

Allocating Liberalization:

Administrative Hierarchy and Tariff Relief in China

Yajie Wang

Division of Global and Area Studies, Chinese University of Hong Kong, Shenzhen

Abstract

Trade agreements commit governments to lower tariffs, but often leave discretion over how those reductions are allocated across products. This paper explains how administrative hierarchy shapes the product-level allocation of trade liberalization. I develop a theory of administrative representation: firms with authoritative bureaucratic sponsors are better positioned to turn product-specific demands into actionable requests for tariff relief. I examine China's trade policymaking after its accession to the World Trade Organization (WTO) by linking firms' pre-accession imports to subsequent tariff schedules and interim-duty lists and identifying each firm's administrative affiliation status. Products with greater pre-accession import exposure to centrally affiliated firms faced lower applied tariff rates after WTO accession and were more likely to receive preferential interim-duty rates. Institutional records and policymaker interviews describe the proposed transmission process. Together, the distributional and process evidence is consistent with domestic administrative institutions shaping the product-level allocation of trade liberalization.

Keywords: trade liberalization, tariffs, firms, state-owned enterprises, China

1 Introduction

International trade negotiations can constrain how much governments protect without determining who receives the gains from liberalization.¹ Trade agreements can sharply reduce average protection while allocating negotiated concessions unevenly across products (Maggi and Rodríguez-Clare, 2007; Betz, 2017). Because WTO bindings are ceilings, China’s product-level commitments still left room to set applied rates below them (World Trade Organization, 2001a; News Office, Ministry of Finance of the People’s Republic of China, 2006). The composition of those choices determines which firms obtain cheaper inputs and which producers face stronger competition. Governments can therefore satisfy liberalization commitments while distributing the gains of openness strategically. This paper asks: when international commitments restrict overall protection but leave discretion over applied policy, what determines which products—and which firms—receive tariff relief?

I argue that *administrative representation* helps allocate tariff relief within the policy space left by international commitments. I define administrative representation as a firm’s capacity to have its bureaucratic principal act as an authoritative sponsor for a product-specific tariff request. A bureaucratic principal is a public organization charged with supervising the firm and bearing institutional responsibility for its performance. It becomes a sponsor when it uses that bureaucratic reporting relationship and its institutional access to validate and advance the firm’s request through the tariff policymaking process. Tariff policymaking often proceeds as a bureaucratic-administrative process because product-level decisions require technical expertise and authority is concentrated in specialized agencies. The mechanism should be especially consequential in authoritarian regimes with hierarchical bureaucracies, where organized interests often seek influence through elite and administrative channels (Steinberg and Shih, 2012; Mertha, 2009).

Because modern tariffs are set at the level of individual product lines, firms can seek

¹In China’s WTO accession talks, China and existing members negotiated tariff bindings and phase-in schedules for thousands of product lines (World Trade Organization, 2001a).

relief through administrative requests that identify a specific tariff item and propose a change in its rate (I. S. Kim, 2017; Osgood, 2016). A manufacturer’s need for a foreign input creates a product-specific demand, but that demand can affect the tariff schedule only if the request reaches tariff officials. A bureaucratic sponsor can help the request bypass administrative bottlenecks and reach the officials authorized to act. This argument differs from informational lobbying and embedded autonomy. Informational lobbying explains how organized actors subsidize officials’ policy work, while embedded-autonomy accounts explain dense state–business ties (Hall and Deardorff, 2006; Evans, 1995). Administrative representation identifies a more specific advantage: among firms with similar policy needs, resources, or political connections, an authoritative bureaucratic principal can increase the probability that a request reaches the final decision stage. This transmission mechanism is distinct from firm size, ownership, and lobbying effort, which may shape demand or influence through other channels.

Contemporary tariff policymaking in China provides a useful setting for testing the argument: authority over product-level tariffs is centralized, while firms vary in their administrative access to the national decision process. WTO accession constrained the direction and broad scale of liberalization (World Trade Organization, 2001a), while leaving product-level implementation to a centralized domestic process. Decisions passed through the State Council Tariff Commission and, for major adjustments, State Council approval.²

In China, firms seeking to influence trade policy must engage with a centralized policy-making process, but they do so from different positions within the administrative hierarchy. I operationalize administrative representation with pre-accession central administrative affiliation: whether a firm was supervised by a central ministry or another central government body. I call these firms direct-control firms (DCFs). This measure records affiliation, not ownership. State-owned firms, for example, could report either to a central ministry or to a provincial or local government (Hsieh and Song, 2015). Central supervision could increase

²See General Office of the State Council of the People’s Republic of China, 1998; State Council Tariff Commission, 2006; News Office, Ministry of Finance of the People’s Republic of China, 2006.

the likelihood that a DCF’s tariff request reached national review because its supervising body could validate and advance the request within the central administration, helping it bypass the bureaucratic bottleneck faced by ordinary firms. These reporting relationships predated China’s contemporary trade regime but continued to shape the allocation of tariff relief after WTO accession.

Empirically, I construct a new product-level tariff dataset and a complementary firm-level dataset. In the empirical analysis, *tariff relief* refers to a reduction in an applied tariff rate, whether through a lower regular MFN rate or an interim duty below that rate. I use *tariff reduction* and *trade liberalization* in the same applied-rate sense. I hand-collect China’s annual product-level interim-duty rates and national tariff schedules, which I combine into a detailed panel of statutory tariffs. The firm dataset links the Annual Survey of Manufacturing Firms (ASMF) to China Customs records covering the universe of firm–product import and export transactions in 2000. The customs records identify each firm’s imported products and import values immediately before accession. The ASMF records administrative subordination and legal ownership in separate fields. At the product level, I compare products with similar starting tariffs, aggregate import demand, sourcing, producer characteristics, and product-family fixed effects but different central-firm import exposure. Products imported more heavily by centrally affiliated firms before accession were more likely to appear on interim-duty lists and experienced larger tariff cuts. At the firm level, DCFs received larger fixed-basket tariff cuts and were more likely to have an interim-duty product in their pre-accession import baskets.

Interviews with former trade policymakers provide additional evidence on how product-specific tariff requests were processed. Interviewees described a congested proposal process in which firms without central affiliation had to pass through layers of technical screening. Firms under direct central supervision, by contrast, could bypass much of this bottleneck and present product-level tariff requests directly to central policymakers. Official records document the authority and reporting relationships that sustained this shorter route.

This paper makes three contributions. First, it shifts attention from how much liberalization occurs overall to how tariff cuts are distributed across products. Classic accounts explain protection through organized interests, while firm-level research shows that global sourcing and production networks divide trade preferences within industries (Grossman and Helpman, 1994; Osgood, 2016; Osgood, 2018; Blanchard and Matschke, 2015). Research on tariff suspensions and exclusions further shows that firms seek and sometimes obtain line-specific tariff relief (Ludema et al., 2018; Lee and Osgood, 2022). Relatedly, Tan and Davis (2023) show that industrial policy muted SOEs’ response to WTO tariff cuts in strategic sectors. My analysis examines whether firms’ administrative position shaped the allocation of those cuts across products.

Second, the paper moves research on authoritarian trade policy inside policymaking. Existing studies explain national openness and trade-agreement decisions through authoritarian institutions, distributive threats, and leader survival (Hankla and Kuthy, 2013; Wu, 2015; Baccini and Chow, 2018). They say less about how officials process detailed demands, especially when trade policy is centralized at the senior leadership level (Feng, 2006). The administrative-representation argument identifies a specific mechanism: bureaucratic sponsorship determines whose product information reaches national policymakers as a credible, actionable proposal. This mechanism differs from both the formal lobbying and petition channels studied in industrialized democracies and the patronage and local-government implementation mechanisms studied in other research on authoritarian governance (Hall and Deardorff, 2006; Ludema et al., 2018; Jiang, 2018).

Third, the paper opens the black box of trade policymaking in China. Existing research documents bargaining over China’s WTO accession (Pearson, 2001; Feng, 2006), shows that trade policy reflects bureaucratic, sectoral, regional, and business interests operating through differentiated channels of access (Kennedy, 2005; Zeng, 2007; Deng and Kennedy, 2010), links SOE interests and administrative connections to tariff protection and antidumping outcomes (Hong, 2013; H. Zhang, 2018), and identifies divergent central and subnational strategies

(Tan, 2020). Interviews with former trade policymakers reconstruct how product-specific requests moved through tariff institutions. Detailed firm-product data then test whether the administrative routes described in those interviews correspond to realized tariff outcomes. Together, the two forms of evidence connect the policymaking process to the distribution of tariff relief across products and firms.

In what follows, Section 2 develops the theoretical argument. Section 3 introduces the tariff policymaking process in China and presents qualitative evidence from administrative records and policymaker interviews. Section 4 states the hypothesis and its observable implications. Sections 5 and 6 describe the measures and present the quantitative evidence. Section 7 concludes.

2 Theory

2.1 From Aggregate Liberalization to Product-Level Allocation

Trade policy distributes gains and losses, and classic international political economy (IPE) explains how those economic stakes become political coalitions and policy. One strand asks whether trade divides society along broad class lines or narrow industry lines. When factors move readily across sectors, owners and workers tend to organize by class. When factors are specific, capital and labor within an industry share a stake in protection. Factor mobility therefore determines which cleavage dominates (Hiscox, 2001). A second strand treats tariffs as outcomes of organization and political exchange. Hillman (1982) links protection for declining industries to the political support they can offer, Magee (2002) models lobby formation as an endogenous response to the private returns from protection, and Grossman and Helpman (1994) formalize the government's trade-off between aggregate welfare and organized contributions. A third strand explains why firms organize for liberalization rather than merely fail to resist it. Exports, multinational production, and intrafirm trade raise the costs of protection for internationally connected firms, even when those firms face import

competition (Milner, 1988a; Milner, 1988b). Reciprocal negotiations then give exporters clearer gains from foreign market access and help them overcome collective-action problems (Gilligan, 1997). These approaches make both protection and liberalization outcomes of organized conflict, but they generally locate that conflict at the level of classes, sectors, industries, or broad national coalitions.

Recent IPE moves below those aggregates in two connected ways. Firm-centered research shows that firms in the same industry can hold different trade preferences because they differ in productivity, export participation, and product differentiation. These differences also shape which firms lobby, so an industry need not act as a unitary political actor (Osgood, 2016; I. S. Kim, 2017; I. S. Kim and Osgood, 2019; Plouffe, 2017). A related product-level perspective identifies the policy instrument through which governments can respond to this heterogeneity: modern tariff schedules contain thousands of product lines, with substantial variation in applied rates among products in the same industry. A government can lower the duty on an input used by one set of firms while retaining protection on a neighboring product. Firm heterogeneity fragments political demand. Tariff granularity allows policymakers to respond selectively, line by line.

Tariff granularity changes how trade policy should be understood. National average tariffs can conceal how governments distribute protection across thousands of product lines. International commitments constrain this allocation unevenly because foreign governments focus on the products in which their exporters have substantial stakes, leaving other lines subject to less external pressure.³ Even on committed lines, bindings establish ceilings rather than floors. Domestic policymakers can set applied rates below bound rates, implement scheduled cuts early, or grant temporary tariff relief. Viewing trade policy at the product level therefore reveals two forms of domestic discretion: greater room on lines that attract limited

³Arguments for uniform tariffs warn that product-level differentiation invites particularistic bargaining (Panagariya and Rodrik, 1993). Under the principal-supplier rule, major exporters press for concessions on the products they supply, while the importing government decides which concessions to offer (Gowa and S. Y. Kim, 2005; Pelc, 2011). These negotiations help determine product-specific bindings and phase-in schedules, but they do not cover every tariff line with equal intensity.

foreign attention and scope to liberalize beyond formal commitments. The distribution of tariff relief depends not only on international constraints but also on the domestic institutions that determine how this discretion is used.

This remaining discretion has distributive consequences. A lower duty on an intermediate input reduces costs for downstream firms, while continued protection shelters domestic producers of that input. Tariff relief need not be legally excludable to be concentrated: every importer of a tariff line pays the lower rate, but the gains accrue primarily to firms that use the product and cannot readily substitute away from it. Two reforms with the same average tariff cut can therefore create different coalitions of beneficiaries, and average tariffs conceal this allocation.

Trade reforms can also generate uneven adjustment across workers and regions (Goldberg and Pavcnik, 2007; Topalova, 2010; Autor et al., 2013; Dix-Carneiro and Kovak, 2017). Those studies examine downstream incidence; the present analysis instead identifies the upstream allocation of tariff relief and does not estimate effects on workers, households, regions, or ethnic groups.⁴

Research shows that information, organized opposition, political connections, multinational production, and supply chains shape line-level tariff relief (Ludema et al., 2018; Fotak et al., 2025; Eldes et al., 2026; Baccini, Dür, et al., 2018; Blanchard and Matschke, 2015; Bown et al., 2021). Much of this evidence comes from industrialized democracies, where legislative and formal petition channels are comparatively visible. However, developing countries also maintain highly disaggregated schedules, and authoritarian schedules can exhibit selective complexity and dispersion (Guimbard et al., 2012; Wu, 2020). The theory therefore turns to administrative representation: whether an authoritative bureaucratic principal can carry a firm’s demand into the tariff-setting process.

⁴Material interests and institutional channels do not exhaust trade politics. Economic ideas and identity are important because they can shape which sectors are understood as nationally valuable and which coalitions form around liberalization (V. G. Rodrigues Vieira, 2024). This paper focuses on the administrative procedures through which firms’ demands reach tariff officials. It therefore treats ideas and identity as scope conditions rather than as evidence for the narrower administrative-representation mechanism tested here.

2.2 Firm-Level Demand for Tariff Relief

Product-level discretion creates the policy space, while firms' input and output interests determine which tariff lines they want changed. A manufacturer may seek lower tariffs on imported inputs while favoring continued protection for its own output. Because firms within an industry use different inputs and participate differently in global production, an industry label can conceal divergent firm-level trade-policy preferences (Osgood, 2016; Osgood, 2018; Jensen et al., 2015; Lee and Osgood, 2022).

The benefit of tariff relief depends on a firm's sourcing pattern. Lower duties reduce the price of established foreign inputs and can expand access to new varieties, widen product scope, and raise downstream productivity (Amiti and Konings, 2007; Goldberg, Khandelwal, et al., 2010; Halpern et al., 2015; Brandt et al., 2017). These gains vary with which inputs a firm uses and how intensively it uses them.

Tariff relief also creates an opposing interest. Domestic producers lose protection when imports become cheaper, while firms that depend on imported inputs gain from lower duties. Policymakers therefore face competing claims from input users and import-competing producers (Grossman and Helpman, 1994; Eckhardt, 2013). Global sourcing can create this conflict even among firms in the same industry (Lee and Osgood, 2022). In requests for tariff relief, both sides may provide information about domestic substitutes, production costs, and the likely effects of a cut, consistent with accounts of lobbying as the provision of policy information and legislative work (Grossman and Helpman, 2001; Hall and Deardorff, 2006). Evidence from U.S. tariff suspensions shows that information from proponents and opposition from domestic producers both shaped approval (Ludema et al., 2018). Product-level demand produces tariff relief only after technical screening and competition with domestic-producer claims. How policymakers resolve these competing product-level claims depends on the political institutions through which firms seek influence.

