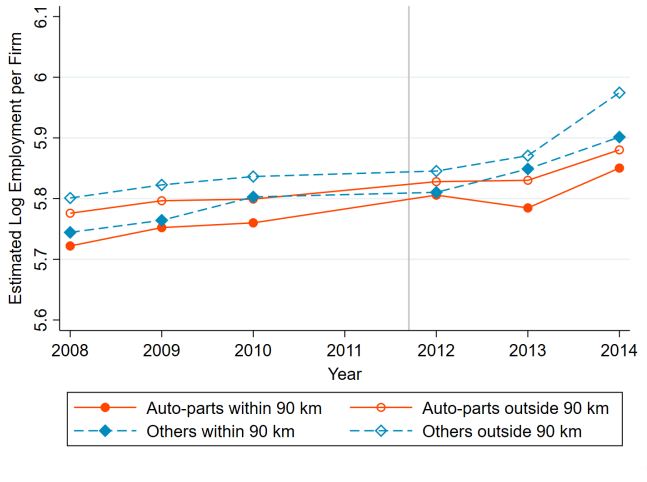
Notes: This figure displays the locations of $15,707$ auto parts manufacturers and 24 Japanese JV automakers in China in 2012, sourced from the ASIE data. Axis labels represent geographic coordinates.

Figure 4: Employment Trends for Auto Parts and Non-Parts Manufacturers

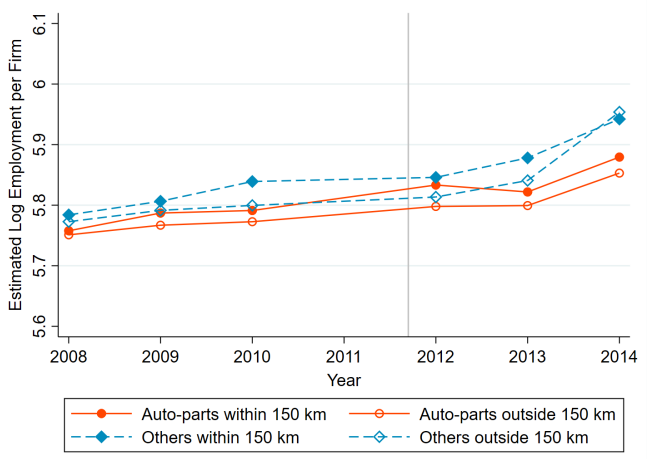
(a) dist = 30 km



(b) dist = 90 km

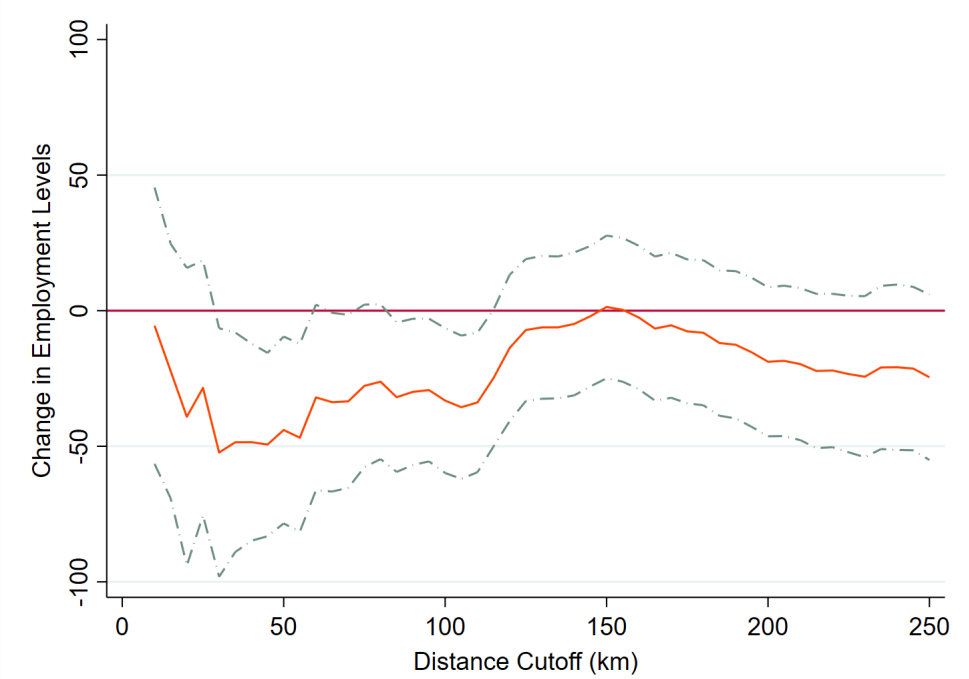


(c) dist = 150 km



Notes: Three graphs display employment trends for auto parts and non-parts manufacturers at 30 km, 90 km, and 150 km cutoffs from their nearest Japanese JV automakers. The sample, with 203, 209 observations, includes auto parts, metal, clothing, electronics, electricity, and food industries from the 2008-2014 ASIE, excluding 2011. The grey line indicates the 2012 anti-Japanese boycott. Employment outcome is logged form.

Figure 5: Estimated Boycott Impacts along Distance Cutoffs



Notes: The figure shows estimated treatment effects $\hat{\delta}$ from Equation (1) along various distance cutoffs. The red solid line shows average treatment effects $\hat{\delta}$ across distance cutoffs. Grey dashed and dotted lines mark the 95% confidence interval. Standard errors are clustered at city level.

Table 1: Summary Statistics by Industry, 2008-2014

	Auto Parts	Electricity	Electronics	Food	Metal	Clothing
Revenue (million yuan)	145.32	234.74	281.82	196.47	138.35	113.75
	(874.89)	(1379.10)	(3173.58)	(987.25)	(386.52)	(476.21)
Assets (million yuan)	105.07	174.71	267.18	138.92	88.52	64.41
	(600.01)	(1315.49)	(2963.64)	(980.23)	(320.83)	(508.45)
Employment (Count)	292	353	452	342	282	376
	(498)	(1175)	(1692)	(799)	(500)	(602)
Age (Year)	9.35	9.70	9.14	9.84	8.88	7.95
	(7.91)	(7.34)	(6.52)	(9.44)	(6.22)	(5.86)
Sample proportion in each distance band (km)						
[0, 30]	0.15	0.14	0.15	0.07	0.13	0.11
(30, 60]	0.11	0.15	0.21	0.07	0.15	0.14
(60, 90]	0.11	0.12	0.14	0.07	0.10	0.10
(90, 120]	0.11	0.13	0.12	0.09	0.12	0.11
(120, 150]	0.12	0.10	0.09	0.09	0.10	0.10
(150, 180]	0.06	0.05	0.04	0.09	0.09	0.06
(180, 210]	0.05	0.04	0.04	0.07	0.06	0.06
outside 210	0.29	0.26	0.20	0.46	0.24	0.30
Number of Observations	28,910	52,903	20,763	30,844	43,200	26,589
Number of Firms	10,029	15,161	6,166	9,609	12,631	7,691

Notes: The sample from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) data, excluding the employment information from 2011, includes privately-owned manufacturers from auto parts, electronics, clothing, metal, and food industries. The table shows average values and standard deviations for revenues, assets, employment, and ages by industry.

Table 2: Summary Statistics by Distance Band, 2008-2014

Distance Band (km)	[0, 30]	(30, 60]	(60, 90]	(90, 120]	(120, 150]	(150, 180]	(180, 210]	outside 210
Auto Parts								
Revenue (million yuan)	215.35	151.19	129.56	134.71	121.81	117.20	114.94	136.50
	(2079.50)	(373.63)	(278.50)	(480.12)	(354.11)	(323.93)	(174.17)	(313.68)
Assets (million yuan)	161.71	109.13	100.46	105.53	101.95	69.34	82.27	87.47
	(1328.77)	(296.89)	(394.93)	(426.15)	(420.35)	(174.17)	(154.61)	(246.89)
Employment (Count)	327	294	281	278	295	261	260	295
	(921)	(325)	(307)	(371)	(543)	(260)	(233)	(358)
Age (Year)	9.66	9.60	8.43	9.73	9.90	10.14	8.78	8.98
	(8.48)	(8.15)	(6.89)	(8.03)	(8.49)	(9.09)	(7.34)	(7.26)
Number of Observations	4,435	3,300	3,173	3,037	3,581	1,829	1,301	8,254
Number of Firms	1,517	1,179	1,135	1,090	1,297	668	493	2,909
Non-Parts								
Revenue (million yuan)	206.48	166.65	249.97	200.66	193.41	161.00	194.72	176.58
	(1590.63)	(1152.56)	(3287.80)	(910.26)	(779.00)	(525.35)	(1257.99)	(551.95)
Assets (million yuan)	167.02	127.61	198.93	160.00	133.89	104.75	149.71	117.41
	(1207.51)	(1276.74)	(3036.47)	(965.90)	(665.73)	(716.85)	(1471.35)	(575.31)
Employment (Count)	367	355	392	343	340	316	370	329
	(1662)	(685)	(1616)	(787)	(602)	(460)	(1277)	(544)
Age (Year)	9.66	8.99	9.06	10.10	9.51	8.62	8.59	8.90
	(7.23)	(6.38)	(6.37)	(7.25)	(7.39)	(6.64)	(7.60)	(7.87)
Number of Observations	21,316	24,589	18,906	20,192	17,018	11,865	9,515	50,898
Number of Firms	5,764	6,770	5,397	5,671	4,874	3,697	3,027	16,058

Notes: The sample, from 2008-2014 ASIE data, contains privately-owned manufacturers in auto parts, electronics, clothing, metal, and food sectors, excluding 2011's employment data. The table lists average values and standard deviations for revenues, assets, employment, and ages by industry, sorted by proximity to the nearest Japanese JV automakers.

Table 3: The Boycott's Impact on Employment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Outcome = Number of Workers				Outcome = Log(Number of Workers)			
dist. cutoff = 30 km								
$\hat{\delta}$	-47.96**	-47.73**	-54.50**	-56.84**	-0.06*	-0.06*	-0.07**	-0.11***
	(23.75)	(23.98)	(24.06)	(26.56)	(0.04)	(0.04)	(0.04)	(0.03)
dist. cutoff = 60 km								
$\hat{\delta}$	-21.07	-21.83	-28.91	-38.17**	-0.02	-0.02	-0.05	-0.09***
	(16.66)	(16.65)	(18.37)	(19.24)	(0.03)	(0.03)	(0.03)	(0.03)
dist. cutoff = 90 km								
$\hat{\delta}$	-15.43	-16.00	-24.16*	-36.03**	-0.00	-0.01	-0.04*	-0.09***
	(12.87)	(12.90)	(13.81)	(15.46)	(0.03)	(0.03)	(0.02)	(0.03)
dist. cutoff = 120 km								
$\hat{\delta}$	-3.89	-4.26	-7.65	-17.06	0.02	0.02	-0.01	-0.07**
	(12.70)	(12.70)	(13.38)	(17.56)	(0.03)	(0.03)	(0.03)	(0.03)
dist. cutoff = 150 km								
$\hat{\delta}$	15.08	14.54	11.02	4.10	0.04	0.04	0.01	-0.04
	(13.23)	(13.19)	(13.06)	(17.62)	(0.03)	(0.03)	(0.03)	(0.03)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.86	0.86	0.86	0.86	0.82	0.82	0.82	0.81
Firms FEs	Y	Y	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	Y	N	Y	Y	Y
Control Dist to Euro/US Automakers	N	Y	Y	Y	N	Y	Y	Y
City-Year Trends	N	N	Y	Y	N	N	Y	Y
Drop Yangtze Region	N	N	N	Y	N	N	N	Y
Number of Observations	193,824	193,763	193,763	122,066	193,824	193,763	193,763	122,066

Notes: The table shows $\hat{\delta}$ from Equation (1), capturing the boycott's effect on auto parts manufacturers based on proximity to Japanese JV automakers. Each $\hat{\delta}$ denotes an effect for a specific distance cutoff in a separate regression. The outcome variable captures employee count per firm and logged employment. The changes in observations can be attributed to some firms lacking observations of time-variant characteristics and to observations being dropped from the Yangtze region. Standard errors, clustered at the city level, are in parentheses. Data is sourced from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) across various industries, but 2011 employment data is omitted due to its absence. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table 4: The Boycott's Impact on Employment by Distance Bands

	(1)	(2)	(3)	(4)
	Outcome = Number of Workers			
$\hat{\sigma_b}$				
distance band = [0, 30]	-46.42*	-52.88**	-56.34**	-56.21**
	(26.35)	(26.01)	(25.78)	(27.57)
dist. band = (30, 60]	5.27	-8.84	-11.24	-11.71
	(16.45)	(16.09)	(15.92)	(23.95)
dist. band = (60, 90]	-1.58	-5.92	-15.15	-24.94
	(20.43)	(22.03)	(22.24)	(40.40)
dist. band = (90, 120]	18.27	12.34	14.10	32.87
	(21.82)	(23.24)	(25.15)	(53.56)
dist. band = (120, 150]	32.68	20.88	19.40	37.53
	(20.58)	(20.02)	(20.62)	(39.54)
dist. band = (150, 180]	-32.39**	-33.57**	-44.82**	-24.70
	(16.44)	(16.76)	(18.71)	(27.36)
dist. band = (180, 210]	-75.93***	-67.35***	-58.90**	-38.15*
	(28.73)	(24.80)	(24.10)	(22.45)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.86	0.90	0.90	0.89
Firms FEs	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	Y
Control Dist to Euro/US Automakers	N	Y	Y	Y
City-Year Trends	N	N	Y	Y
Drop Yangtze Region	N	N	N	Y
Number of Observations	193,824	193,748	193,748	122,051

Notes: The main specification is Equation (2). The table shows $\hat{\sigma_b}$, the estimated coefficients for $boycott_t \times \mathbb{1}(j \in b) \times auto\ parts_j$, which measures the heterogeneous treatment effects on employments across distance bands by the boycott. The dependent variable is the number of workers from each firm. The changes in observations can be attributed to some firms lacking observations of time-variant characteristics and to observations being dropped from the Yangtze region. Standard errors are clustered at city level in parentheses. The sample includes observations of firms from the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) data, excluding those from 2011 due to the absence of employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

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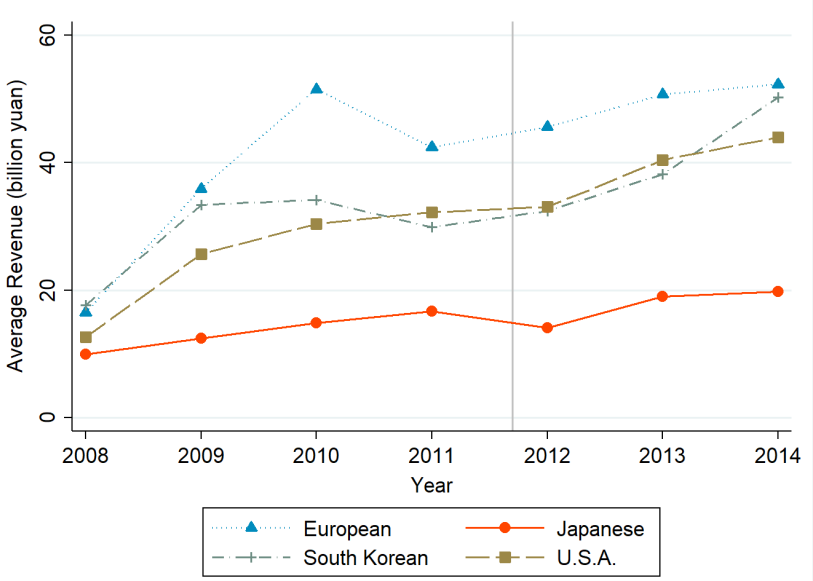
Appendix