2.3 Trade Policy under Authoritarianism

In democracies, trade policy is shaped by institutions that channel organized demands through elections, parties, legislatures, and agencies (Milner, 1997; Nielson, 2003). Electoral rules determine how broadly leaders aggregate interests (Rogowski and Kayser, 2002; Nielson, 2003). Legislative ratification, party organization, and electoral transparency further constrain executives and their choice of policy instruments (Milner, 1997; Hankla, 2006; Kono, 2006). Firms also influence policy through contributions, information, lobbying, and formal petitions for tariff relief (Grossman and Helpman, 1994; Hall and Deardorff, 2006; Ludema et al., 2018). These mechanisms help explain why democracies trade more freely and conclude more trade agreements (Mansfield et al., 2000; Mansfield et al., 2002). These accounts may disagree over whose interests prevail but emphasize electoral channels from societal preferences to policymakers.

Research on authoritarian trade policy shifts attention from electoral incentives to regime survival and authoritarian institutions, but usually retains a national or agreement-level outcome. Cross-regime work asks whether autocracies trade less or protect more (Mansfield et al., 2000; Aidt and Gassebner, 2010). Within authoritarian regimes, selectorate breadth, regime institutionalization, time horizons, inequality, and threats of democratization help explain national openness (Hankla and Kuthy, 2013; Wu, 2015; Zissimos, 2017). Related studies connect trade-agreement accession to leadership survival (Hollyer and Rosendorff, 2012) and explain how authoritarian governments balance liberalization against domestic autonomy in agreement depth and design (Baccini and Chow, 2018; Postnikov and Gamso, 2024). These lines of work explain why an autocracy opens or which commitments it accepts, but they say much less about the distribution of applied policy across individual products.

A smaller literature moves closer to that allocational question by showing how specific groups shape policy under authoritarian rule. Powerful economic groups can influence an authoritarian government's exchange-rate choices (Steinberg and Shih, 2012). Evidence from China similarly shows that firms and industry associations seek to influence national policy

through different organizational channels (Kennedy, 2005; Deng and Kennedy, 2010). Other studies link SOE interests and administrative connections to tariff protection and antidumping outcomes (Hong, 2013; H. Zhang, 2018). These studies establish that authoritarian leaders respond selectively and can redirect protection through administrative instruments. Comparative research on Brazil and India likewise shows that the design of the bureaucracy leading trade negotiations shapes how domestic and international constraints enter the construction of national trade interests (V. Rodrigues Vieira, 2017; V. Rodrigues Vieira, 2021). Explaining how influence reaches individual tariff lines requires a theory of administrative representation.

2.4 Administrative Representation and Policy Transmission

I define administrative representation as a firm’s capacity to enlist its bureaucratic principal as an authoritative sponsor of a product-specific tariff request. A bureaucratic principal is the public organization charged with supervising the firm and bearing institutional responsibility for its performance. The supervisory relationship creates representational capacity. A principal exercises that capacity when it uses its reporting relationship and institutional access to validate and advance the firm’s request. Thus, a centrally supervised manufacturer may seek ministry endorsement of a lower duty on imported machinery, whereas a subnationally supervised firm may first approach its local economic department. The key difference across firms is how close their bureaucratic principals are to national tariff officials within the administrative hierarchy.⁵

Administrative representation should matter most when product-level trade policy requires technical expertise, formal authority is centralized in specialized agencies, and electoral and legislative channels are weak. These are scope conditions rather than universal features of authoritarian rule: the mechanism should be strongest where national bureaucracies control product-specific decisions and electoral and legislative channels exert limited influence. Firms

⁵Administrative representation differs from *representative bureaucracy*, which asks whether the demographic composition of public agencies produces representation of social groups (Mosher, 1968). Here the represented actor is an affiliated organization and the representative is its bureaucratic principal.

then depend more heavily on administrative reporting ties, making the hierarchy consequential for which claims reach national review.

To focus on the domestic allocation problem, I hold aggregate liberalization fixed at $\bar{L}$ and allow national policymakers to distribute nonnegative tariff cuts, $\Delta\tau_j$, across product lines:

$$\sum_{j=1}^J \omega_j \Delta\tau_j = \bar{L}, \quad \Delta\tau_j \equiv \tau_{j,0} - \tau_{j,1} \geq 0. \quad (1)$$

Here j indexes product lines, $\tau_{j,0}$ and $\tau_{j,1}$ are pre- and post-reform tariffs, and the fixed weights $\omega_j > 0$ sum to one. The fixed-budget constraint is an analytical device that isolates composition. Trade agreements can constrain the depth and timing of liberalization (Maggi and Rodríguez-Clare, 2007), and accession bargains determine demanded concessions (Pelc, 2011). Conditional on $\bar{L}$, the model asks how domestic politics allocates reform across products. Additional relief on one line must be offset by less liberalization elsewhere, so representation can reallocate relief without changing its aggregate amount.⁶

Allocating $\bar{L}$ across thousands of product lines creates a screening bottleneck. Input users seeking relief, protected producers opposing cuts, industry associations, technical agencies, and subnational governments compete for the attention of a small set of national officials. Their product-level knowledge affects the tariff schedule only if a claim survives screening and enters national review. Research on lobbying and tariff suspensions shows that organized actors improve their prospects by supplying information and the policy labor needed to make it usable (Grossman and Helpman, 2001; Hall and Deardorff, 2006; Ludema et al., 2018). Administrative representation confers a distinct advantage at the prior stage: whether that information reaches the relevant officials.

I therefore separate transmission from decision. During transmission, a firm or its sponsor must identify the product and proposed rate change, document its role in production and the availability of substitutes, and pass technical and interagency screening. During

⁶The constraint holds the scale of reform constant to isolate its composition. Actual trade agreements may encode the aggregate constraint in different legal forms.

decision, national officials choose among reviewable claims by weighing gains to users against producer opposition, revenue considerations, international constraints, and other objectives. Administrative representation raises the probability that a claim becomes reviewable; national officials retain authority over whether to grant relief.

Sponsorship improves transmission through three analytically distinct mechanisms. First, *visibility*: endorsement by a recognized principal raises a claim’s priority within a congested queue. Second, *credibility*: because a principal bears responsibility for supervised organizations, its endorsement can convey that a claim passed internal screening. A biased sponsor may nonetheless distort the information it transmits, a tension formalized in models of advocacy (Dewatripont and Tirole, 1999). Third, *routing*: whereas visibility changes priority within a queue, organizational proximity reduces the number of gatekeepers a claim must cross and directs it toward the officials responsible for technical review. This routing logic accords with theories that organizations use hierarchy to process and direct costly information (Bolton and Dewatripont, 1994; Garicano, 2000). Credibility is a general benefit of sponsorship; the predicted proximity gradient arises chiefly because nearer principals can place claims in higher-priority channels and bypass more gatekeepers. Research on China likewise portrays trade policymaking as pluralized and documents contrasting lobbying styles and access among business actors (Zeng, 2007; Deng and Kennedy, 2010).

Administrative representation is an organizational channel, not a proxy for firm size, state ownership, political loyalty, fiscal contribution, or lobbying effort. Size provides resources for political participation (Bombardini, 2008); fiscal ties can give governments substantive reasons to favor particular firms (Queralt, 2017; Han et al., 2022); and ownership or loyalty can alter government preferences. Lobbying effort supplies information and policy labor, whereas the relationship with a bureaucratic principal identifies the official route through which those inputs reach review. In China, state-sector restructuring assigned large firms to different central and local principals, allowing the principal’s location to be measured separately from ownership status and firms’ responses to WTO liberalization (Hsieh and

Song, 2015; Tan and Davis, 2023).

3 WTO Constraints and Tariff Policymaking in China

3.1 WTO Accession and Residual Tariff Discretion

China's WTO accession sharply constrained the level and timing of tariff protection without eliminating discretion over applied rates. After applying to resume its status as a GATT contracting party in 1986, China negotiated on two tracks. A multilateral Working Party examined its trade regime and negotiated rules and institutional commitments, while China bargained bilaterally with WTO members seeking market-access concessions in goods and services. Because accession required members' consent, China had to address these individual concerns before the accession package could proceed (Yang and Cheng, 2001; Pearson, 2001; Feng, 2006; World Trade Organization, 2001b). The resulting bilateral commitments were consolidated into a single schedule of tariff bindings and phase-in requirements and extended to all WTO members under most-favored-nation treatment (World Trade Organization, 2001a). Existing members' export interests shaped the concessions demanded of China, while accession placed most of the adjustment burden on China as the applicant (Pelc, 2011).

The final package sharply constrained both the direction and broad scale of Chinese tariff policy. China bound every import tariff, committed to reduce average industrial bindings to 8.9 percent and agricultural bindings to 15 percent, and phased in most reductions by 2004.⁷ By 2007, the official tariff plan placed the overall applied tariff level at 9.8 percent.⁸ The empirical analysis focuses on how tariff treatment varied across products within the constraints established by accession.

China applies product-specific tariffs at the eight-digit Harmonized System (HS8) level, including regular most-favored-nation (MFN) rates and annual interim duty rates (IDRs).

⁷See World Trade Organization, 2001b; World Trade Organization, 2001a.

⁸See News Office, Ministry of Finance of the People's Republic of China, 2006.

Appendix A reproduces sample tariff lines to show the schedule’s organization. The empirical analysis uses the 2001–2007 schedules.

Figure 1 summarizes changes in applied MFN tariffs and the composition of tariff dispersion. The upper panel shows that the mean applied MFN tariff fell from 17.5 percent in 1998 to 9.9 percent in 2007. The lower panel decomposes annual variation across six-digit Harmonized System (HS6) products into variation within and between two-digit Harmonized System (HS2) industries. The within-HS2 component rose from 43.9 percent of total tariff variation in 1998 to 57.2 percent in 2007 and exceeded the between-HS2 component from 2001 onward. Tariff dispersion among products in the same broad industry became greater than dispersion in average tariffs across broad industries. Industry membership therefore became a weaker guide to a product’s tariff: closely related goods could face a larger tariff gap than the typical difference between industry averages. Comparable within-industry tariff patterns appear beyond China (I. S. Kim, 2017; I. S. Kim and Osgood, 2019).

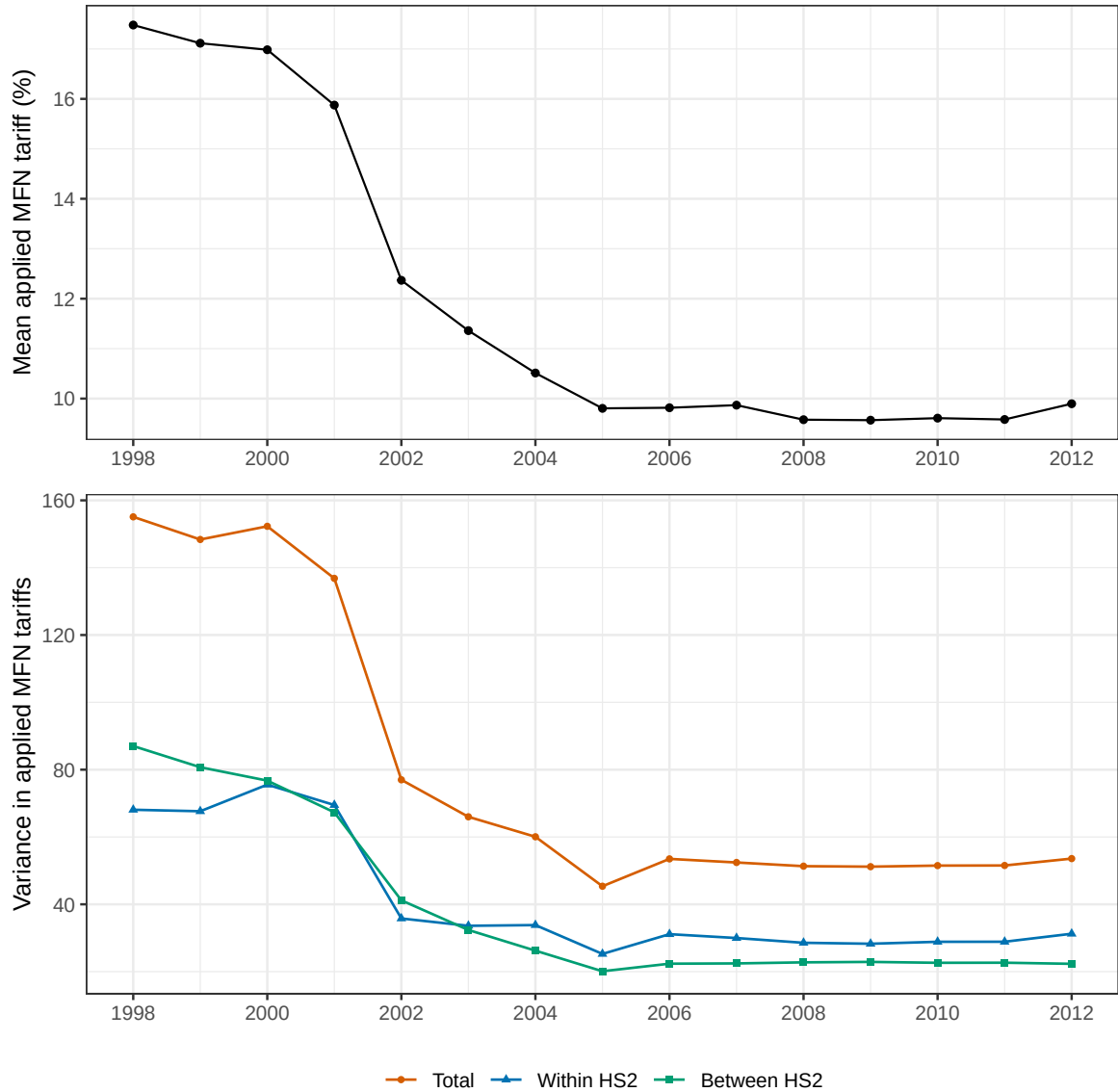


Figure 1: Falling Applied Tariffs and the Composition of Product-Level Dispersion, 1998–2012

Notes: The upper panel reports the unweighted mean applied MFN tariff across HS6 products. The lower panel decomposes total annual variance across HS6 products into variation within HS2 industries and variation between HS2 industry means. The two components sum to total variance. The within-industry share equals 43.9 percent in 1998 and 57.2 percent in 2007. Source: World Integrated Trade Solution. The 2007 pattern is similar when measured using eight-digit Harmonized System (HS8) tariff lines.

Table 1 shows what this within-industry variation meant in China’s 2007 schedule. All six products belong to HS2 industry 84 (machinery) and describe related engines, yet their regular MFN rates range from 5 to 25 percent. An internal-combustion engine for a railway train at or above 132.39 kW faced a 25 percent tariff, while a tractor diesel engine at the same capacity threshold faced 9 percent. Three adjacent locomotive-engine lines faced rates of 5, 8.4, and 5 percent depending on capacity. This 20-point spread within one industry illustrates the product differentiation concealed by broad industry averages. Aggregate liberalization reduced overall protection without eliminating product-specific tariff choices.