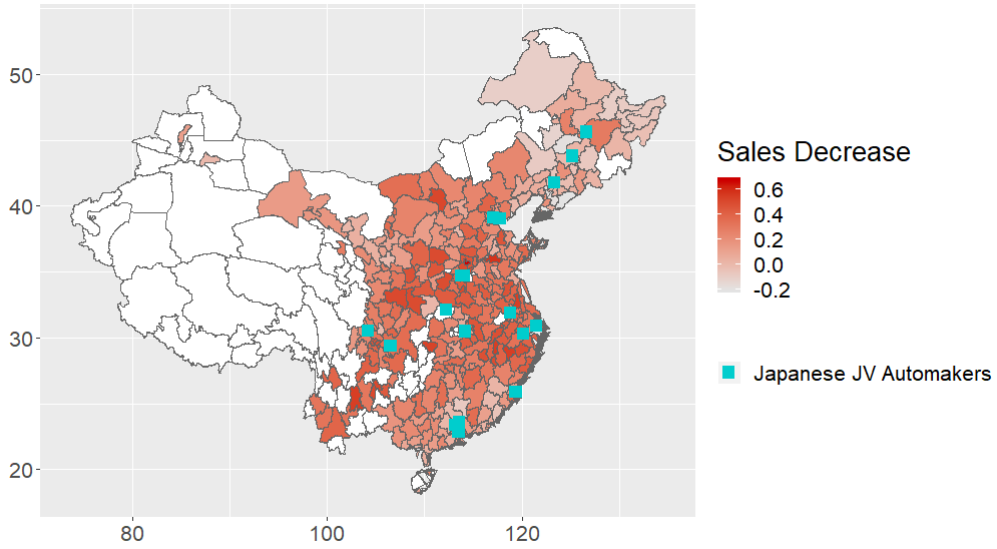
A Additional Figures

Figure A1: Revenues of Joint Venture Automakers, 2008-2014



Notes: Using the 2008-2014 Annual Survey of Industrial Enterprises (ASIE), the data features 52 JV automakers: 25 Japanese, 14 European (11 German, 2 French, 1 Italian), 4 South Korean, and 9 U.S. The currency is adjusted to the 2010 CPI. Each data point shows the average end-of-year revenue by country of origin. The grey line marks the 2012 boycott.

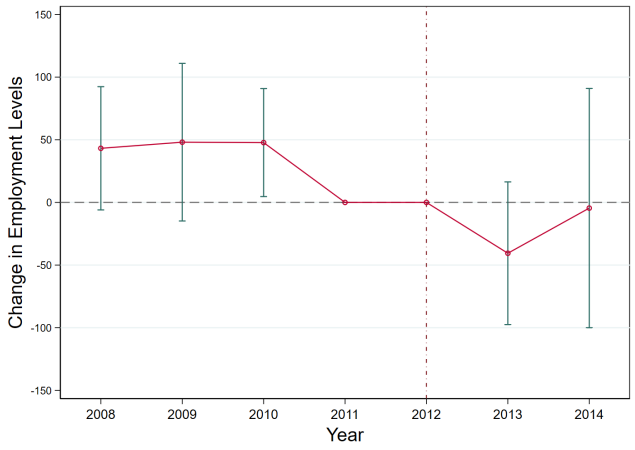
Figure A2: Decline in Japanese Car Sales Post-2012 and Locations of Japanese JV Automakers



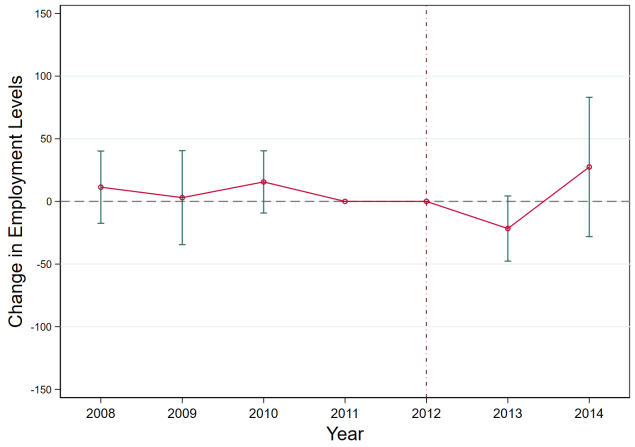
Notes: Sales estimates are replicated from Barwick et al. (2019), using vehicle registration data from 2009 to 2015. Japanese JV automaker locations are from the 2012 ASIE. Regions without estimates are in blank. Axis labels show geographic coordinates.

Figure A3: Employment Changes in Auto Parts Manufacturers

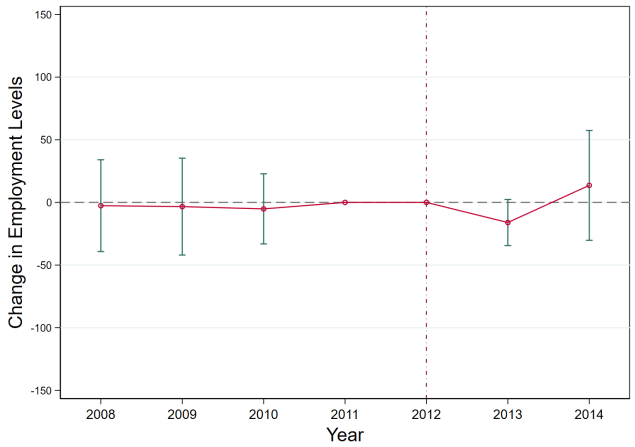
(a) dist = 30 km



(b) dist = 90 km



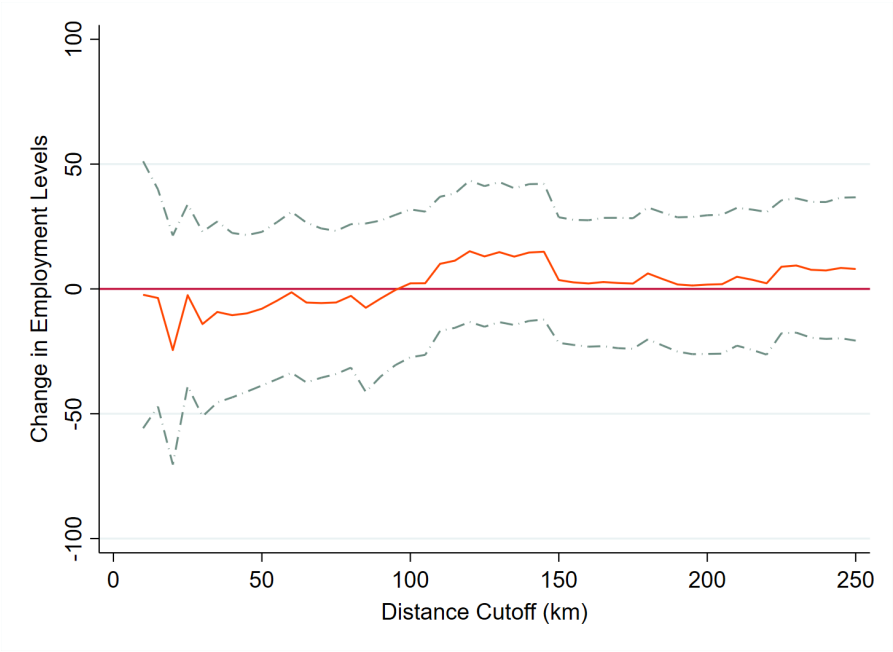
(c) dist = 150 km



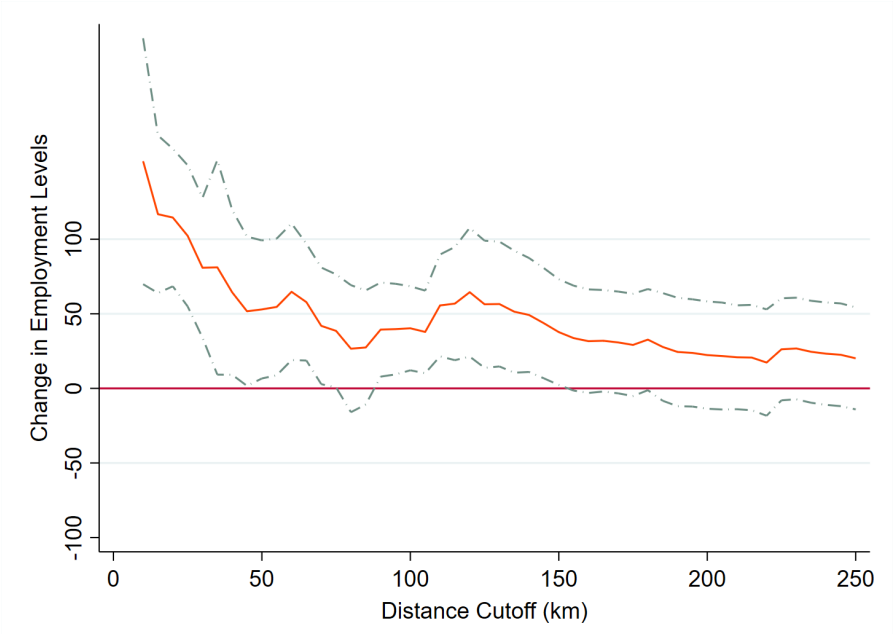
Notes: The sample includes 203, 209 observations from the auto parts, metal, clothing, electronics, electricity, and food industries from the 2008 to 2014 ASIE data, excluding observations from 2011. The vertical dashed line in the figure represents the time of the 2012 anti-Japanese boycott and uses 2012 as the based year. Outcome is the relative difference in employment levels between the auto parts manufacturers located within a specified distance cutoff and the rest of the sample, compared to the employment level in 2012.