Table 1: Within-Industry Tariff Differentiation: Machinery, 2007

HS8	Product	Regular MFN rate
8407.9090	Petrol engines	18%
8408.2010	Diesel engines of tractors, ≥ 132.39 kW	9%
8408.2090	Internal combustion engines of railway trains, ≥ 132.39 kW	25%
8408.9091	Locomotive engines, ≤ 14 kW	5%
8408.9092	Locomotive engines, > 14 kW but ≤ 132.39 kW	8.4%
8408.9093	Locomotive engines, ≥ 132.39 kW	5%

Notes: The table reports regular applied MFN rates for selected HS8 lines within industry 84. WTO bindings set the maximum permissible rate, while annual interim duties could lower the applied rate for selected products.

Source: China’s 2007 national tariff schedule, digitized by the author.

Policymakers could also use annual interim duties—applied rates set below the regular MFN rate for selected products—to grant temporary tariff relief within China’s WTO bindings. Authority over both instruments remained centralized: the State Council Tariff Commission reviewed rate changes, with major decisions subject to State Council approval.⁹

I measure product-level tariff treatment using two primary outcomes: changes in regular applied MFN rates and interim-duty treatment. MFN changes capture the broader cross-product allocation of regular-rate cuts, while interim duties identify selective reductions below the regular rate. Section 5.4 details their construction.

⁹See General Office of the State Council of the People’s Republic of China, 1998. In October 2006, a Commission decision approved by the State Council lowered interim duties on 58 tariff items, and the 2007 tariff plan applied interim rates to more than 300 products (State Council Tariff Commission, 2006; News Office, Ministry of Finance of the People’s Republic of China, 2006). In the analysis panel, 8.2 percent of 4,825 HS6 products appeared on an interim-duty list at least once during 2001–2007.

3.2 Tariff Policymaking Process

Prior research describes pluralized trade policymaking and contrasting lobbying styles among Chinese business organizations (Zeng, 2007; Deng and Kennedy, 2010). The evidence assembled here reveals a more specific product-level process. Chinese firms sought tariff changes by submitting technical petitions through government agencies and industry associations. Each petition identified a tariff line, requested a rate change, and justified it against competing claims from domestic producers. Firms across ownership forms could submit petitions, but interviewees reported that they differed in access to policymakers and in their ability to move a request forward.

I combine official administrative records with interviews conducted in Beijing in 2021–2022 with former tariff policymakers and bureaucrats. This section introduces the two channels through which firms submitted petitions and explains how each route moved requests toward Commission review.

3.2.1 The Tariff Commission

The State Council Tariff Commission was the central government body at the core of China’s tariff policymaking. Operating under the State Council, it coordinated the ministries and agencies responsible for finance, planning, customs, agriculture, industry, and related policy areas. It also held authority over tariff rates, annual interim rates, tariff-line changes, and major tariff policies and negotiations, with an office in the Ministry of Finance providing administrative support.¹⁰ Figure 2 illustrates this organizational structure.¹¹

¹⁰See General Office of the State Council of the People’s Republic of China, 1998.

¹¹The figure uses the agencies’ later names. The empirical analysis classifies firms by their pre-SASAC affiliations in 2000.

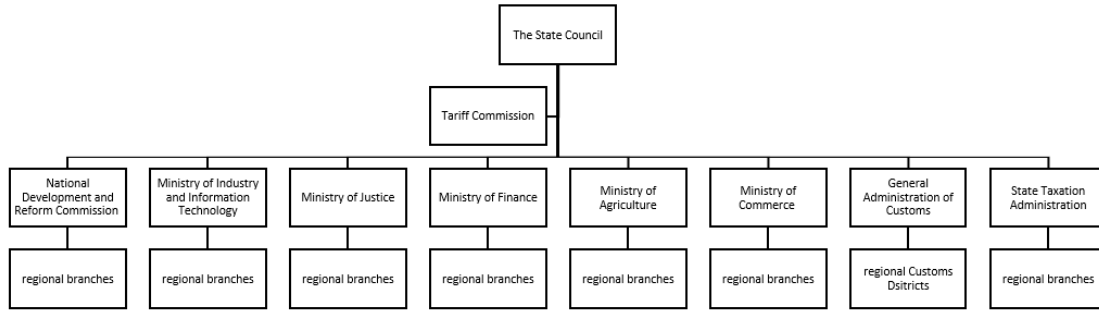


Figure 2: Organization of China’s Tariff-Setting Institutions

Notes: The chart illustrates the State Council Tariff Commission’s organizational structure using later-period agency names.

The Commission and its member agencies exercised this authority at two working levels. Senior Commission members and ministerial representatives received direction from the State Council, coordinated interests across agencies, and reviewed proposals. Below them, specialized bureaucrats assembled product information, evaluated requests, and drafted proposed changes. These bureaucrats both processed information and could obstruct a petition. A request could stall if the responsible bureaucrat lacked time, found the supporting evidence inadequate, or chose not to advance it. Before senior officials could approve a request, specialized bureaucrats had to verify the firm’s evidence. They then translated the request into a proposed change for a specific tariff line.

Figure 3 traces product-specific tariff requests through this hierarchy and introduces the two channels examined below. In the ordinary bureaucratic channel, firms and associations worked through local or sectoral officials. In the central supervisory channel—labeled “State Asset” in the figure—a DCF could ask its supervising ministry or central state-asset body to forward a request. Both channels converged on the Commission’s technical and hierarchical review, but central sponsorship could bypass preliminary queues.

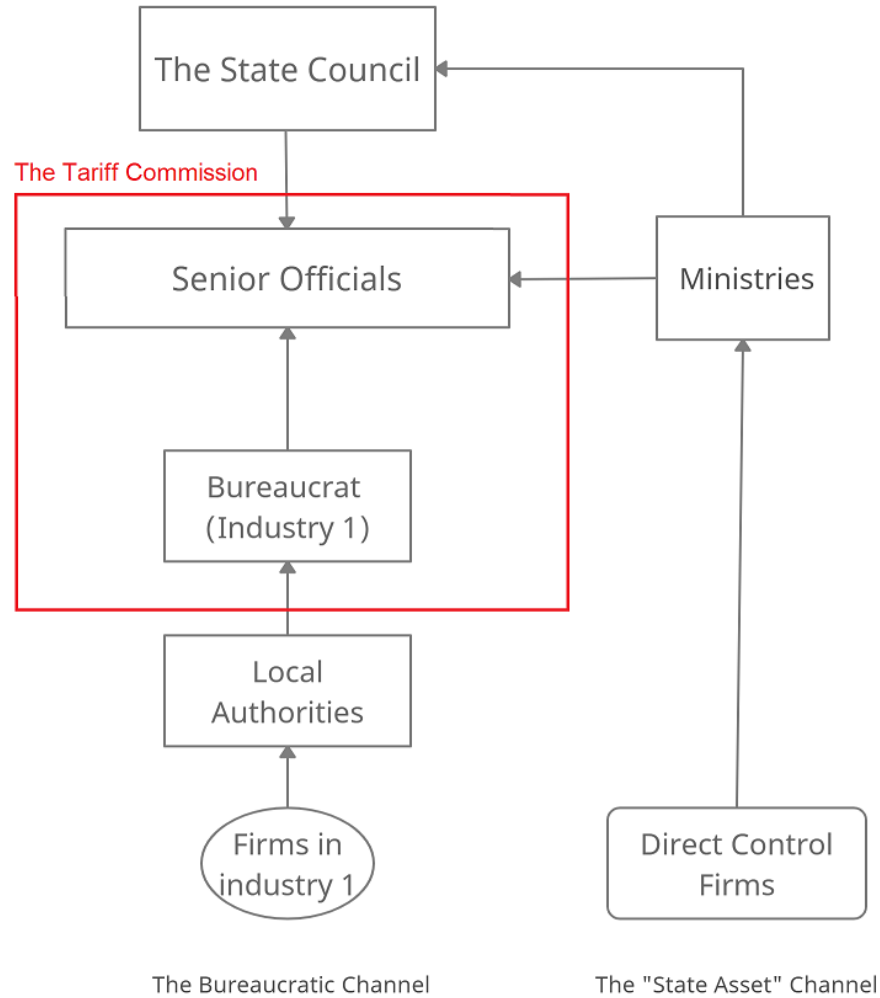


Figure 3: Reported Administrative Routes for Product-Specific Tariff Requests

Notes: The arrows represent the flow of information. In the ordinary channel, firms and industry associations transmit petitions through local and sectoral officials. In the central supervisory channel, a DCF's sponsoring organization can forward a petition into the central review process. The advantage is that this route can bypass some preliminary queues. The "State Asset" label denotes a supervisory function.

3.2.2 The Ordinary Bureaucratic Channel

Interviewees described much of the product-level work as being performed by career officials in the Commission office and relevant agencies. I refer to these mid-level officials as *bureaucrats*. They received requests—for example, a proposed 5% reduction on a specified product— assembled information about imports and domestic production, assessed the likely effects on the industries they covered, and drafted proposals for senior review. Senior authorities retained final decision-making power, but the bureaucrats’ authority to evaluate and advance a request gave them substantial gatekeeping discretion. A lower-level bureaucrat could become an obstacle even when a firm had submitted a petition: the official could request more evidence, give the request low priority, decline to recommend it, or fail to move it forward before the relevant decision.

Interviewees described each bureaucrat as responsible for a portfolio of industries and as screening petitions within that portfolio. An automobile specialist, for example, also covered related supply-chain industries and products such as tires and transmission units.¹² Recruitment reflected this specialization. A 2003 Tariff Commission hiring notice sought applicants with matching academic training in chemical engineering, communications electronics, machinery, and computer electronics. These assignments allowed bureaucrats to accumulate product-level expertise and to evaluate competing claims from input users and domestic producers.

Interviewees reported that firms commonly sent petitions through local customs offices or industry associations, which relayed them to the relevant officials. Repeated contact with firms and associations gave sectoral bureaucrats access to technical information that was difficult to obtain from aggregate data alone. It also left firms dependent on an official’s willingness and capacity to turn a request into an administrative proposal.

The same specialization that produced expertise also produced overload. Interviewees described officials as responsible for large numbers of stakeholders and, at times, thousands of

¹²Author’s interview.

petitions. Overtime was common, and senior officials could demand reports on short notice. One interviewee’s later experience illustrates the persistence of these working conditions: during the 2018–2019 trade war, the official was instructed to draft China’s response to U.S. tariffs within a single business day. As another interviewee put it, officials sometimes reviewed petitions “like paging through a book.” Under these conditions, a lower-level official’s limited time or decision to set a request aside could stop it before senior review. Bureaucratic overload thus created an attention bottleneck in the ordinary channel. This China-specific evidence parallels overload mechanisms documented among rural development officials in India (Dasgupta and Kapur, 2020).

Interviewees also described substantive screening. In one unsuccessful case, an official examined customs transactions for a high-value chemical input and rejected a foreign affiliate’s request because the declared intra-firm price failed to substantiate the claimed tariff burden. Lower-level review therefore involved substantive judgment. A petition had to survive attention constraints and technical verification before reaching senior Commission officials and ministerial representatives, who could block, revise, or approve it.

3.2.3 The Central Supervisory Channel

Interviewees described directly affiliated enterprises as occupying a distinct position in the administrative hierarchy. A DCF could submit a product-specific tariff request through its supervising ministry or central state-asset body. This organization could represent the firm and forward its petition to the Tariff Commission or senior officials. I refer to the supervising organization as the DCF’s bureaucratic sponsor.

Interviewees characterized a DCF’s central affiliation as providing a shorter and more authoritative channel. They used *dandu xingwen* to describe the DCF’s formal authority to issue official correspondence in its own name directly to the relevant ministry, without routing the document through unrelated administrative bodies. This *de jure* channel was unavailable to ordinary firms, which had to transmit their requests through regular administrative

procedures. The ministry could then communicate directly with the Tariff Commission. A sponsor could also validate the stated production need, lend the petition credibility, and help it bypass some intermediate queues and lower-level gatekeepers. I therefore hypothesize that sponsorship increased the probability that a technically viable petition reached senior review.

This advantage did not create a separate decision process or guarantee approval. Sponsored petitions remained subject to technical scrutiny, policy constraints, producer opposition, and senior review. Private firms and local state-owned enterprises (SOEs) could obtain tariff relief through ordinary channels, and a DCF's request could fail. The difference lay in transmission: DCFs had an additional, institutionally backed route into the same review process.

3.2.4 Local Governments and Access to the Central Channel

Local governments had both the capacity and incentives to sponsor firms through the ordinary channel. China's decentralized authoritarian institutions gave local officials substantial implementation capacity (Landry, 2008). Fiscal institutions also tied their interests to revenue generated within their jurisdictions (Oi, 1992; Xu, 2011; Gordon and Li, 2012). Their stake in supporting trade-oriented firms varied geographically because provinces differed in export-led growth and in the relationship between inward investment and exports (Ljungwall, 2006; Q. Zhang and Felmingham, 2001).

However, local sponsorship did not give provinces control over tariff policy.¹³ Firms could submit petitions through local customs branches, sometimes with provincial or local government sponsorship. Local bodies could also solicit, screen, and relay proposals from firms and associations. Yet these regional petitions still had to pass through the ordinary bureaucratic bottleneck to reach the central Tariff Commission. At the Commission level, officials pooled petitions nationally and grouped them by industry rather than region, reflecting the bureaucracy's sectoral specialization. Local support could help a petition enter central review, but it did not provide the direct formal access available to DCFs. Province controls

¹³See General Office of the State Council of the People's Republic of China, 1998.

and within-province comparisons distinguish this central access from geographically varying local support.

3.3 Central Administrative Control versus State Ownership

Three concepts must remain separate. *Ownership* describes equity or legal status under the customs classification. *Administrative affiliation* identifies the governmental principal to which a firm reports and which may structure appointments, supervision, or communication. *Imported-input exposure* measures whether, and how strongly, a firm benefits from lower tariffs on products it actually imports. Direct central administrative control records affiliation. Imported-input exposure separately measures a firm’s demand for tariff relief.

The central category sits within the State Council’s administrative system, but it does not encompass the state sector as a whole. Most SOEs were affiliated with provincial or local governments rather than the center. Central affiliation also crossed ownership categories: the linked sample includes centrally affiliated foreign-invested enterprises, including joint ventures, as well as centrally affiliated SOEs. The empirical measure therefore captures a firm’s formal position in the administrative hierarchy rather than state ownership.

Political access does not map cleanly onto legal ownership. Using repeated surveys of Chinese private firms, Guo et al. (2014) find that politically connected entrepreneurs gained better access to subsidized bank credit after institutional changes recognized private business. Their outcome is finance rather than tariffs, but the comparison shows why private ownership cannot be treated as an absence of state access. DCF status captures a formal reporting relationship, which is narrower than political connection and can cross ownership categories.

In the early 2000s, imported intermediates were central to production across Chinese firms. Conditional on using a foreign input, producers generally benefited from a lower tariff on that product (Yu, 2015; Brandt et al., 2017). Because this incentive was widespread, the relevant difference is administrative position. Tariff decisions were centralized, DCFs reported directly to ministries or other central bodies, and interviewees reported that other firms generally

transmitted demands through local governments, sectoral agencies, or industry associations. This pattern is consistent with research depicting pluralized Chinese trade policymaking and contrasting association lobbying styles (Zeng, 2007; Deng and Kennedy, 2010). DCF status therefore identifies a firm’s position in the policymaking hierarchy. Product-specific demand establishes what a firm wants, while administrative affiliation identifies the route through which that demand can reach the central tariff process.

This distinction matters within China’s state sector. Large enterprise groups were administered by central or local authorities, and responsibility for appointing and evaluating managers followed the administrative level. State ownership therefore provides a poor proxy for a common governmental principal (Hsieh and Song, 2015). Because central affiliation spans state-owned and foreign-invested firms, within-ownership comparisons help distinguish hierarchy from broad state ownership. Section 5.3 defines the pre-accession DCF measure, ownership categories, and linkage procedure.

4 Hypothesis

China’s WTO commitments constrained the overall extent of tariff liberalization but left officials discretion over which products received additional tariff relief. Firms under direct central administrative control could submit product-specific requests through central ministries, giving the products they imported a more direct route to tariff-setting officials. This leads to the following hypothesis:

Hypothesis. Products imported more heavily by centrally affiliated firms before China’s WTO accession receive greater tariff relief afterward, reflected in larger reductions in regular applied MFN rates and a higher probability of receiving a temporary tariff rate below the regular MFN rate.

The empirical analysis compares products with similar total pre-accession import demand, isolating central administrative access from demand for imported inputs more generally.

5 Data and Measurement

5.1 Sources and units of analysis

The analysis links firms’ pre-accession imports to changes in China’s tariff schedule after WTO entry. The firm-level unit is an importer and the product-level unit is a six-digit Harmonized System (HS6) tariff line. I measure firm status and import demand in 2000, before China joined the WTO in December 2001. Domestic producer characteristics come from 1998. I use 2007 as the end year because most accession-related tariff cuts and scheduled phase-ins had been implemented by then. China’s average applied MFN rate subsequently changed little, from 9.8 percent in 2007 to 9.3 percent in 2017.¹⁴ The country-specific additional tariffs imposed during the 2018 U.S.–China trade war belong to a later policy episode (S. E. Kim and Margalit, 2021). This timing fixes the political and economic covariates before the policy outcomes.

I combine three sources. Annual applied most-favored-nation rates from the World Integrated Trade Solution provide tariffs at HS6 for 1998–2011. I harmonize the 2002 and 2007 nomenclature revisions to the 1996 Harmonized System (HS1996) codes used in the 2000 trade data and retain products observed in every year of the panel. China’s national tariff schedules add HS8 detail and identify interim duty rates (IDRs). An IDR is a product-specific temporary applied rate set below the regular MFN rate while leaving the WTO binding and regular MFN schedule unchanged. Each annual tariff plan identifies the eligible product lines and their lower rates; comparison across successive plans shows which treatments are renewed, revised, or removed.¹⁵ I reconstruct whether an HS6 line appeared on any interim-duty list during 2001–2007.

Transaction records from the China General Administration of Customs report the importer’s name, postal code, legal status (state-owned, foreign-invested, or private), product,

¹⁴See News Office, Ministry of Finance of the People’s Republic of China, 2006; World Trade Organization, 2018.

¹⁵See State Council Tariff Commission, 2006; News Office, Ministry of Finance of the People’s Republic of China, 2006.

trade regime, country of origin, and shipment value. These records cover the universe of reported merchandise transactions. After name cleaning and the exclusions described below, the 2000 cross-section contains 39,164 importers with positive imports, including 283 centrally affiliated firms. The cross-section determines firms’ fixed import baskets and the scale and composition of demand for each product. Using pre-accession baskets prevents firms’ later sourcing or product switching from entering the tariff outcome.

The Annual Survey of Manufacturing Firms (ASMF) supplies administrative affiliation and producer characteristics. The survey covers all state-owned manufacturing enterprises (SOEs) and nonstate manufacturers with annual sales above 5 million renminbi (RMB). I use the 2000 administrative-subordination field to identify firms attached to central state bodies. Aggregates from the 1998 survey measure domestic producer output, employment, and the state share of revenue at the product’s matched industry. Accounting variables enter only the supplementary analyses because requiring an ASMF match would reduce the main customs sample sharply.

5.2 Sample construction and trade regime

The primary product-level sample links tariff changes to pre-accession import demand at HS6. Collapsing the archived 2000 customs aggregates yields 4,825 imported lines. Requiring tariffs in both 2000 and 2007 leaves 4,214, and adding producer controls leaves 3,902. Because the aggregates combine ordinary and processing trade, these estimates relate tariff allocation to demand recorded across customs regimes. A separately reconstructed ordinary-trade sample isolates shipments subject to tariffs and tests the 2007-level association without processing trade.

The firm-level sample instead measures tariff incidence on fixed 2000 ordinary-trade baskets. Processing inputs generally receive duty exemptions, so including them would overstate the tariff incidence firms actually face (Yu, 2015). From the 39,164-firm roster described above, requiring ordinary-trade imports and at least one HS6 product with tariffs

observed throughout 1998–2011 leaves 19,397 firms, including 199 centrally affiliated firms. I reweight each retained basket to sum to one. Processing transactions never enter the firm-level outcome. Appendix Tables A2 and A3 document name cleaning, exclusions, linkage, and import-value coverage.

The end-use classification serves as a validation of the imported-input interpretation. Both main samples retain the broader product universe. The United Nations Statistics Division’s HS1996-to-Broad Economic Categories (BEC) concordance identifies intermediate inputs, capital goods, and final consumption. Among central SOEs, 65.0 percent import at least one intermediate product, and intermediates average 64.3 percent of ordinary-import value among firms with a valid denominator. Imported-input use is widespread: average intermediate shares range from 64 to 80 percent across administrative and ownership categories, consistent with the importance of imported inputs to Chinese manufacturing (Yu, 2015; Brandt et al., 2017). The main fixed-basket measure retains all ordinary imports, while intermediate-only definitions are sensitivity checks. Appendix Tables A5 and A6 report the classification rules and comparisons.

5.3 Administrative status and ownership

I use the 2000 ASMF administrative-affiliation field to identify firms supervised by a central ministry or another central government body and merge them by firm name with the customs data. I classify these firms as DCFs. This central-affiliation indicator operationalizes administrative representation but does not record whether the supervising body sponsored a particular petition. Appendix B documents the coding, linkage, and ownership categories.

5.4 Outcomes and explanatory variables

The two primary product outcomes capture complementary margins of tariff relief. The first is the percentage-point reduction in the applied MFN rate:

$$\text{Cut}_j = \tau_{j,2000} - \tau_{j,2007}, \quad (2)$$

where a positive value denotes deeper liberalization. The other primary outcome records whether an HS6 line appeared on any interim-duty list during 2001–2007. For firm i , let $w_{ij,2000}$ be product j 's share of its ordinary-trade imports in 2000. The fixed-basket outcome is

$$\text{Cut}_i = \sum_{j \in J_i} w_{ij,2000} (\tau_{j,2000} - \tau_{j,2007}). \quad (3)$$

The same products and weights enter both endpoints. I also calculate the weighted 2000 and 2007 tariff levels, an unweighted basket average, the tariff on the firm's largest import, and whether at least one product in its basket receives an IDR. Because the amount of protection available to remove depends on the initial rate, the preferred specifications adjust flexibly for the 2000 tariff.

The key product-level predictor is the absolute scale of pre-accession DCF demand:

$$\text{DCFExposure}_{j,2000} = \log(1 + \text{DCFImports}_{j,2000}). \quad (4)$$

I standardize this variable within the product sample and include $\log(1 + \text{total imports})$ separately. The coefficient therefore compares products with similar overall demand but different demand from centrally affiliated firms. A literal DCF import share separately tests concentration, and the log difference between DCF and total import value provides another alternative measure. At the firm level, the explanatory variables are the binary DCF indicator and the ownership-by-affiliation categories defined above.

5.5 Pre-accession controls

All baseline controls are measured before WTO entry. Firm models adjust for 2000 import value, the number of imported products, the share sourced from countries in the Organisation for Economic Co-operation and Development (OECD) countries, and the import-value-weighted average of the firm’s share in each product market. Fixed effects compare firms within the HS2 category of their largest 2000 import and within province. Product models include log total import value, the log number of importers, the OECD sourcing share, 1998 producer output and employment, and the state share of producer revenue. They also absorb HS2 fixed effects and a four-degree-of-freedom natural spline in the 2000 tariff. The share sourced from the United States, European Union, or Japan and the geographic concentration of import demand enter designated sensitivity tests. No post-accession firm outcome or producer characteristic is used as a control.

Table 2 reports the distributions of the primary outcomes, predictors, and customs controls. The two panels retain their distinct empirical universes: ordinary-trade fixed baskets for firms and the broader all-regime aggregation for products.

Table 2: Summary Statistics

Variable	N	Mean	SD	Min	Max
<i>Panel A. Product-level sample</i>					
Tariff cut, 2000–2007 (percentage points)	4,214	7.042	8.999	-45.000	112.000
MFN tariff, 2000 (percent)	4,792	16.919	12.003	0.000	121.000
MFN tariff, 2007 (percent)	4,220	9.917	7.112	0.000	65.000
Any interim-duty listing, 2001–2007	4,825	0.082	0.275	0.000	1.000
Log DCF import value	4,825	5.099	6.075	0.000	21.019
Literal DCF import share	4,825	0.037	0.120	0.000	1.000
Log import value	4,825	14.539	2.682	6.913	23.412
Number of importing firms	4,825	113.342	266.537	0.000	5496.000
OECD import share	4,825	0.663	0.310	0.000	1.000
<i>Panel B. Firm-level fixed-basket sample</i>					
Tariff cut, 2000–2007 (percentage points)	19,397	6.862	6.727	-45.000	111.600
Weighted input tariff, 2000 (percent)	19,397	14.491	7.833	0.000	114.000
Weighted input tariff, 2007 (percent)	19,397	7.628	4.080	0.000	50.000
Share of imported products receiving an IDR	19,397	0.181	0.283	0.000	1.000
Direct-control firm	19,397	0.010	0.101	0.000	1.000
Import value (US\$ billions)	19,397	0.006	0.076	0.000	9.205
Number of imported products	19,397	26.864	46.882	1.000	1160.000
OECD import share	19,397	0.705	0.380	0.000	1.000

Notes: Product statistics use all customs regimes and HS6 aggregation. DCF exposure is $\log(1 + \text{DCF imports})$. Firm tariffs apply fixed 2000 ordinary-trade weights to the balanced HS6 panel. Shares range from zero to one. Product import value is logged, and firm import value is in US\$ billions.

6 Empirical Strategy and Results

6.1 Design and estimands

I test the administrative-access hypothesis at the product level because tariffs are set by product. It predicts more favorable applied treatment for tariff lines used by centrally affiliated firms before accession, conditional on the line’s initial protection, overall demand, and producer opposition. I estimate

$$Y_j = \alpha + \beta \text{DCFExposure}_{j,2000} + f(\tau_{j,2000}) + \mathbf{W}_j' \theta + \mathbf{Z}_j' \kappa + \lambda_{h(j)} + \varepsilon_j, \quad (5)$$

where Y_j is either of the two primary product outcomes: any interim-duty listing or the 2000–2007 tariff cut defined in Section 5. The function $f(\tau_{j,2000})$ is a four-degree-of-freedom natural spline in the 2000 tariff. This flexible control is necessary because products with higher initial protection have more room for large cuts, and negotiated phase-ins can make the relationship between initial protection and subsequent treatment nonlinear. The spline prevents this starting-point relationship from being attributed to DCF exposure. Four degrees of freedom allow moderate curvature while keeping the adjustment parsimonious. Appendix Figure A5 reports results under alternative spline choices. The term $\lambda_{h(j)}$ denotes HS2 fixed effects. Importer controls $\mathbf{W}_j$ include log total import value, the log number of importers, and the OECD sourcing share. Producer output, employment, and the state share of producer revenue enter $\mathbf{Z}_j$. Standard errors are clustered at the four-digit Harmonized System (HS4) level, allowing shocks to be correlated across related HS6 lines.

The preferred exposure measure is standardized log DCF import value. Because log total imports enters the same regression, β compares products with similar overall demand but different absolute demand from DCFs. A literal DCF import share tests whether concentration predicts treatment independently of the scale of represented demand. The interim-duty estimand records whether a product appeared on any list during 2001–2007.

The supplementary firm analysis fixes the beneficiary side of the same product allocation. For firm i , I estimate

$$Y_i = \alpha + \beta \text{DCF}_i + f(\bar{\tau}_{i,2000}) + \mathbf{X}_i' \gamma + \delta_{s(i)} + \phi_{p(i)} + \varepsilon_i, \quad (6)$$

where the outcomes are the cut in the firm’s fixed-basket tariff and whether its basket contains at least one IDR product. Because only 199 DCFs remain in the balanced firm sample, these estimates are descriptive incidence checks and serve as additional evidence. $\mathbf{X}_i$ contains the pre-accession firm controls listed in Section 5.5. The terms $\delta_{s(i)}$ and $\phi_{p(i)}$ are fixed effects for the HS2 category of the firm’s largest import and its postal province. In the grouped model, central SOEs and centrally affiliated FIEs are pooled into a single direct-control category, and ordinary FIEs are the reference category. Private firms and local SOEs are therefore interpreted relative to ordinary FIEs, while the pooled direct-control coefficient imposes a common association across central SOEs and centrally affiliated FIEs. The grouped specifications restrict the direct-control category to the 198 firms in these two ownership groups. Table 5 reports the binary and grouped firm specifications. The binary specifications cluster standard errors by the HS6 category of the firm’s largest 2000 import; the grouped specifications cluster by firm.

These models estimate conditional associations. Initial tariffs enter because they determine how much protection can be removed and differ systematically with DCF exposure. The firm models use ordinary trade only. The product-change file combines customs regimes, so its coefficients describe policy allocation associated with total DCF demand across those regimes.

6.2 Product-level allocation

Interim duties capture selective use of residual applied-rate discretion. An interim-duty list identifies products granted temporary applied tariff rates below the regular MFN rate. Table 3

Table 3: Pre-Accession DCF Import Exposure and Interim-Duty Decisions

	Any Listing				Years Listed	Max. Discount
	(1)	(2)	(3)	(4)	(5)	(6)
DCF Import Exposure (1 SD)	0.047*** (0.006)	0.048*** (0.006)	0.027*** (0.007)	0.027*** (0.007)	0.105*** (0.029)	0.188*** (0.053)
Importer Controls	No	No	Yes	Yes	Yes	Yes
Producer Controls	No	No	No	Yes	Yes	Yes
HS2 FE	Yes	Yes	Yes	Yes	Yes	Yes
Flexible 2000 Tariff	No	Yes	Yes	Yes	Yes	Yes
Num. obs.	4825	4792	4792	4431	4431	4431

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Columns 1–4 sequentially add a flexible function of the 2000 tariff, importer controls, and producer controls to the linear probability model for any interim-duty listing during 2001–2007. Columns 5–6 use the full specification; their outcomes are the number of listed years and the maximum percentage-point discount below the regular MFN rate. The discount measure is bounded below at zero. DCF exposure is standardized log DCF import value in 2000. Importer controls are total import value, the log number of importers, and OECD sourcing; producer controls are output, employment, and the state share of revenue. All models include HS2 fixed effects, and flexible specifications use a four-degree-of-freedom natural spline in the 2000 tariff. Standard errors are clustered at HS4. HS8 listings are mapped to HS6 by prefix across changing HS vintages.

first varies the covariates for whether a product appeared on any annual list during 2001–2007, then applies the full product specification to two additional margins of discretion. With HS2 fixed effects alone, a one-standard-deviation increase in pre-accession DCF exposure predicts a 4.7-percentage-point increase in listing probability. Flexibly controlling for the 2000 tariff leaves the estimate at 4.8 points. Importer controls reduce it to 2.7 points, and adding producer controls leaves it at 2.7 points, about 31 percent of the 8.6 percent estimation-sample mean. The attenuation when importer controls enter shows that overall import demand explains part, but not all, of the HS2-adjusted association.