Figure A4: Boycott Impact Estimate by Distance Cutoffs for Non-Japanese JV Automakers

(a) Entire Sample



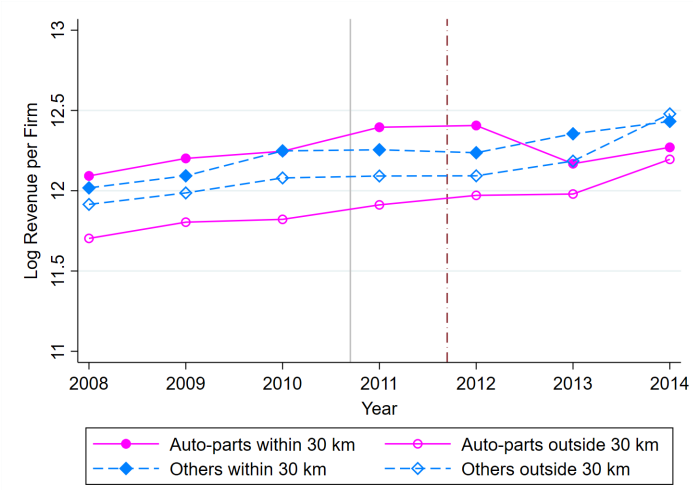
(b) Firms outside 100 km from Japanese JVs



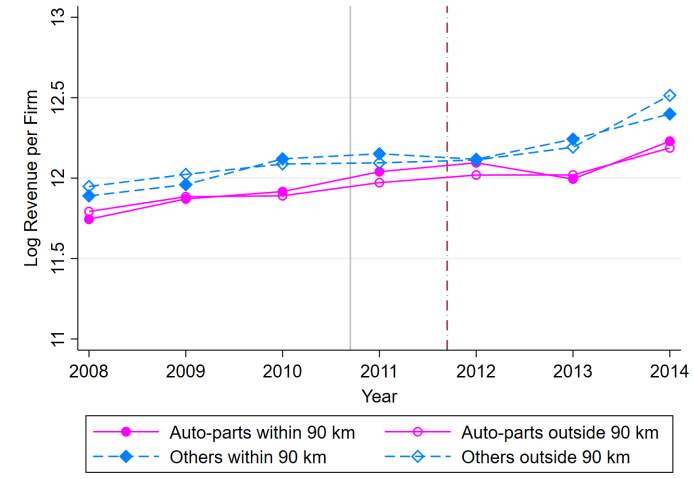
Notes: The specifications in (a) and (b) are estimated in columns (3) and (4) of Table B6. The red solid line in the figure represents the estimated average treatment effects $\hat{\delta}$ across various distance cutoffs on the x-axis. The grey dashed and dotted lines show the 95 percent confidence interval. Standard errors are clustered at the city level.

Figure A5: Revenues Trends of Auto Parts and Non-Parts Manufacturers

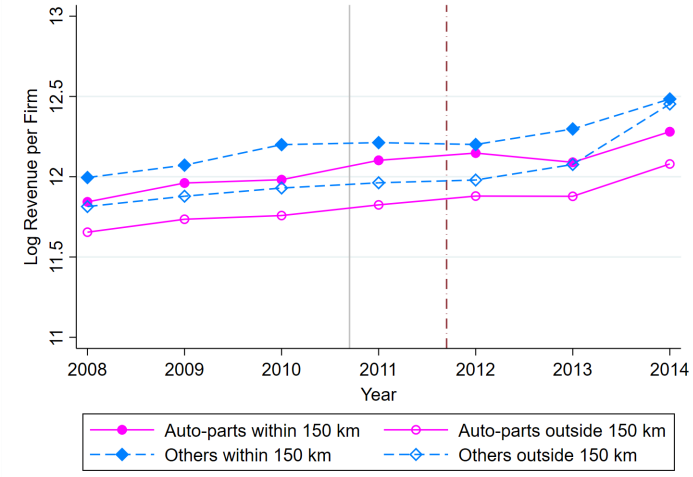
(a) dist = 30 km



(b) dist = 90 km



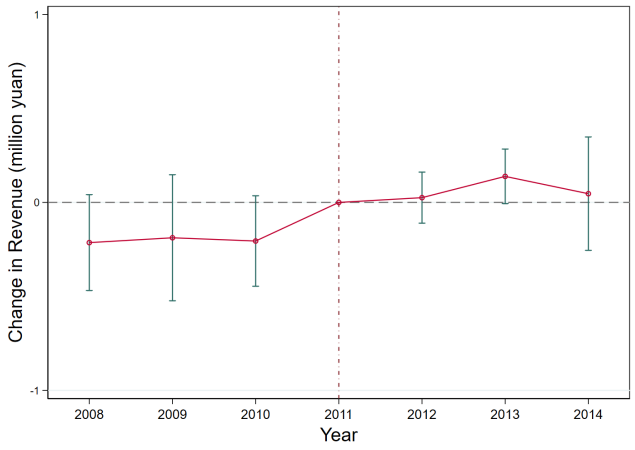
(c) dist = 150 km



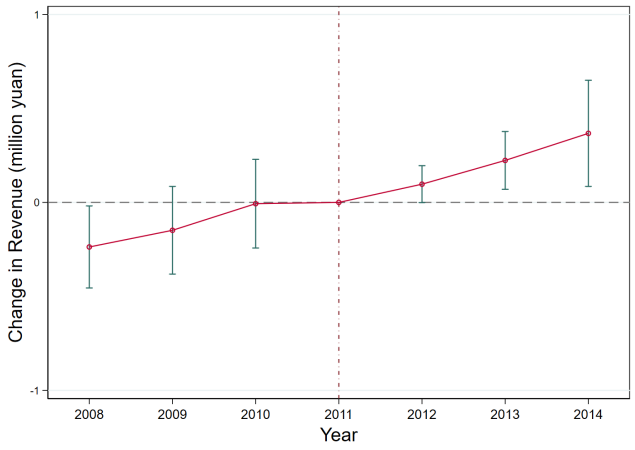
Notes: The sample includes $248,841$ observations of auto parts and non-parts manufacturers from the 2008 to 2014 ASIE data. The grey vertical line in the figure represents the time of the 2011 Japanese tsunami. The red dotted line signifies the time of the 2012 boycott. The y-axis displays the log revenue.

Figure A6: Revenue Changes in Auto Parts Manufacturers

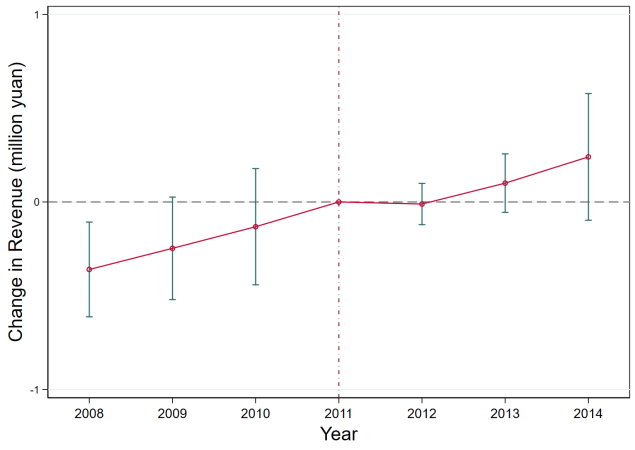
(a) dist = 30 km



(b) dist = 90 km



(c) dist = 150 km



Notes: The sample includes 248,841 observations of auto parts and non-parts manufacturers from the 2008 to 2014 ASIE data. The grey vertical line in the figure represents the time of the 2011 Japanese tsunami. The change in revenues represents the relative difference in log revenue between the auto parts manufacturers located within a specified distance cutoff and the rest of the sample, compared to the revenue levels in 2011.

B Additional Tables

Table B1: Summary Statistics on Auto Parts and Non-Parts Manufacturers

	Analysis Sample	Original Sample
Auto Parts		
Revenue (million yuan)	145.32	184.74
	(874.89)	(855.66)
Assets (million yuan)	105.07	138.05
	(600.01)	(596.05)
Employment	292	291
	(498)	(539)
Age	9.35	9.05
	(7.91)	(16.34)
Number of Observations	28,910	58,000
Number of Firms	10,029	15,504
Non-Parts		
Revenue (million yuan)	191.26	249.78
	(1424.89)	(1782.00)
Assets (million yuan)	141.20	173.20
	(1345.43)	(1313.57)
Employment	348	419
	(996)	(1311)
Age	9.19	9.25
	(7.24)	(10.50)
Number of Observations	174,299	341,814
Number of Firms	51,258	69,414

Notes: The table demonstrates the average values of total revenues, total assets, employments, and ages of the auto parts and the non-parts manufacturers from the 2008-2014 ASIE. Standard deviations are shown in the parentheses. The original sample encompasses all observations from 2008 to 2014, while the analysis sample excludes observations from 2011 and firms that are state-owned, Hong Kong/Taiwan/Macau-owned, or foreign-owned.

Table B2: The Boycott's Impact After One Year

	(1)	(2)	(3)	(4)
	Outcome = Number of Workers			
dist. cutoff = 30 km				
$\hat{\delta}$	-24.25	-24.77	-32.35	-58.94**
	(25.04)	(25.11)	(25.43)	(27.04)
dist. cutoff = 60 km				
$\hat{\delta}$	-7.22	-8.03	-9.69	-29.35
	(15.91)	(16.03)	(18.48)	(23.69)
dist. cutoff = 90 km				
$\hat{\delta}$	-10.10	-10.82	-14.20	-35.74**
	(12.28)	(12.37)	(12.96)	(16.33)
dist. cutoff = 120 km				
$\hat{\delta}$	0.46	-0.08	0.68	-15.22
	(12.52)	(12.53)	(13.06)	(18.61)
dist. cutoff = 150 km				
$\hat{\delta}$	19.86	19.36	19.46	7.76
	(12.91)	(12.86)	(12.38)	(18.24)
Year Range	2008-2013	2008-2013	2008-2013	2008-2013
R-Squared	0.90	0.90	0.90	0.89
Firms FEs	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	Y
Control Dist to Euro/US Automakers	N	Y	Y	Y
City-Year Trends	N	N	Y	Y
Drop Yangtze Region	N	N	N	Y
Number of Observations	168,995	168,934	168,934	107,666

Notes: The table shows boycott's estimated impact $\hat{\delta}$ from Equation (1) one year after the boycott. Each $\hat{\delta}$ is from a separate regression in Equation (1). The dependent variable is the number of workers from each firm. The changes in observations can be attributed to some firms lacking observations of time-variant characteristics and to observations being dropped from the Yangtze region. Standard errors are clustered at city level in parentheses. The sample contains the observations of firms from auto parts, clothing, electronics, food, and metal industries from the 2008-2013 ASIE excluding those in 2011 due to the lack of employment observations. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B3: The Boycott's Impacts on Assets and Revenue

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Outcome = Log(Assets)				Outcome = Log(Revenue)			
dist. cutoff = 30 km								
$\hat{\delta}$	0.05	0.05	0.02	0.04	0.09*	0.09	0.03	0.03
	(0.05)	(0.05)	(0.04)	(0.06)	(0.06)	(0.05)	(0.04)	(0.05)
dist. cutoff = 60 km								
$\hat{\delta}$	0.01	0.00	-0.01	-0.03	0.13**	0.12**	0.03	-0.00
	(0.04)	(0.04)	(0.03)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
dist. cutoff = 90 km								
$\hat{\delta}$	0.03	0.03	0.01	0.02	0.16***	0.16***	0.03	0.01
	(0.03)	(0.03)	(0.03)	(0.04)	(0.05)	(0.05)	(0.04)	(0.05)
dist. cutoff = 120 km								
$\hat{\delta}$	0.04	0.04	0.02	0.00	0.16***	0.16***	0.02	-0.01
	(0.03)	(0.03)	(0.02)	(0.04)	(0.05)	(0.05)	(0.04)	(0.05)
dist. cutoff = 150 km								
$\hat{\delta}$	0.06*	0.06*	0.02	0.01	0.16***	0.16***	0.03	-0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.06)	(0.06)	(0.04)	(0.05)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.92	0.92	0.92	0.91	0.87	0.87	0.88	0.87
Firms FEs	Y	Y	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	Y	N	Y	Y	Y
City-Year Trends	N	N	Y	Y	N	N	Y	Y
Drop Yangtze Region	N	N	N	Y	N	N	N	Y
Number of Observations	196,595	196,030	196,030	124,332	191,082	190,514	190,514	120,060

Notes: The main specification is Equation (1), and outcomes are logged assets and revenue. The table presents $\hat{\delta}$, the estimated coefficients for $boycott_t \times near\ Japanese_{jc} \times auto\ parts_j$, which measure the treatment effects on the outcomes resulting from the boycott by geographical location. Each $\hat{\delta}$ represents the effect under a unique regression for each distance cutoff. The changes in observations can be attributed to some firms lacking observations of time-variant characteristics and to observations being dropped from the Yangtze region. Standard errors are clustered at city level in parentheses. The sample includes observations of firms from the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B4: The Boycott's Impacts on Employments by Age

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Outcome = Number of Workers				Outcome = Log(Number of Workers)			
	Firm Age <= 3	Age in (3, 7]	Age in (7, 16]	Age >16	Firm Age <= 3	Age in (3, 7]	Age in (7, 16]	Age >16
dist. cutoff = 30 km								
$\hat{\delta}$	-38.50	-12.92	-90.53**	-292.21**	-0.13	-0.12	-0.14***	-0.15
	(37.56)	(27.68)	(43.00)	(142.39)	(0.17)	(0.08)	(0.05)	(0.11)
dist. cutoff = 60 km								
$\hat{\delta}$	-37.64	-21.01	-33.15	-189.93*	-0.15	-0.08	-0.04	-0.08
	(50.85)	(19.99)	(24.24)	(110.01)	(0.18)	(0.07)	(0.04)	(0.09)
dist. cutoff = 90 km								
$\hat{\delta}$	-12.48	-19.10	-21.87	-135.17	-0.07	-0.09	-0.06	-0.08
	(32.50)	(15.62)	(23.43)	(85.43)	(0.13)	(0.06)	(0.04)	(0.08)
dist. cutoff = 120 km								
$\hat{\delta}$	14.40	-17.73	-3.94	-23.50	-0.01	-0.03	-0.01	-0.01
	(33.12)	(16.10)	(21.72)	(80.50)	(0.13)	(0.06)	(0.04)	(0.07)
dist. cutoff = 150 km								
$\hat{\delta}$	30.29	-17.40	35.41	54.98	0.04	-0.00	0.04	0.05
	(34.27)	(16.51)	(23.08)	(75.74)	(0.14)	(0.06)	(0.05)	(0.07)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.91	0.93	0.83	0.96	0.86	0.87	0.85	0.89
Firms FEs	Y	Y	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time-Variant Controls	Y	Y	Y	Y	Y	Y	Y	Y
Control Dist to Euro/US Automakers	Y	Y	Y	Y	Y	Y	Y	Y
City-Year Trends	Y	Y	Y	Y	Y	Y	Y	Y
Number of Observations	22,356	50,037	79,086	17,496	22,356	50,037	79,086	17,496

Notes: The main specification is Equation (1). The table presents $\hat{\delta}$, the estimated coefficients for $boycott_t \times near\ Japanese_{jc} \times auto\ parts_j$, which measure the boycott's effect on employment by geographical location and by firm's age before the boycott. Each $\hat{\delta}$ represents the effect under a unique regression for each distance cutoff. The dependent variables are the number of employees and logged number of employees in each firm. Standard errors are clustered at city level in parentheses. The sample includes observations of firms from the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) data, excluding those from 2011 due to the absence of employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B5: The Boycott's Impacts on Employments by Revenue