Under the full specification, the same increase in DCF exposure predicts 0.105 additional listed years and a 0.188-percentage-point larger maximum discount from the regular MFN rate. Incidence, duration, and depth capture three margins of the same policy process. The preferred any-listing estimate remains precise with broader HS2 clustering ($p < 0.001$).

The primary MFN tariff-cut outcome captures the broader allocation of regular-rate reductions. Negotiated commitments and pre-accession differences also shaped the regular MFN schedule, so comparable products require adjustment for their starting protection.

Column 1 of Table 4 includes the 2000 tariff linearly. A one-standard-deviation increase in DCF exposure predicts a 0.648-percentage-point larger cut ($p < 0.001$). Column 2 replaces the linear term with a flexible baseline specification and yields 0.570 points ($p < 0.001$).

Importer controls reduce the coefficient to 0.235 points. Adding producer characteristics yields the preferred estimate of 0.271 points. Moving from the twenty-fifth percentile of exposure—zero DCF imports—to the seventy-fifth percentile is a 1.878-standard-deviation change and corresponds to a 0.508-point larger cut, about 7 percent of the sample’s 7.04-point mean reduction. The literal DCF import share has a coefficient of 0.273. The preferred coefficient therefore describes the central-firm component of demand conditional on total imports. Appendix Figure A1 displays the full baseline- adjustment sequence. Appendix Figures A4 and A5, together with Appendix Table A14, probe exposure support, weighting, functional form, and outcome horizon.

Table 4: DCF Import Exposure and Baseline-Adjusted Tariff Reductions

	Tariff Cut, 2000–2007			
	(1)	(2)	(3)	(4)
DCF Import Exposure	0.648*** (0.126)	0.570*** (0.117)	0.235* (0.129)	0.271** (0.125)
2000 Tariff	0.662*** (0.038)			
Importer Controls	No	No	Yes	Yes
Producer Controls	No	No	No	Yes
HS2 FE	Yes	Yes	Yes	Yes
Linear 2000 Tariff	Yes	No	No	No
Flexible 2000 Tariff	No	Yes	Yes	Yes
Num. obs.	4,214	4,214	4,214	3,902

Positive coefficients indicate larger tariff cuts. The unit is an HS6 product. DCF exposure is standardized log DCF import value in 2000. Columns 2–4 use a four-degree-of-freedom natural spline in the 2000 tariff. Importer controls are total import value, the log number of HS6 importers, and OECD sourcing; producer controls are output, employment, and the state share of revenue. Standard errors, in parentheses, are clustered at HS4. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Rebuilding exposure from ordinary-trade intermediate inputs preserves the positive sign.

Appendix Table A9 shows that the tariff-cut coefficient also survives controls for sourcing from major negotiating partners. These specifications address processing-trade exemptions and principal-supplier sourcing for the tariff-cut outcome.

6.3 Firm-Level Evidence

The firm-level analysis uses a balanced descriptive sample of 19,397 firms, including 199 DCFs. The binary fixed-effect regressions use 19,396 observations after the estimator removes one singleton; the grouped ownership specifications use 19,395 observations.

Figure 4 provides a descriptive comparison from the broader customs roster. Applying the 2007 MFN schedule to products imported under all customs regimes in 2000, DCFs face a winsorized mean tariff of 5.24 percent, compared with 7.25 percent for non-DCF. This raw gap motivates the fixed-basket timing and conditional comparisons that follow.

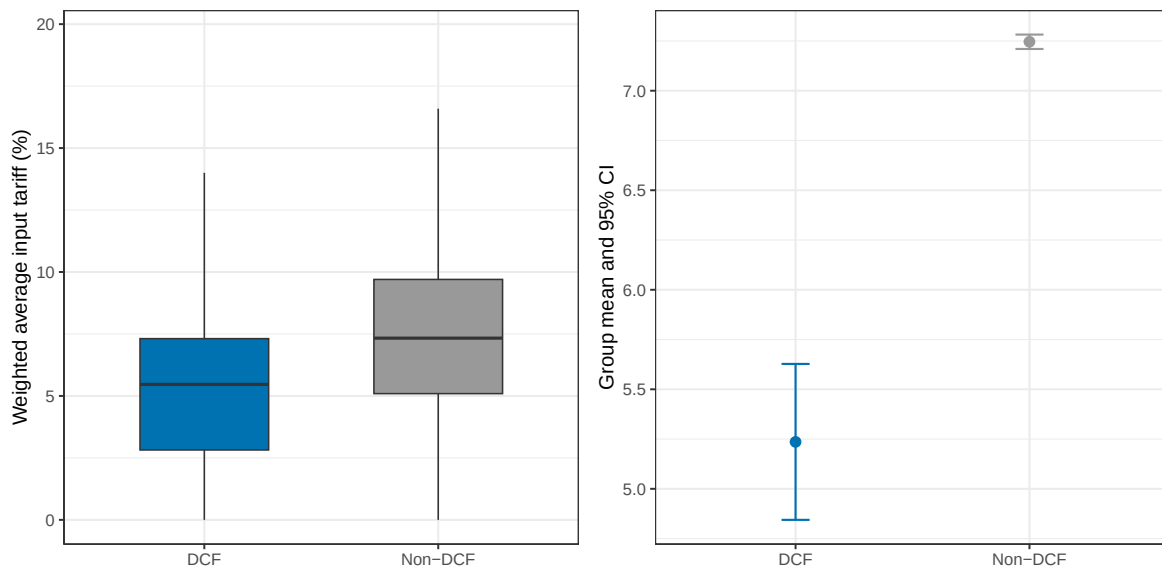


Figure 4: Firm-Level Input Tariffs by Direct-Control Status

Notes: The left panel compares the distributions of weighted input tariffs for DCFs and non-DCF. Boxes show the interquartile range, and horizontal lines mark medians. Tariffs below the first and above the ninety-ninth percentile are winsorized. The right panel reports group means with 95 percent confidence intervals. The figure uses all customs regimes. Import baskets are measured in 2000 and evaluated at 2007 MFN rates.

To show how this difference changes across tariff schedules, I apply each firm’s fixed 2000 ordinary-trade basket to annual MFN rates from 1998 through 2011. Average input tariffs fall from 12.60 to 5.80 percent for DCFs and from 14.89 to 7.32 percent for non-DCF. The raw gap is therefore present before accession and narrows from 2.29 to 1.52 percentage points over the period. Because product weights remain fixed, these changes reflect tariff schedules rather than changes in firms’ import composition. Appendix Figure A3 plots the full annual series.

The conditional 2007 level difference also survives adjustment for ownership and importer characteristics. Figure 5 plots an additive specification containing direct-control, SOE, and FIE indicators. In the corresponding model with ownership controls, HS2 fixed effects, and province fixed effects, DCFs face input tariffs 0.945 percentage points lower than other firms. Replacing the separate fixed effects with HS2-by-province cells yields a 1.003-point difference. A direct comparison within the state sector gives the same pattern: state-owned DCFs face tariffs 0.797 points below local SOEs after province adjustment. Appendix Tables A10 and A11 report these specifications.

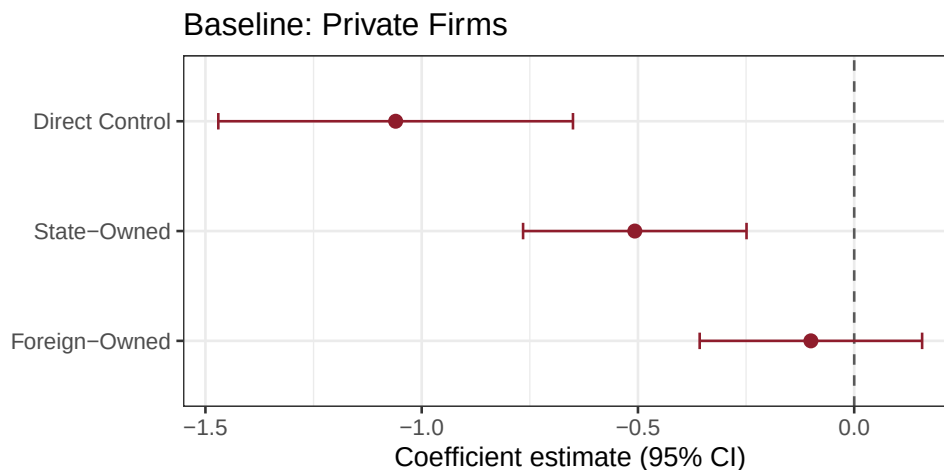


Figure 5: Conditional Differences in 2007 Input Tariffs by Firm Type

Notes: Points and 95 percent confidence intervals come from an additive firm-level regression of the weighted 2007 input tariff on direct-control, SOE, and FIE indicators, importer controls, and two-digit industry fixed effects. Standard errors are clustered by the six-digit category of the firm’s highest-value import. Because direct control overlaps the ownership indicators, its coefficient is the conditional DCF difference under a common-effect restriction, not a separate within-ownership interaction.

Table 5 makes the baseline adjustment explicit. Firms with higher initial basket tariffs mechanically have more scope for subsequent cuts, so controlling for the 2000 tariff separates differences in starting protection from differences in the allocation of liberalization. Column 1 uses a linear adjustment for the 2000 basket tariff and estimates a DCF difference of 0.471 points. Column 2 uses the preferred flexible adjustment and yields 0.385 points, about 6 percent of the mean firm-level cut. Adjusting for observed selection into the balanced panel raises the estimate to 0.841 points ($p < 0.05$), reinforcing the positive firm-level association. Appendix Table A13 reports the selection-adjusted estimate.

The grouped model combines the 97 central SOEs and 101 centrally affiliated FIEs into one direct-control category and uses ordinary FIEs as the reference group. Relative to ordinary FIEs, private firms have a 0.099-point larger tariff reduction ($p = 0.325$), direct-control firms have a 0.501-point larger reduction ($p = 0.022$), and local SOEs have a 0.493-point larger reduction ($p < 0.001$). For the extensive-margin IDR outcome, private firms are 14.9 percentage points less likely to have at least one IDR product in the basket ($p < 0.001$), direct-control firms are 6.0 percentage points more likely ($p = 0.026$), and local SOEs are 4.1 percentage points less likely ($p < 0.001$). Column 4 is estimated as a linear-probability model. These grouped comparisons use 19,395 observations and firm-clustered standard errors.

Table 5: Administrative Affiliation, Ownership, and Fixed-Basket Tariff Allocation

Outcome	(1) Tariff cut	(2) Tariff cut	(3) Tariff cut	(4) Any IDR product
Direct control	0.471** (0.226)	0.385* (0.220)	0.501** (0.218)	0.060** (0.027)
2000 tariff	0.743*** (0.050)			
Private			0.099 (0.100)	−0.149*** (0.014)
Local SOE			0.493*** (0.060)	−0.041*** (0.010)
Importer controls	Yes	Yes	Yes	Yes
Top-import HS2 FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Linear 2000 tariff	Yes	No	No	No
Flexible 2000 tariff	No	Yes	Yes	Yes
Firm specification	Binary	Binary	Grouped	Grouped
Num. obs.	19,396	19,396	19,395	19,395

Positive tariff-cut coefficients indicate larger 2000–2007 reductions. Column 4 is a linear-probability model for whether the firm’s 2000 import basket contains at least one IDR product. Its coefficients are probability differences. Columns 1–2 use the binary central-roster indicator. Columns 3–4 use grouped ownership categories, restrict the direct-control group to central SOEs and centrally affiliated FIEs, and use ordinary FIEs as the reference category. The reported private, direct-control, and local-SOE coefficients are therefore relative to ordinary FIEs. Columns 1–3 use the percentage-point tariff-cut outcome. All outcomes use ordinary-trade fixed baskets. Importer controls are 2000 import value, number of imported products, OECD sourcing, and weighted product-market share. Flexible specifications use a four-degree-of-freedom natural spline in the weighted 2000 tariff. Standard errors in columns 1–2 are clustered by the HS6 category of the firm’s highest-value 2000 import. Columns 3–4 cluster by firm. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

6.4 Additional Robustness

Appendix Table A7 summarizes the main alternative explanations and the evidence used to evaluate them. Appendix Figure A1 shows that the product-level coefficient remains positive as the specification moves from linear to flexible adjustment for the 2000 tariff and then adds importer and producer controls. The estimate is also stable when the most DCF-exposed products, products led by a DCF, products with a DCF among the three largest importers, and the most state-producer-intensive sectors are excluded (Appendix Table A8). The leave-one-sector-out estimates are positive for every displayed HS2 exclusion (Appendix Figure A2).

The result is not driven by processing trade or sourcing from China’s major negotiating partners. Reconstructing exposure from ordinary-trade transactions preserves the positive coefficient, as does restricting the sample to imported intermediate inputs. Adding the share supplied by the United States, European Union, and Japan leaves those estimates essentially unchanged (Appendix Table A9). Product-level controls for the geographic concentration of import demand and the ownership composition of domestic producers also leave the preferred estimate nearly unchanged (Appendix Table A12). At the firm level, the 2007 tariff difference persists after ownership and export-status controls, province fixed effects, HS2-by-province comparisons, and direct comparisons with local SOEs (Appendix Tables A10 and A11). Adjusting for observed sample selection raises the firm estimate from 0.385 to 0.841, while leaving the product estimate close to its preferred value (Appendix Table A13).

Additional tests examine functional form and outcome definition. The nonlinear estimates are largest among products with the greatest DCF demand (Appendix Figure A4), and all ten estimates in the product specification curve are positive (Appendix Figure A5). The product association persists through the 2003, 2005, and 2007 endpoints and under proportional and logarithmic tariff changes (Appendix Table A14). Finally, DCF export exposure is close to zero while the import-exposure coefficient remains positive when both enter together (Appendix Table A15).

7 Conclusion

China’s WTO accession sharply reduced average protection but left discretion over interim duties and product-level applied cuts. Conditional on initial tariffs, import demand, sourcing, producer characteristics, and product-family fixed effects, greater pre-accession imports by centrally affiliated firms are associated with a higher probability of interim-duty treatment and larger tariff cuts. The firm-level evidence reinforces this pattern: DCF import baskets are more likely to contain interim-duty products. Records and interviews provide supporting evidence for the underlying mechanism, showing how central principals validated technical requests and routed them into national review.

China is a particularly revealing setting because WTO commitments constrained average protection without eliminating product-level discretion. Tariff decisions remained centralized, and firms seeking tariff relief had to move technical petitions through a congested review process. In this setting, administrative ties shaped whose requests reached national decision makers: public principals responsible for affiliated firms’ performance could sponsor claims for the differentiated imported inputs those firms needed. The argument therefore travels most readily to other GVC-intensive state-capitalist systems in which trade commitments leave room for product-level adjustment and public principals can help firms navigate centralized tariff institutions. Vietnam is one plausible comparison because its WTO accession produced a major trade reform in an economy with a prominent state-owned sector (Baccini, Impullitti, et al., 2019). It offers less leverage in commodity-exporting economies where trade politics revolves around a small number of primary sectors or broad export rents. More generally, the mechanism weakens when one of its two essential links breaks. When binding commitments eliminate discretion, there is little policy space to influence. When petition procedures equalize access or authority is dispersed, administrative sponsorship provides less advantage.

One distributive implication follows. A tariff cut advanced through privileged access applies to every importer of the product, while domestic producers face stronger competition and firms using untreated inputs receive less tariff relief. Administrative access can therefore

shape winners and losers even though the statutory tariff is not firm-specific. A comparative perspective suggests that similar firm preferences can be translated into policy through different organizational routes. In hierarchical systems, firms can convert administrative position into access through public principals. In systems with open petitioning and competitive representation, the same demands are more likely to be aggregated through industry associations, coalitions, or direct lobbying. The relevant contrast is therefore not simply between state and private ownership but between institutions that organize firms' access to trade policymakers in different ways.

References

- Aidt, Toke S. and Martin Gassebner (2010). “Do Autocratic States Trade Less?” *The World Bank Economic Review* 24(1): 38–76.
- Amiti, Mary and Jozef Konings (2007). “Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia”. *American Economic Review* 97(5): 1611–1638.
- Autor, David H, David Dorn, and Gordon H Hanson (2013). “The China Syndrome: Local Labor Market Effects of Import Competition in the United States”. *American Economic Review* 103(6): 2121–2168.
- Baccini, Leonardo and Wilfred M. Chow (2018). “The Politics of Preferential Trade Liberalization in Authoritarian Countries”. *International Interactions* 44(2): 189–216.
- Baccini, Leonardo, Andreas Dür, and Manfred Elsig (2018). “Intra-Industry Trade, Global Value Chains, and Preferential Tariff Liberalization”. *International Studies Quarterly* 62(2): 329–340.
- Baccini, Leonardo, Giammario Impullitti, and Edmund J. Malesky (2019). “Globalization and State Capitalism: Assessing Vietnam’s Accession to the WTO”. *Journal of International Economics* 119: 75–92.
- Betz, Timm (2017). “Trading Interests: Domestic Institutions, International Negotiations, and the Politics of Trade”. *The Journal of Politics* 79(4): 1237–1252.
- Blanchard, Emily J. and Xenia Matschke (2015). “U.S. Multinationals and Preferential Market Access”. *The Review of Economics and Statistics* 97(4): 839–854.
- Bolton, Patrick and Mathias Dewatripont (1994). “The Firm as a Communication Network”. *Quarterly Journal of Economics* 109(4): 809–839.
- Bombardini, Matilde (2008). “Firm Heterogeneity and Lobby Participation”. *Journal of International Economics* 75(2): 329–348.
- Bown, Chad P., Aksel Erbahar, and Maurizio Zanardi (2021). “Global Value Chains and the Removal of Trade Protection”. *European Economic Review* 140: 103937.

- Brandt, Loren, Johannes Van Biesebroeck, Luhang Wang, and Yifan Zhang (2017). “WTO Accession and Performance of Chinese Manufacturing Firms”. *American Economic Review* 107(9): 2784–2820.
- Dasgupta, Aditya and Devesh Kapur (2020). “The Political Economy of Bureaucratic Overload: Evidence from Rural Development Officials in India”. *American Political Science Review* 114(4): 1316–1334.
- Deng, Guosheng and Scott Kennedy (2010). “Big Business and Industry Association Lobbying in China: The Paradox of Contrasting Styles”. *The China Journal* 63: 101–125.
- Dewatripont, Mathias and Jean Tirole (1999). “Advocates”. *Journal of Political Economy* 107(1): 1–39.
- Dix-Carneiro, Rafael and Brian K. Kovak (2017). “Trade Liberalization and Regional Dynamics”. *American Economic Review* 107(10): 2908–2946.
- Eckhardt, Jappe (2013). “EU Unilateral Trade Policy-Making: What Role for Import-Dependent Firms?” *JCMS: Journal of Common Market Studies* 51(6): 989–1005.
- Eldes, Ayse, Jieun Lee, and Iain Osgood (2026). “Trade Lobbying Works (for Big Firms): Evidence from the China Trade War”. *Business and Politics* 28(2): 284–318.
- Evans, Peter B. (1995). *Embedded Autonomy: States and Industrial Transformation*. Princeton, NJ: Princeton University Press.
- Feng, Hui (2006). *The Politics of China’s Accession to the World Trade Organization: The Dragon Goes Global*. London: Routledge.
- Fotak, Veljko, Hye Seung (Grace) Lee, William L. Megginson, and Jesus M. Salas (2025). “The Political Economy of Tariff Exemption Grants”. *Journal of Financial and Quantitative Analysis* 60(6): 2678–2717.
- Garicano, Luis (2000). “Hierarchies and the Organization of Knowledge in Production”. *Journal of Political Economy* 108(5): 874–904.
- General Office of the State Council of the People’s Republic of China (1998). *Notice on the Main Responsibilities and List of Members of the State Council Tariff Commis-*

- sion. Guobanfa [1998] No. 143. Issued 30 November 1998; official government-bulletin reproduction.
- Gilligan, Michael J. (1997). *Empowering Exporters: Reciprocity, Delegation, and Collective Action in American Trade Policy*. Ann Arbor: University of Michigan Press.
- Goldberg, Pinelopi Koujianou, Amit Kumar Khandelwal, Nina Pavcnik, and Petia Topalova (2010). “Imported Intermediate Inputs and Domestic Product Growth: Evidence from India”. *The Quarterly Journal of Economics* 125(4): 1727–1767.
- Goldberg, Pinelopi Koujianou and Nina Pavcnik (2007). “Distributional Effects of Globalization in Developing Countries”. *Journal of Economic Literature* 45(1): 39–82.
- Gordon, Roger H. and Wei Li (2012). “Provincial and Local Governments in China: Fiscal Institutions and Government Behavior”. In: *Capitalizing China*. Ed. by Joseph P. H. Fan and Randall Morck. National Bureau of Economic Research Conference Report. Chicago: University of Chicago Press, pp. 337–369.
- Gowa, Joanne and Soo Yeon Kim (2005). “An Exclusive Country Club: The Effects of the GATT on Trade, 1950–94”. *World Politics* 57(4): 453–478.
- Grossman, Gene M. and Elhanan Helpman (1994). “Protection for Sale”. *The American Economic Review* 84(4): 833–850.
- Grossman, Gene M. and Elhanan Helpman (2001). *Special Interest Politics*. Cambridge, MA: MIT Press.
- Guimbard, Houssein, Sébastien Jean, Mondher Mimouni, and Xavier Pichot (2012). “MAcMap-HS6 2007, An exhaustive and consistent measure of applied protection in 2007”. *International Economics* 130: 99–121.
- Guo, Di, Kun Jiang, Byung-Yeon Kim, and Chenggang Xu (2014). “Political Economy of Private Firms in China”. *Journal of Comparative Economics* 42(2): 286–303.
- Hall, Richard L. and Alan V. Deardorff (2006). “Lobbying as Legislative Subsidy”. *American Political Science Review* 100(1): 69–84.

- Halpern, László, Miklós Koren, and Adam Szeidl (2015). “Imported Inputs and Productivity”. *American Economic Review* 105(12): 3660–3703.
- Han, Chaohua, Xiaojun Li, and Jean C. Oi (2022). “Firms as Revenue Safety Nets: Political Connections and Returns to the Chinese State”. *The China Quarterly* 251: 683–704.
- Hankla, Charles R. (2006). “Party Strength and International Trade: A Cross-National Analysis”. *Comparative Political Studies* 39(9): 1133–1156.
- Hankla, Charles R. and Daniel Kuthy (2013). “Economic Liberalism in Illiberal Regimes: Authoritarian Variation and the Political Economy of Trade”. *International Studies Quarterly* 57(3): 492–504.
- Hillman, Arye L. (1982). “Declining Industries and Political-Support Protectionist Motives”. *The American Economic Review* 72(5): 1180–1187.
- Hiscox, Michael J. (2001). “Class Versus Industry Cleavages: Inter-Industry Factor Mobility and the Politics of Trade”. *International Organization* 55(1): 1–46.
- Hollyer, James R. and B. Peter Rosendorff (2012). “Leadership Survival, Regime Type, Policy Uncertainty and PTA Accession”. *International Studies Quarterly* 56(4): 748–764.
- Hong, Chang (2013). “The Political Economy of Tariff Protection in China: Evidence from the WTO Accession”. *Canadian Journal of Economics/Revue canadienne d’économique* 46(4): 1295–1316.
- Hsieh, Chang-Tai and Zheng Song (2015). “Grasp the Large, Let Go of the Small: The Transformation of the State Sector in China”. *Brookings Papers on Economic Activity* 2015(1): 295–366.
- Jensen, J. Bradford, Dennis P. Quinn, and Stephen Weymouth (2015). “The Influence of Firm Global Supply Chains and Foreign Currency Undervaluations on US Trade Disputes”. *International Organization* 69(4): 913–947.
- Jiang, Junyan (2018). “Making Bureaucracy Work: Patronage Networks, Performance Incentives, and Economic Development in China”. *American Journal of Political Science* 62(4): 982–999.

- Kennedy, Scott (2005). “China’s Porous Protectionism: The Changing Political Economy of Trade Policy”. *Political Science Quarterly* 120(3): 407–432.
- Kim, In Song (2017). “Political Cleavages within Industry: Firm-level Lobbying for Trade Liberalization”. *American Political Science Review* 111(1): 1–20.
- Kim, In Song and Iain Osgood (2019). “Firms in Trade and Trade Politics”. *Annual Review of Political Science* 22(1): 399–417.
- Kim, Sung Eun and Yotam Margalit (2021). “Tariffs As Electoral Weapons: The Political Geography of the US–China Trade War”. *International Organization* 75(1): 1–38.
- Kono, Daniel Y. (2006). “Optimal Obfuscation: Democracy and Trade Policy Transparency”. *American Political Science Review* 100(3): 369–384.
- Landry, Pierre F. (2008). *Decentralized Authoritarianism in China: The Communist Party’s Control of Local Elites in the Post-Mao Era*. Cambridge: Cambridge University Press.
- Lee, Jieun and Iain Osgood (2022). “Protection Forestall: Offshore Firms against Tariffs in Their Own Industry”. *Business and Politics* 24(4): 377–398.
- Ljungwall, Christer (2006). “Export-led Growth: Application to China’s Provinces, 1978–2001”. *Journal of Chinese Economic and Business Studies* 4(2): 109–126.
- Ludema, Rodney D., Anna Maria Mayda, and Prachi Mishra (2018). “Information and Legislative Bargaining: The Political Economy of U.S. Tariff Suspensions”. *The Review of Economics and Statistics* 100(2): 303–318.
- Magee, Christopher (2002). “Endogenous Trade Policy and Lobby Formation: An Application to the Free-Rider Problem”. *Journal of International Economics* 57(2): 449–471.
- Maggi, Giovanni and Andrés Rodríguez-Clare (2007). “A Political-Economy Theory of Trade Agreements”. *American Economic Review* 97(4): 1374–1406.
- Mansfield, Edward D., Helen V. Milner, and B. Peter Rosendorff (2000). “Free to Trade: Democracies, Autocracies, and International Trade”. *The American Political Science Review* 94(2): 305–321.

- Mansfield, Edward D., Helen V. Milner, and B. Peter Rosendorff (2002). “Why Democracies Cooperate More: Electoral Control and International Trade Agreements”. *International Organization* 56(3): 477–513.
- Mertha, Andrew (2009). “Fragmented Authoritarianism 2.0: Political Pluralization in the Chinese Policy Process”. *China Quarterly* 200: 995–1012.
- Milner, Helen V. (1988a). *Resisting Protectionism: Global Industries and the Politics of International Trade*. Princeton, NJ: Princeton University Press.
- Milner, Helen V. (1988b). “Trading Places: Industries for Free Trade”. *World Politics* 40(3): 350–376.
- Milner, Helen V. (1997). *Interests, Institutions, and Information: Domestic Politics and International Relations*. Princeton, NJ: Princeton University Press.
- Mosher, Frederick C. (1968). *Democracy and the Public Service*. New York: Oxford University Press.
- News Office, Ministry of Finance of the People’s Republic of China (2006). *China to Adjust the Import and Export Tariff Schedule from 1 January 2007*. Published 26 December 2006.
- Nielson, Daniel L. (2003). “Supplying Trade Reform: Political Institutions and Liberalization in Middle-Income Presidential Democracies”. *American Journal of Political Science* 47(3): 470–491.
- Oi, Jean C. (1992). “Fiscal Reform and the Economic Foundations of Local State Corporatism in China”. *World Politics* 45(1): 99–126.
- Osgood, Iain (2016). “Differentiated Products, Divided Industries: Firm Preferences over Trade Liberalization”. *Economics & Politics* 28(2): 161–180.
- Osgood, Iain (2018). “Globalizing the Supply Chain: Firm and Industrial Support for US Trade Agreements”. *International Organization* 72(2): 455–484.
- Panagariya, Arvind and Dani Rodrik (1993). “Political-Economy Arguments for a Uniform Tariff”. *International Economic Review* 34(3): 685–703.

- Pearson, Margaret M. (2001). “The Case of China’s Accession to GATT/WTO”. In: *The Making of Chinese Foreign and Security Policy in the Era of Reform*. Ed. by David M. Lampton. Stanford, CA: Stanford University Press, pp. 337–370.
- Pelc, Krzysztof J. (2011). “Why Do Some Countries Get Better WTO Accession Terms Than Others?” *International Organization* 65(4): 639–672.
- Plouffe, Michael (2017). “Firm Heterogeneity and Trade-Policy Stances: Evidence from a Survey of Japanese Producers”. *Business and Politics* 19(1): 1–40.
- Postnikov, Evgeny and Jonas Gamso (2024). “The Design of Autocratic Trade Agreements: Economic Integration and Political Survival”. *International Studies Quarterly* 69(1): sqae152.
- Queralt, Didac (2017). “Protection Not for Sale, But for Tax Compliance”. *International Studies Quarterly* 61(3): 631–641.
- Rodrigues Vieira, Vinícius (2017). “Blended Diplomacy: Institutional Design and Brazil’s National Interest in Trade”. *Rising Powers Quarterly* 2(2): 31–53.
- Rodrigues Vieira, Vinícius (2021). *Domestic Institutional Design and the National Interest in Trade Negotiations*. Working Paper. APSA Preprints.
- Rodrigues Vieira, Vinícius Guilherme (2024). *Shaping Nations and Markets: Identity Capital, Trade, and the Populist Rage*. Routledge Studies in Nationalism and Ethnicity. Abingdon: Routledge.
- Rogowski, Ronald and Mark Andreas Kayser (2002). “Majoritarian Electoral Systems and Consumer Power: Price-Level Evidence from the OECD Countries”. *American Journal of Political Science* 46(3): 526–539.
- State Council Tariff Commission (2006). *Notice of the State Council Tariff Commission on Adjusting Interim Import and Export Tariff Rates for Certain Commodities*. State Council Tariff Commission Document [2006] No. 30. Published 27 October 2006.