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Outcome = Number of Workers				Outcome = Log(Number of Workers)			
Revenue before Boycott by Percentile	Bottom 25th	25th to 50th	50th to 75th	Top 25th	Bottom 25th	25th to 50th	50th to 75th	Top 25th
dist. cutoff = 30 km								
$\hat{\delta}$	24.61	5.49	1.47	-174.09***	0.03	-0.02	-0.05	-0.14**
	(17.41)	(8.28)	(14.18)	(65.73)	(0.08)	(0.04)	(0.05)	(0.06)
dist. cutoff = 60 km								
$\hat{\delta}$	0.81	-2.59	17.27	-104.23**	-0.00	-0.00	-0.02	-0.07
	(13.54)	(10.04)	(16.04)	(48.28)	(0.05)	(0.04)	(0.05)	(0.05)
dist. cutoff = 90 km								
$\hat{\delta}$	-3.45	1.75	11.11	-85.56**	-0.02	0.01	-0.03	-0.05
	(11.51)	(9.32)	(12.85)	(35.10)	(0.05)	(0.03)	(0.04)	(0.04)
dist. cutoff = 120 km								
$\hat{\delta}$	5.26	6.79	10.81	-46.96	0.02	0.02	-0.01	-0.05
	(11.89)	(9.66)	(11.30)	(35.98)	(0.04)	(0.04)	(0.04)	(0.04)
dist. cutoff = 150 km								
$\hat{\delta}$	13.53	2.99	12.78	-1.80	0.11**	0.03	-0.00	-0.02
	(14.95)	(9.25)	(9.87)	(34.99)	(0.05)	(0.04)	(0.04)	(0.05)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.77	0.75	0.79	0.86	0.79	0.77	0.77	0.83
Firms FEs	Y	Y	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time-Variant Controls	Y	Y	Y	Y	Y	Y	Y	Y
Control Dist to Euro/US Automakers	Y	Y	Y	Y	Y	Y	Y	Y
City-Year Trends	Y	Y	Y	Y	Y	Y	Y	Y
Number of Observations	21,449	51,475	56,618	61,185	21,449	51,475	56,618	61,185

Notes: The main specification is Equation (1). The table presents $\hat{\delta}$, the estimated coefficients for $boycott_t \times near\ Japanese_{jc} \times auto\ parts_j$, which measure the boycott's effect on employment by geographical location and by firm's revenue before the boycott. Each $\hat{\delta}$ represents the effect under a unique regression for each distance cutoff. The dependent variables are the number of employees and logged number of employees in each firm. Standard errors are clustered at city level in parentheses. The sample includes observations of firms from the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) data, excluding those from 2011 due to the absence of employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B6: The Boycott's Impacts on Employments, Distances to European/U.S. JV Automakers and Domestic Chinese Automakers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Distance to European/U.S. JVs				Distance to Domestic Chinese Automakers			
dist. cutoff = 30 km								
$\hat{\delta}$	10.90	9.59	-1.63	72.77***	-28.64*	-26.89	-35.05**	13.79
	(20.76)	(20.50)	(19.86)	(26.08)	(16.81)	(16.95)	(17.55)	(16.07)
dist. cutoff = 60 km								
$\hat{\delta}$	19.28	18.00	9.25	64.87***	-8.00	-7.40	-13.46	12.76
	(16.46)	(16.29)	(16.96)	(23.12)	(13.55)	(13.39)	(14.63)	(16.08)
dist. cutoff = 90 km								
$\hat{\delta}$	11.36	11.30	1.19	41.56**	-13.62	-13.33	-23.65*	-4.43
	(14.40)	(14.12)	(15.51)	(16.16)	(13.33)	(13.20)	(13.86)	(15.42)
dist. cutoff = 120 km								
$\hat{\delta}$	22.03*	21.81*	17.03	62.21***	-11.38	-11.56	-16.43	0.59
	(12.89)	(12.74)	(14.08)	(18.09)	(15.18)	(15.06)	(15.09)	(18.12)
dist. cutoff = 150 km								
$\hat{\delta}$	10.38	10.30	4.40	37.93**	-9.23	-9.82	-14.00	2.02
	(12.22)	(12.23)	(12.80)	(16.07)	(18.13)	(18.01)	(18.15)	(22.20)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.86	0.86	0.86	0.91	0.86	0.86	0.86	0.91
Firms FEs	Y	Y	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	Y	N	Y	Y	Y
Control Dist to Japanese Automakers	N	Y	Y	Y	N	Y	Y	Y
City-Year Trends	N	N	Y	Y	N	N	Y	Y
100 km from Japanese JV	N	N	N	Y	N	N	N	Y
Number of Observations	193,824	193,763	193,763	112,858	193,824	193,763	193,763	112,858

Notes: The table presents the results of the regression analysis using Equation (1) with the variable "near Japanese" being replaced by "near European/U.S." or "near Domestic Chinese Automakers." The estimated coefficient, $\hat{\delta}$, measures the impact of the boycott on employment changes for auto parts manufacturers located near European/U.S. JV automakers and domestic Chinese automakers. The changes in observations can be attributed to some firms lacking observations of time-variant characteristics, and to observations being dropped due to their location within 100 km of Japanese JV automakers. The dependent variable is the number of workers in each firm, and standard errors are clustered at the city level (in parentheses). The sample consists of firms in the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 ASIE, excluding those in 2011 due to missing employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B7: The Boycott's Impact on Employment by Distance Bands, 100 km Away from Japanese JV Automakers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Outcome = Number of Workers							
	Distance to European/U.S. JV Automakers				Distance to Domestic Chinese Automakers			
$\hat{\sigma_b}$								
distance band = [0, 30]	108.71***	103.57***	82.18***	84.59***	15.27	16.35	17.87	45.46
	(33.02)	(32.43)	(27.64)	(30.62)	(27.48)	(26.50)	(27.52)	(32.13)
dist. band = (30, 60]	56.16	54.40	53.89	39.66	3.07	2.80	7.73	32.66
	(41.79)	(41.76)	(40.14)	(40.29)	(28.82)	(27.80)	(27.33)	(32.00)
dist. band = (60, 90]	26.67	25.63	23.69	8.92	-23.41	-22.25	-23.10	-34.58
	(17.91)	(17.00)	(18.76)	(29.77)	(29.63)	(29.03)	(29.36)	(32.49)
dist. band = (90, 120]	72.34**	69.56**	81.68*	122.20	0.09	0.41	12.59	31.48
	(31.50)	(32.13)	(44.40)	(83.27)	(32.24)	(31.47)	(33.68)	(44.70)
dist. band = (120, 150]	-11.54	-12.42	-20.06	-7.03	1.33	3.17	8.80	14.40
	(17.84)	(17.98)	(19.15)	(27.21)	(27.17)	(26.43)	(26.11)	(28.67)
dist. band = (150, 180]	14.93	13.38	10.26	7.29	-53.62	-48.20	-46.29	-32.90
	(14.11)	(13.92)	(14.96)	(25.86)	(39.45)	(36.28)	(36.73)	(38.40)
dist. band = (180, 210]	-34.25	-33.31	-22.30	-9.33	71.35	73.04	87.28	96.85
	(32.43)	(30.34)	(26.97)	(26.95)	(71.67)	(71.65)	(72.98)	(87.78)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.91	0.91	0.91	0.90	0.91	0.91	0.91	0.90
Firms FEs	Y	Y	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	Y	N	Y	Y	Y
Control Dist to Euro/US Automakers	N	Y	Y	Y	N	Y	Y	Y
City-Year Trends	N	N	Y	Y	N	N	Y	Y
Drop Yangtze Region	N	N	N	Y	N	N	N	Y
Number of Observations	112,887	112,845	112,845	71,441	112,887	112,845	112,845	71,441

Notes: The main specification is Equation (2), using distance cutoffs to European and U.S. JVs, as well as domestic Chinese automakers. The table shows $\hat{\sigma_b}$, the estimated coefficients for $boycott_t \times \mathbb{1}(j \in b) \times auto\ parts_j$, which measures the heterogeneous treatment effects on employments across distance bands by the boycott. The changes in observations can be attributed to some firms lacking observations of time-variant characteristics and to observations being dropped from the Yangtze region. The dependent variable is the number of workers from each firm. Standard errors are clustered at city level in parentheses. The sample includes observations of firms from the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 Annual Survey of Industrial Enterprises (ASIE) data, excluding those from 2011 due to the absence of employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B8: The Boycott's Impacts on Employments, Distances to Japanese JV Automakers and Domestic Chinese Automakers

	(1)	(2)	(3)	(4)	(5)	(6)
	Distance to Domestic Chinese Automakers					
	30 km within Japanese JV automakers			30 km outside from Japanese JV automakers		
dist. cutoff = 30 km						
$\hat{\delta}$	-93.43***	-90.65***	-96.02***	12.62	13.53	8.26
	(31.14)	(31.37)	(31.94)	(10.54)	(10.96)	(11.32)
dist. cutoff = 60 km						
$\hat{\delta}$	-56.95**	-55.85*	-61.37**	15.93	16.17	12.30
	(28.85)	(28.94)	(29.66)	(10.66)	(10.81)	(11.60)
dist. cutoff = 90 km						
$\hat{\delta}$	-53.57*	-53.18*	-60.07**	8.79	8.93	3.09
	(27.61)	(27.82)	(28.32)	(12.55)	(12.66)	(13.04)
dist. cutoff = 120 km						
$\hat{\delta}$	-53.85*	-53.54*	-60.35**	13.40	13.10	13.52
	(27.56)	(27.82)	(28.32)	(14.52)	(14.58)	(14.70)
dist. cutoff = 150 km						
$\hat{\delta}$	-53.85*	-53.54*	-60.35**	17.51	16.91	18.34
	(27.56)	(27.82)	(28.32)	(16.44)	(16.46)	(16.40)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.86	0.86	0.86	0.86	0.86	0.86
Firms FEs	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	N	Y	Y
Control Dist to Japanese Automakers	N	Y	Y	N	Y	Y
City-Year Trends	N	N	Y	N	N	Y
Number of Observations	193,824	193,763	193,763	193,824	193,763	193,763

Notes: The table presents the results of the regression analysis using Equation (1) with the variable "near Japanese" being altered to "near Chinese Domestic Automakers". The estimated coefficient, $\hat{\delta}$, measures the impact of the boycott on employment changes for auto parts manufacturers located near domestic Chinese automakers. This is further conditioned on whether these manufacturers are located within or outside a 30 km radius from Japanese JV automakers. The change in observations can be attributed to some firms lacking observations of time-variant characteristics. The dependent variable is the number of workers in each firm, and standard errors are clustered at the city level (in parentheses). The sample consists of firms in the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 ASIE, excluding those in 2011 due to missing employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B9: Revenue Correlations between Japanese JV Automakers and Auto Parts Manufacturers

	Distance to Japanese JV Automakers (km)				
	[0, 10)	[10, 20)	[20, 30)	[30, 40)	[40,50)
$\hat{\beta}_1$	4.69*	0.96**	4.22*	-1.77	-1.28
	(2.61)	(0.41)	(2.32)	(2.59)	(2.77)
Number of Observations	462	379	308	289	189
	[50, 60)	[60, 70)	[70, 80)	[80, 90)	[90, 100)
$\hat{\beta}_1$	-1.29	-2.38	-0.18	4.76**	-0.32
	(0.81)	(3.61)	(1.24)	(1.91)	(0.99)
Number of Observations	180	181	187	103	100
	[100, 110)	[110, 120)	[120, 130)	[130, 140)	[140, 150)
$\hat{\beta}_1$	-0.41	-0.63	-7.55	4.89	-0.05
	(2.01)	(3.04)	(6.14)	(3.30)	(1.22)
Number of Observations	111	160	129	270	137
	[150, 160)	[160, 170)	[170, 180)	[180, 190)	[190, 200)
$\hat{\beta}_1$	0.60	3.83	-1.33*	-0.54	-0.08
	(1.16)	(4.11)	(0.74)	(1.83)	(2.85)
Number of Observations	123	120	80	97	104
	[200, 210)		outside 210		
$\hat{\beta}_1$	6.58***		1.24		
	(2.02)		(1.18)		
Number of Observations	84		2,422		

Notes: The table presents the estimated revenue correlations $\hat{\beta}_1$ between the Japanese JV automakers and the auto parts manufacturers in the sample, calculated using Equation (3). The sample includes auto parts manufacturers from the ASIE between 2008 and 2012 and excludes those located near the three Japanese JV automakers in the Yangtze Delta (YRD) region due to potential violation of the distance assumption. The dependent variable is the revenue level of each auto parts manufacturer in each year, measured in thousands of yuan. The main estimates, $\hat{\beta}_1$, represent the coefficients of the Japanese revenue in the previous year. Standard errors are shown in parentheses. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B10: The Boycott's Impact on Employment, Altering Boycott Year

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome = Number of Workers					
Treatment Year	2010			2013		
dist. cutoff = 30 km						
$\hat{\delta}$	-0.11	0.05	-2.51	-37.12	-36.16	-40.61
	(13.85)	(13.78)	(14.67)	(26.79)	(26.75)	(27.06)
dist. cutoff = 60 km						
$\hat{\delta}$	2.37	1.79	-1.09	-19.67	-19.58	-24.87
	(11.04)	(11.08)	(12.52)	(17.91)	(17.67)	(18.58)
dist. cutoff = 90 km						
$\hat{\delta}$	1.07	0.64	-3.87	-13.00	-13.06	-19.29
	(10.64)	(10.60)	(11.71)	(13.79)	(13.67)	(14.40)
dist. cutoff = 120 km						
$\hat{\delta}$	4.98	4.68	4.47	-4.53	-4.46	-7.50
	(10.65)	(10.60)	(11.09)	(11.56)	(11.48)	(11.96)
dist. cutoff = 150 km						
$\hat{\delta}$	15.73	15.35	13.96	3.21	3.01	-1.47
	(11.31)	(11.26)	(11.12)	(10.99)	(10.92)	(10.94)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.86	0.86	0.86	0.86	0.86	0.86
Firms FEs	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y
Time Variant Controls	N	Y	Y	N	Y	Y
Control Dist to Euro/US Automakers	N	Y	Y	N	Y	Y
City-Year Trends	N	N	Y	N	N	Y
Number of Observations	193,824	193,763	193,763	193,824	193,763	193,763

Notes: The table presents the results of the regression using Equation (1) with the treatment year changed to 2010 (columns 1-3) and 2013 (columns 4-6) respectively. The estimated coefficient, $\hat{\delta}$, represents the impact of the boycott on employment changes in auto parts manufacturers located near Japanese JV automakers. The change in observations can be attributed to some firms lacking observations of time-variant characteristics. The dependent variable is the number of workers in each firm. The standard errors, shown in parentheses, are clustered at the city level. The sample includes observations from auto parts, clothing, electronics, food, and metal industries in the 2008-2014 ASIE, excluding those in 2011 due to missing employment data. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B11: Heterogeneous Treatment Effects by Dist Bands, Year Occurances

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome = Number of Workers					
Treatment Year	2010			2013		
$\hat{\sigma_b}$						
distance band = [0, 30]	-3.71	-4.45	-8.15	-39.53	-39.28	-45.98
	(17.33)	(17.19)	(17.32)	(28.28)	(28.27)	(28.54)
dist. band = (30, 60]	-0.02	-2.17	-4.93	-3.30	-4.76	-10.47
	(16.87)	(16.89)	(15.95)	(13.43)	(13.39)	(13.40)
dist. band = (60, 90]	-6.47	-7.20	-10.88	-0.74	-1.55	-7.87
	(19.09)	(19.13)	(19.30)	(15.58)	(15.54)	(15.68)
dist. band = (90, 120]	4.11	3.42	9.48	10.33	10.08	12.46
	(17.10)	(17.02)	(19.29)	(13.21)	(13.00)	(14.19)
dist. band = (120, 150]	16.61	15.59	11.69	7.70	6.60	0.90
	(17.15)	(17.21)	(16.85)	(12.19)	(12.35)	(12.03)
dist. band = (150, 180]	-30.34**	-32.78**	-42.79***	-26.66**	-27.98**	-33.17***
	(14.77)	(14.99)	(16.34)	(11.30)	(11.41)	(11.74)
dist. band = (180, 210]	-66.97**	-69.09**	-60.56**	-43.90**	-45.96***	-38.22**
	(27.83)	(28.10)	(28.64)	(17.22)	(17.36)	(18.08)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.86	0.86	0.86	0.86	0.86	0.86
Firms FEs	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y
Time-Variant Controls	N	Y	Y	N	Y	Y
Control Dist to Euro/US Automakers	N	Y	Y	N	Y	Y
City-Year Trends	N	N	Y	N	N	Y
Number of Observations	193,824	193,763	193,763	193,824	193,763	193,763