- Steinberg, David A. and Victor C. Shih (2012). “Interest Group Influence in Authoritarian States: The Political Determinants of Chinese Exchange Rate Policy”. *Comparative Political Studies* 45(11): 1405–1434.
- Tan, Yeling (2020). “Disaggregating “China, Inc.”: The Hierarchical Politics of WTO Entry”. *Comparative Political Studies* 53(13): 2118–2152.
- Tan, Yeling and Christina L Davis (2023). “The Limits of Liberalization: WTO Entry and Chinese State-Owned Firms”. *International Studies Quarterly* 67(3): sqad056.
- Topalova, Petia (2010). “Factor Immobility and Regional Impacts of Trade Liberalization: Evidence on Poverty from India”. *American Economic Journal: Applied Economics* 2(4): 1–41.
- World Trade Organization (2001a). *Schedule CLII—People’s Republic of China (Part I—Schedule of Concessions and Commitments on Goods)*. WT/ACC/CHN/49/Add.1. Dated 1 October 2001; in force following China’s accession in December 2001.
- World Trade Organization (2001b). *WTO Successfully Concludes Negotiations on China’s Entry*. Press/243. Issued 17 September 2001.
- World Trade Organization (2018). *Trade Policy Review: China*. WT/TPR/S/375. Summary report issued in 2018.
- Wu, Wen-Chin (2015). “When do Dictators Decide to Liberalize Trade Regimes? Inequality and Trade Openness in Authoritarian Countries”. *International Studies Quarterly* 59(4): 790–801.
- Wu, Wen-Chin (2020). “Rethinking Coalition Size and Trade Policies in Authoritarian Regimes: Are Single-Party Dictatorships Less Protectionist?” *Party Politics* 26(2): 143–153.
- Xu, Chenggang (2011). “The Fundamental Institutions of China’s Reforms and Development”. *Journal of Economic Literature* 49(4): 1076–1151.
- Yang, Guohua and Jin Cheng (2001). “The Process of China’s Accession to the WTO”. *Journal of International Economic Law* 4(2): 297–328.

- Yu, Miaojie (2015). “Processing Trade, Tariff Reductions and Firm Productivity: Evidence from Chinese Firms”. *The Economic Journal* 125(585): 943–988.
- Zeng, Ka, ed. (2007). *China’s Foreign Trade Policy: The New Constituencies*. London: Routledge.
- Zhang, Hongyong (2018). “Political Connections and Antidumping Investigations: Evidence from China”. *China Economic Review* 50: 34–41.
- Zhang, Qing and Bruce Felmingham (2001). “The Relationship between Inward Direct Foreign Investment and China’s Provincial Export Trade”. *China Economic Review* 12(1): 82–99.
- Zissimos, Ben (2017). “A Theory of Trade Policy under Dictatorship and Democratization”. *Journal of International Economics* 109: 85–101.

Appendix Contents

A	Illustration of China’s Tariff Schedule	53
B	Data Construction and Direct-Control Measurement	54
B.1	Sample construction and linkage	54
B.2	Administrative-affiliation source and coding rules	56
B.3	Imported-input scope and construct validation	56
C	Robustness and Alternative Explanations	59
C.1	Summary of rival explanations	59
C.2	Specification sequence for tariff reductions	59
C.3	Product-level influence and sector concentration	61
C.4	Trade regime, intermediate inputs, and principal suppliers	62
C.5	Administrative affiliation versus ownership	64
C.6	Importer geography and output-side producer interests	66
C.7	Sample selection	66
C.8	Fixed-basket tariff paths	67
C.9	Exposure nonlinearity and specification stability	68
C.10	Alternative horizons and outcome definitions	71
C.11	Export exposure as a negative-control exposure	71

A Illustration of China’s Tariff Schedule

Table A1 reproduces sample entries from China’s 2020 national tariff schedule. It shows the HS8 granularity and the schedule’s main rate columns. The 2020 schedule postdates the empirical period. The analysis uses tariff schedules through 2007.

Table A1: Sample Tariff Lines from China’s 2020 Tariff Schedule

Product	HS8	MFN (%)	2020 IDR (%)	Conventional duty by partner (%)	Preferential duty (%)	General (%)
Cashew nuts, shelled	08013200	10	7	0: ASEAN, Chile, New Zealand, Peru, Switzerland, Iceland, Australia, Hong Kong, Macau, and Georgia; 3.3: Costa Rica; 4: South Korea; 4.5: Pakistan	0: Cambodia, Myanmar, and other designated LDCs	70
Chinese chestnuts, shelled	08024210	25	—	0: ASEAN, Chile, New Zealand, Peru, Iceland, Australia, Hong Kong, Macau, and Georgia; 7.5: Switzerland; 8.3: Costa Rica; 17.5: South Korea	0: designated LDCs	70
Winding wire of copper	85441100	10	6	0: ASEAN, Singapore, Chile, New Zealand, Peru, Costa Rica, Iceland, Australia, Hong Kong, Macau, and Georgia; 6: Switzerland; 14: South Korea; 20: Pakistan	0: designated LDCs	70
Co-axial cable and conductors	85442000	10	—	0: ASEAN, Singapore, Pakistan, Chile, New Zealand, Peru, Costa Rica, Iceland, Australia, Hong Kong, Macau, Taiwan, and Georgia; 5.3: Switzerland; 4: South Korea; 6.5: Asia–Pacific	0: designated LDCs	20
Diesel engines for cars (≥ 50 kW)	84082090	25	20	0: Chile, New Zealand, Costa Rica, Iceland, Australia, Hong Kong, Macau, Taiwan, and Georgia; 5: ASEAN; 17.5: Asia–Pacific, Pakistan, and South Korea	0: designated LDCs	35
Saloon cars (> 4 L)	87035071	15	—	0: ASEAN, Singapore, Chile, New Zealand, Costa Rica, Iceland, Australia, Hong Kong, Macau, and Georgia; 13.5: Asia–Pacific; 22.5: Pakistan	0: designated LDCs	270

Notes: Rates are percentages. A dash indicates that the product has no interim duty rate, so the regular MFN rate applies unless a lower partner-specific rate is available. Conventional and preferential cells list the rate followed by the eligible partners. The table omits anti-dumping and countervailing duties and country-specific measures introduced during the U.S.–China trade conflict.

Source: China’s 2020 national tariff schedule, compiled by the author.

B Data Construction and Direct-Control Measurement

This appendix documents the samples and measures used in the empirical analysis and then reports construct-validity checks. The order follows the data and measurement section of the main text.

B.1 Sample construction and linkage

Table A2 distinguishes the source universes from the one-to-one customs–ASMF linkage. The ASMF and customs rows draw parallel samples from separate source populations. Table A3 then shows the additional coverage requirements for the ordinary-trade fixed-basket panel used in the firm-level tariff-cut analysis.

Table A2: Sample Construction and Direct-Control Firm Counts

Sample or linkage stage	All firms	DCFs
ASMF 2000: all manufacturing firms	144,949	
ASMF 2000: direct-control firms (administrative-subordination code, SUB-ORD = 10)		3,404
Customs 2000: cleaned importers with positive imports	39,164	283
One-to-one customs–ASMF entity matches with consistent DCF flags	7,123	214
Constant accounting-regression sample	7,121	214

The ASMF and customs rows are parallel source samples, not sequential attrition from a common universe. The customs sample applies the name cleaning, trading-company exclusion, tariff-rate-quota exclusion, and parent-name consolidation described in the text. The linkage retains only customs names and ASMF identifiers that each appear once, requires the customs and ASMF direct-control flags to agree, and then holds the complete-control sample constant across columns.

Table A3: Coverage of the Ordinary-Trade Fixed-Basket Panel

Group	Baseline firms	Exact-name firms	Balanced-panel firms	Firm retention (%)	Import-value coverage (%)
All firms	39,164	19,559	19,397	49.5	68.7
DCF	283	202	199	70.3	58.0
Non-DCF	38,881	19,357	19,198	49.4	69.1

Exact-name firms match the cleaned ordinary-trade transaction file to the processed firm roster. Balanced-panel firms also import at least one HS6 product with tariffs observed in every year from 1998 through 2011. Import-value coverage is calculated within the exact-name-matched ordinary-trade basket.

B.2 Administrative-affiliation source and coding rules

The primary roster matches cleaned customs names to firms recorded in the 2000 ASMF whose administrative affiliation is with the central government. Customs legal status is then used to separate centrally affiliated state-owned and foreign-invested firms. The resulting measure captures administrative position separately from state ownership.

Table A4: Operational Coding Protocol for Direct Control

Issue	Operational rule
Administrative affiliation	Code a firm as centrally affiliated when its administrative affiliation is with the central government.
Central SOE	Require central affiliation and customs-classified state ownership.
Central FIE	Require central affiliation and a customs foreign-invested category.
Local SOE	Require customs-classified state ownership without central affiliation.
Parent and name variants	The administrative principal is provincial or lower level. Standardize firm names and consolidate documented parent-name variants before attaching tariff outcomes.
One-to-one linkage	Retain unique customs names and ASMF identifiers with consistent direct-control flags for accounting-based validation.
Narrow definitions	Re-estimate results separately for state-owned and non-state-owned roster firms. Exclude all other roster firms from these tests.

B.3 Imported-input scope and construct validation

Table A5 shows where DCF demand appears in the ordinary-trade customs data. DCFs account for 3.6 percent of matched import value and appear on 23.9 percent of HS8 lines, but lead only 1.8 percent of lines.

Table A5: Direct-Control Firms in Ordinary-Trade Imports, 2000

Statistic	DCF value/count	Relevant total	Share (%)
DCF share of total import value			3.6
HS8 lines with any DCF imports	1,410	5,900	23.9
HS8 lines led by a DCF	109	5,900	1.8
HS8 lines with a DCF among the top three	277	5,900	4.7
Exact-name-match import-value coverage			94.3

Every statistic uses ordinary-trade transactions (customs trade mode 10) that match exactly to the final firm-name file. The final row reports exact-name-match coverage of ordinary-trade import value. The source file already applies the trading-company and tariff-rate-quota exclusions used in its archived construction.

Table A6 reports firm-level intermediate-input demand by administrative and ownership category. Intermediate inputs constitute a majority of ordinary-import value in every category. Firms across the categories therefore rely heavily on imported inputs, and intermediate goods generally dominate the ordinary imports of Chinese manufacturing firms in the linked sample. After adjusting for log sales, production-industry fixed effects, and province fixed effects, neither the central-SOE/local-SOE nor the central-FIE/ordinary-FIE contrast is statistically different from zero for the intermediate share or for intermediate imports relative to sales. Reliance on imported inputs is therefore broadly shared rather than unique to centrally affiliated firms. The policy tests use observed product demand and reserve direct control for administrative affiliation.

Products are classified with the United Nations Statistics Division's HS1996-to-BEC concordance. BEC codes 321, 51, and 7 remain unassigned because their end use is ambiguous. I calculate each firm's intermediate share among positive ordinary imports and then take the unweighted mean across firms.

Table A6: Imported-Intermediate Demand by Administrative and Ownership Category

<i>Panel A. Descriptive statistics</i>						
Category	<i>N</i>	Share <i>N</i>	Any (%)	II/imports (%)	II/ <i>S</i> (%)	HS6 lines
Central SOE	123	84	65.0	64.3	2.42	5.4
Local SOE	607	598	88.3	69.0	3.25	5.7
Central FIE	91	88	92.3	77.8	10.74	19.4
Ordinary FIE	5,899	5,896	94.0	79.8	7.04	10.9
Private	403	402	80.9	65.0	2.17	2.1
<i>Panel B. Adjusted within-ownership contrasts</i>						
Contrast			II/imports (pp)	II/ <i>S</i> (pp)	Log HS6 scope	
Central SOE – local SOE			–3.150 (4.926)	–1.693 (1.145)	–0.447*** (0.130)	
Central FIE – ordinary FIE			–3.545 (3.587)	1.345 (1.687)	–0.056 (0.120)	
Observations			7,065	7,121	7,121	
Log sales			Yes	Yes	Yes	
Production-industry FE			Yes	Yes	Yes	
Province FE			Yes	Yes	Yes	

Notes: The sample is the one-to-one customs–ASMF linkage. Intermediate-input imports (II) denote 2000 ordinary-trade imports classified as intermediate inputs using the UN HS1996-to-BEC concordance; *S* denotes 2000 ASMF sales. For each firm with positive ordinary imports, II/imports divides its intermediate-import value by its total ordinary-import value; Panel A then takes the unweighted mean of those firm-level shares. Share *N* reports the number of valid firm denominators. The other outcomes retain the full linked sample. Panel B reports linear-model contrasts from a common specification with log sales, production-industry fixed effects, and province fixed effects. Its outcomes are the firm-level intermediate-import share in percentage points, the intermediate-import-to-sales ratio in percentage points winsorized at the first and ninety-ninth percentiles, and $\log(1 + \text{imported intermediate HS6 lines})$. Standard errors, in parentheses, are clustered by the firm’s top-import HS6 category. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

C Robustness and Alternative Explanations

The remaining diagnostics assess threats to the paper’s descriptive allocation claim: influence, trade regime, ownership, geography, functional form, selection, and correlated firm portfolios. These exercises gauge the stability and scope of the reported associations. Causal identification lies outside their scope.

C.1 Summary of rival explanations

Table A7: Rival Explanations, Diagnostic Checks, and Evidentiary Limits

Rival explanation	Diagnostic check	Calibrated inference
DCFs are simply larger	Size controls and exclusions of the largest firms or most DCF-exposed products	The product coefficient retains its sign, although other differences associated with firm importance remain unresolved.
DCFs are merely SOEs	Ownership controls and direct comparisons with local SOEs	The conditional 2007 firm-level tariff difference persists after broad ownership controls and within direct comparisons with local SOEs.
Favored sectors drive the result	Product-family fixed effects, sector exclusions, and leave-one-HS2-out estimates	The product coefficient remains positive across exclusions. The firm estimate is sensitive to major machinery sectors.
Favored provinces drive the result	Province fixed effects and within-province firm comparisons	Province controls absorb common regional differences. unobserved firm-level advantages within provinces remain possible.
WTO bargaining determines tariffs	Baseline-tariff, sourcing, and principal-supplier controls	The ordinary-trade 2007 association remains negative, but the available data lack a direct tariff-line measure of policy space relative to negotiated bindings.
Processing trade drives exposure	Ordinary-trade firm analysis and a mode-10 product check	The ordinary-trade association persists. The main product change file nevertheless combines customs regimes.
Ceiling effects generate larger cuts	Flexible controls for the 2000 tariff and models of levels and changes	The product coefficient remains after flexible baseline adjustment, but its magnitude changes materially when starting protection enters.

C.2 Specification sequence for tariff reductions

Figure A1 summarizes the tariff-cut specifications reported in the main text. The firm panel compares linear and flexible adjustments for the 2000 basket tariff. The product panel moves from a linear to a flexible baseline adjustment, then adds importer and producer controls. Every plotted estimate therefore conditions on starting protection.