Notes: The table presents the results from the main specification, Equation (2) with the treatment year changed to 2010 (columns 1-3) and 2013 (columns 4-6) respectively. The estimated coefficients, $\hat{\sigma_b}$, represent the heterogeneous treatment effects on employments of auto parts manufacturers across various distance bands, as a result of the boycott. The change in observations can be attributed to some firms lacking observations of time-variant characteristics. The dependent variable is the number of workers in each firm. The standard errors, clustered at the city level, are shown in parentheses. The sample includes observations of firms from the auto parts, clothing, electronics, food, and metal industries from the 2008-2014 ASIE, excluding those from 2011 due to missing employment data and those from southeast provinces. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

Table B12: Treatment Effects, Alternative Control Groups

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome = Number of Workers					
Control Group	Drop Electricity	Drop Electronics	Drop Food	Drop Metal	Drop Clothing	Parts Outside Cutoff
dist. cutoff = 30 km						
$\hat{\delta}$	-43.15**	-51.84**	-57.35**	-61.98**	-57.38**	-34.12*
	(20.72)	(25.51)	(26.20)	(27.70)	(25.20)	(18.76)
dist. cutoff = 60 km						
$\hat{\delta}$	-29.25	-26.69	-29.60	-29.69	-31.74*	-26.50*
	(17.91)	(18.35)	(19.60)	(19.80)	(18.94)	(14.09)
dist. cutoff = 90 km						
$\hat{\delta}$	-18.43	-19.55	-27.52*	-27.59*	-26.99*	-14.76
	(14.14)	(13.41)	(14.76)	(15.05)	(13.88)	(11.89)
dist. cutoff = 120 km						
$\hat{\delta}$	-0.29	-9.04	-10.19	-8.17	-9.24	-7.48
	(13.85)	(12.58)	(14.02)	(14.54)	(13.77)	(11.18)
dist. cutoff = 150 km						
$\hat{\delta}$	19.93	9.01	10.11	10.48	9.75	11.52
	(13.61)	(12.64)	(13.44)	(14.07)	(13.28)	(11.49)
Year Range	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014	2008-2014
R-Squared	0.85	0.90	0.86	0.86	0.86	0.83
Firms FEs	Y	Y	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y	Y	Y
Time Variant Controls	Y	Y	Y	Y	Y	Y
Control Dist to Euro/US Automakers	Y	Y	Y	Y	Y	Y
City-Year FEs	Y	Y	Y	Y	Y	X
Number of Observations	142,697	174,024	164,655	152,127	168,111	26,562

Notes: The table shows the results of the regression based on Equation (1) with control groups that exclude electricity, electronics, food, metal, clothing respectively, and control groups that use auto parts located outside the distance cutoff, as well as auto parts located within 50 km from the European/U.S. JVs and outside 100 km from the Japanese JVs. Columns (1)-(5) show $\hat{\delta}$, the estimated coefficients for $boycott_t \times near\ Japanese_{jc} \times auto\ parts_j$. Columns (6)-(7) show the coefficients for $boycott_t \times near\ Japanese_{jc}$. The dependent variable is the number of workers from each firm. Standard errors are clustered at city level in parentheses. The sample contains the observations of firms from auto parts, clothing, electronics, food, and metal industries from the 2008-2014 ASIE excluding those in 2011 due to the lack of employment observations. * denotes $p < 0.1$, ** denotes $p < 0.05$, and *** denotes $p < 0.01$.

C Overcoming Limitations in the Analysis of the ASIE Database

The ASIE offers detailed data on China's large firms, but data selection may pose an issue. From 1998 to 2010, the NBS included firms earning over 5 million yuan annually. From 2011, the threshold rose to 20 million yuan. This shift might bias the boycott effect estimation if smaller firms excluded after 2011 were affected differently by the boycott. To mitigate this bias, I focused on only firms with over 50 employees, aligning with the typical size needed for a formal assembly line.[42]

The ASIE also has variable inconsistencies yearly, with the number of variables ranging from 58 to 99 between 2008 and 2014. Although it consistently provides firm basics and financial data, it lacks employment data in 2011. Consequently, I excluded 2011 and assumed no major events that year affected employment trends in auto-parts and non-parts manufacturers. To justify omitting 2011 employment data, Section 6.4 uses revenue to demonstrate no major 2011 events impacting China's auto parts employment.

Despite lacking 2011 employment data, employment remains my preferred outcome. Workers in China are more disposable, allowing short-term boycott effects to be more detectable, as supported by Chan et al. (2014) showing firms can dismiss workers anytime without legal or union repercussions. Using revenue or assets to examine the boycott's impact might show a delayed, minor effect due to supply chain responses, as they are less disposable than workers. Additionally, the ASIE lacks 2009-2010 wage data, restricting its use as an outcome.

Data authenticity is also a concern with ASIE due to potential misreports and fabrications (Nie et al., 2012). Data from 1998-2007 and 2011-2014 in ASIE is considered reliable, but 2008-2010 data has issues. The 2008 sample missed 30% of large-scale firms (Brandt et al., 2014) and the 2010 data collection process has been questioned (Xiao and Xu, 2018). Concerns about ASIE's reliability led me to consult multiple sources. Xiao and Xu (2018) reviewed the 2008-2013 ASIE data and after cross-referencing, concluded that the 2008-2010 data on revenue, assets, and employment is trustworthy. Despite ASIE's limitations, it is by far the best Chinese firm-level data I have and will be used in my analysis.

[42] This is backed by reports like the 2015 Annual Footwear Factory Survey from the Footwear Distributors & Retailers of America, which studied 100 Chinese factories.

D Understanding the Idea of Treatment Effects

The coefficient δ in Equation (1) theoretically captures the *relative change in employment* for auto parts suppliers compared to non-suppliers to Japanese JV automakers. Specifically,

$$\delta \equiv \delta_{\textit{parts suppliers}} - \delta_{\textit{parts non-suppliers}}$$

where $\delta_{\textit{parts suppliers}}$ and $\delta_{\textit{parts non-suppliers}}$ respectively stand for the impact of the boycott on the auto parts suppliers and the non-suppliers to the Japanese JV automakers.[43] Therefore, δ is a DD estimator, not a triple difference estimator, as the parts non-suppliers may also be impacted by the boycott through two potential mechanisms. First, workers who were laid off from the auto parts suppliers to the Japanese JV automakers may be re-employed by the non-suppliers. Second, the boycott may make it more difficult for job seekers to find employment with the auto parts suppliers compared to the non-suppliers.[44] Since the distance cutoff c serves as a proxy to differentiate between the auto parts suppliers and the non-suppliers to the Japanese JV automakers, the estimated coefficient is defined as

$$\hat{\delta} = \hat{\delta}_{\textit{parts near}} - \hat{\delta}_{\textit{parts not near}}$$

where $\hat{\delta}_{\textit{parts near}}$ and $\hat{\delta}_{\textit{parts not near}}$ respectively stand for the estimated treatment effects of the boycott on the auto parts manufacturers located within and outside c km from their nearest Japanese JV automakers. Therefore, $\hat{\delta}$ represents the relative changes in employment for the auto parts manufacturers located within c km compared to those located outside.

[43] In other words, both auto parts suppliers and non-suppliers may be impacted by the general equilibrium effects of the boycott, but auto parts suppliers are also directly impacted by the boycott. The difference in δ removes the general equilibrium effects. By assuming auto parts suppliers are located near the Japanese JV automakers, Equation (1) indicates $\delta = \delta_{\textit{parts, near Japan}} - \delta_{\textit{non-parts, near Japan}} - (\delta_{\textit{parts, not near Japan}} - \delta_{\textit{non-parts, not near Japan}})$, where $\delta_{\textit{parts, near Japan}}$ represents the treatment effect for auto parts manufacturers located near Japanese JV automakers and so on. Since the non-parts manufacturers are in the control group, $\delta_{\textit{non-parts, near Japan}}$ and $\delta_{\textit{non-parts, not near Japan}}$ are 0.

[44] This could be due to the auto parts suppliers reducing new hires and/or cutting wages to minimize costs after the boycott.