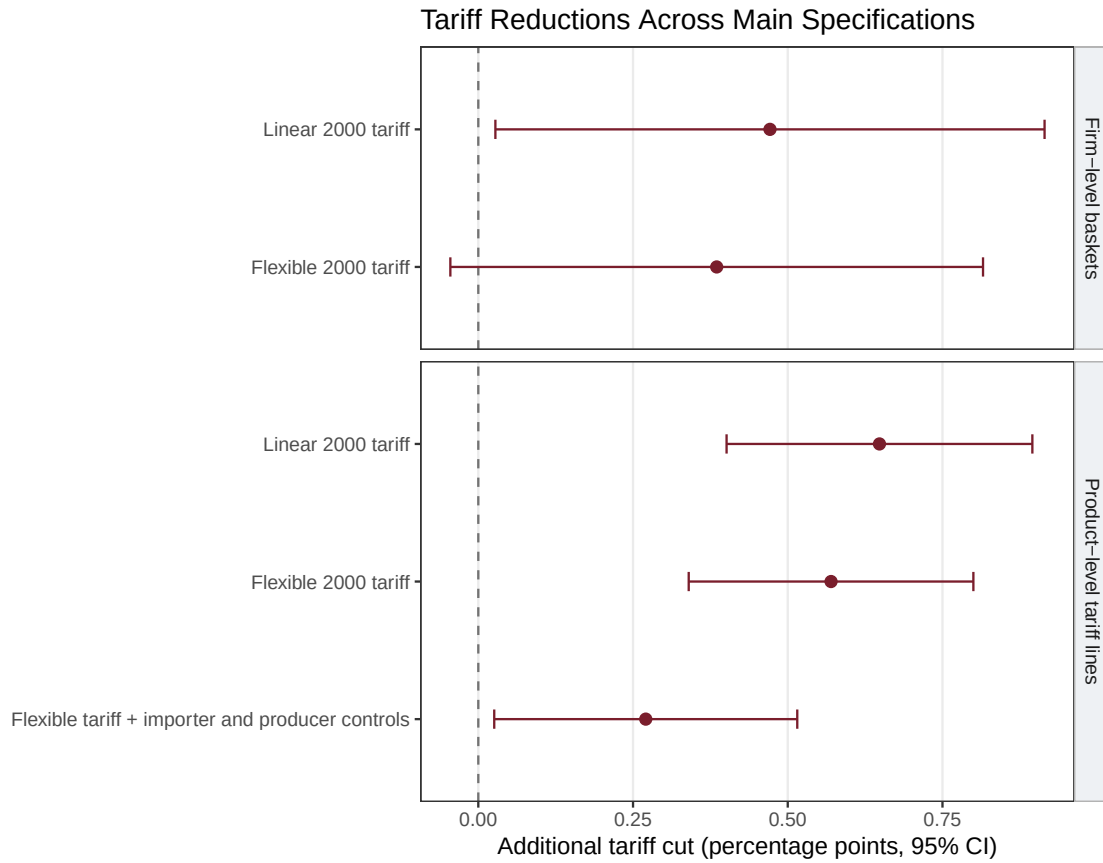


Figure A1: Baseline-Adjusted Tariff Reductions in the Main Specifications

Notes: Points are coefficients and bars are 95 percent confidence intervals. Firm outcomes are fixed-2000-basket tariff reductions, and product outcomes are HS6 tariff reductions. Positive estimates denote deeper liberalization. The firm estimates use the binary DCF indicator, importer controls, top-import HS2 fixed effects, and province fixed effects. They differ only in whether the 2000 basket tariff enters linearly or through a four-degree-of-freedom natural spline. The product estimates include HS2 fixed effects and add importer and producer controls as indicated. Firm standard errors are clustered by top-import HS6, and product standard errors are clustered at HS4.

C.3 Product-level influence and sector concentration

Table A8 asks whether the product-level estimates are generated by a small number of products. Trimming the upper 1, 5, or 10 percent of DCF exposure produces coefficients between 0.267 and 0.293. The estimate also remains similar when tariff lines led by a DCF, tariff lines with a DCF among the three largest importers, or the most state-producer-intensive HS2 sectors are excluded.

Table A8: Product-Level Importer-Dominance and Sector-Concentration Checks

Specification	Estimate	Standard error	95% CI	Observations
Preferred sample	0.271**	(0.125)	[0.026, 0.515]	3,902
Trim top 1% of DCF exposure	0.267**	(0.126)	[0.021, 0.513]	3,866
Trim top 5% of DCF exposure	0.293**	(0.131)	[0.036, 0.549]	3,705
Trim top 10% of DCF exposure	0.281**	(0.142)	[0.002, 0.559]	3,493
Exclude lines led by a DCF	0.276**	(0.127)	[0.027, 0.526]	3,840
Exclude lines with a DCF among top three	0.287**	(0.130)	[0.031, 0.542]	3,726
Exclude top-decile state-producer HS2 sectors	0.235*	(0.121)	[-0.002, 0.472]	3,824

Notes: Estimates report the coefficient on standardized log DCF imports from the preferred HS6 tariff-cut model. DCF rank is measured in ordinary-trade imports. Politically salient sectors are defined before estimation as the top decile of HS2 categories by the output-weighted 1998 state-producer revenue share. Standard errors are clustered at HS4.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Figure A2 reports the more granular leave-one-HS2-out exercise. Every displayed coefficient is positive, and most remain close to the full-sample estimate. The product estimates range from 0.179 to 0.297. Excluding HS85 (electrical machinery) produces the lowest displayed estimate, and no displayed omission reverses the sign.

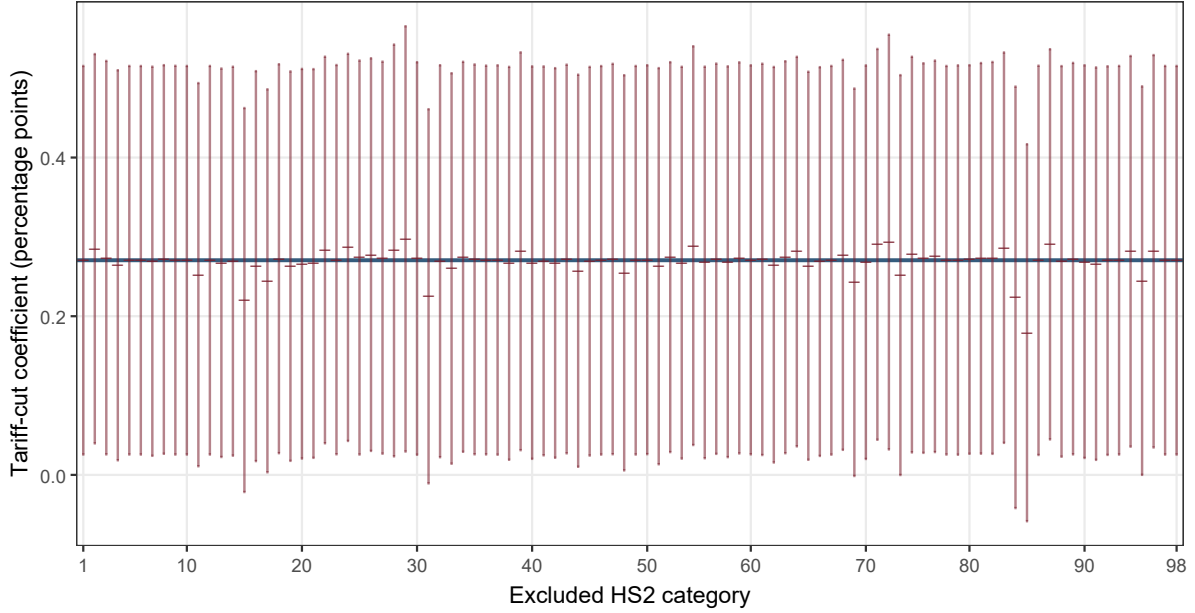


Figure A2: Leave-One-HS2-Out Estimates

Notes: Each horizontal marker re-estimates the preferred product-level specification after excluding the indicated HS2 category. For legibility, the figure omits the estimate for HS51. The archived data retain the complete set of estimates. Observed HS2 exclusions are equally spaced. The horizontal reference line is the full-sample coefficient. Standard errors are clustered at HS4.

C.4 Trade regime, intermediate inputs, and principal suppliers

The product-level result also appears in ordinary trade. As shown in Table A9, rebuilding exposure from ordinary-trade transactions yields a coefficient of 0.195, compared with 0.271 in the all-regime sample. Adding the share imported from the United States, European Union, or Japan leaves the coefficient unchanged. Among ordinary-trade intermediate inputs, the estimate is 0.248, again unchanged by the principal-supplier control. The results support an imported-input channel and weigh against mechanical explanations based on processing trade or sourcing from major negotiating partners.

Table A9: Ordinary-Trade and Intermediate-Input Tariff Reductions

Specification	Estimate	Standard error	95% CI	Observations
All-regime HS6 sample	0.271**	(0.125)	[0.026, 0.515]	3,902
Ordinary trade only	0.195*	(0.109)	[-0.018, 0.408]	3,753
Ordinary trade + principal-supplier share	0.196*	(0.109)	[-0.018, 0.410]	3,753
Ordinary-trade intermediate inputs	0.248**	(0.099)	[0.053, 0.442]	2,374
Intermediate inputs + principal-supplier share	0.248**	(0.100)	[0.052, 0.443]	2,374

Notes: The dependent variable is the 2000–2007 HS6 tariff reduction. The first row uses the all-regime product file. The remaining rows reconstruct 2000 DCF exposure from trade-mode code 10 and exclude pure trading companies. Intermediate inputs follow the UN HS1996-to-BEC concordance. The principal-supplier measure is the import-value share sourced from the United States, European Union, or Japan. Every model includes the flexible 2000-tariff control, importer and producer controls, and HS2 fixed effects. Standard errors are clustered at HS4.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

C.5 Administrative affiliation versus ownership

The firm-level 2007 tariff difference is robust to conditioning on broad ownership, export status, province, and narrow HS2-by-province cells. Table A10 reports the full-sample estimates. Table A11 restricts the comparison to local SOEs and DCFs and then to state-owned DCFs and local SOEs. The conditional DCF difference persists after broad ownership controls and in direct comparisons with local SOEs.

Table A10: Firm-Level Robustness: Ownership and Export Status

	Weighted Average Input Tariff, 2007				
	(1)	(2)	(3)	(4)	(5)
Direct Control	−1.056*** (0.208)	−0.945*** (0.208)	−1.081*** (0.206)	−0.957*** (0.207)	−1.003*** (0.206)
SOE		−0.384*** (0.116)		−0.389*** (0.115)	−0.432*** (0.110)
FIE		−0.045 (0.112)		0.001 (0.111)	−0.064 (0.100)
Exporter			0.417*** (0.080)	0.439*** (0.081)	0.414*** (0.076)
Import Value	−1.811* (0.939)	−1.792* (0.949)	−1.821** (0.921)	−1.797* (0.930)	−2.192** (1.073)
Number of Imported Products	−0.002** (0.001)	−0.002* (0.001)	−0.003*** (0.001)	−0.002*** (0.001)	−0.002** (0.001)
OECD Import Share (%)	0.015 (0.110)	0.030 (0.111)	0.025 (0.110)	0.043 (0.110)	−0.022 (0.101)
Market Share	0.108 (0.397)	0.125 (0.396)	0.092 (0.396)	0.107 (0.395)	0.204 (0.394)
Ownership Controls	No	Yes	No	Yes	Yes
Exporter Control	No	No	Yes	Yes	Yes
HS2 FE	Yes	Yes	Yes	Yes	No
Province FE	Yes	Yes	Yes	Yes	No
HS2 × Province FE	No	No	No	No	Yes
Num. obs.	39163	39163	39163	39163	38759
Num. groups: Ind_2d	96	96	96	96	
Num. groups: province_zip	31	31	31	31	
Num. groups: hs2_province					1139

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. All models control for import value, number of imported products, OECD sourcing, and product-market share. Ownership controls are customs legal-status indicators for SOEs and FIEs, with private enterprises omitted. Standard errors are clustered by the six-digit category of the firm's highest-value imported product.

Table A11: Direct-Control Firms Compared Directly with Local SOEs

	All DCFs vs. Local SOEs			State-Owned DCFs vs. Local SOEs		
	(1)	(2)	(3)	(4)	(5)	(6)
Direct Control	−0.993*** (0.232)	−0.938*** (0.237)	−0.879*** (0.270)	−0.879*** (0.274)	−0.797*** (0.276)	−0.744** (0.310)
Import Value	−0.900*** (0.294)	−0.838*** (0.288)	−0.968** (0.464)	−0.807*** (0.235)	−0.737*** (0.228)	−0.830** (0.377)
Number of Imported Products	−0.000 (0.001)	−0.000 (0.001)	0.000 (0.001)	−0.000 (0.001)	−0.000 (0.001)	0.000 (0.001)
OECD Import Share (%)	0.420 (0.268)	0.334 (0.269)	0.071 (0.327)	0.441 (0.271)	0.354 (0.270)	0.159 (0.324)
Market Share	−0.027 (0.815)	0.068 (0.808)	0.847 (0.959)	−0.248 (0.851)	−0.127 (0.844)	0.592 (1.012)
HS2 FE	Yes	Yes	No	Yes	Yes	No
Province FE	No	Yes	No	No	Yes	No
HS2 × Province FE	No	No	Yes	No	No	Yes
Num. obs.	3679	3679	3333	3545	3545	3201
Num. groups: Ind_2d	82	82		82	82	
Num. groups: province_zip		31			31	
Num. groups: hs2_province			474			464

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Columns 1–3 compare every DCF with local SOEs; columns 4–6 retain only customs-classified SOEs and compare state-owned DCFs with local SOEs. Province fixed effects use the firm's province; HS2-by-province fixed effects combine province with the six-digit category of the firm's highest-value import aggregated to HS2. Standard errors are clustered by the six-digit category of the firm's highest-value imported product.

C.6 Importer geography and output-side producer interests

The preferred product coefficient is essentially unchanged when the geographic concentration of import demand and the ownership composition of domestic producers are added. Table A12 reports estimates of 0.273 with importer-geography controls, 0.266 with producer-ownership controls, and 0.270 with both sets, compared with 0.271 in the preferred specification. The product-level association is unchanged by these observables.

Table A12: Geography, Producer Ownership, and Tariff Reductions

Specification	Estimate	Standard error	95% CI	Observations
Preferred product specification	0.271**	(0.125)	[0.026, 0.515]	3,902
Add importer geography	0.273**	(0.126)	[0.026, 0.521]	3,893
Add producer-ownership composition	0.266**	(0.126)	[0.020, 0.513]	3,902
Add geography and producer ownership	0.270**	(0.127)	[0.021, 0.520]	3,893

Notes: The dependent variable is the 2000–2007 HS6 tariff reduction. Geography controls are the province Herfindahl-Hirschman Index (HHI), top-province share, coastal and western import shares, and province-mapping coverage. Producer composition enters through log counts of central, state, foreign, and private producers measured in the pre-accession manufacturing data. Every specification retains the preferred importer and producer controls, flexible 2000-tariff adjustment, and HS2 fixed effects. Standard errors are clustered at HS4.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

C.7 Sample selection

Table A13 addresses selection into the balanced firm and product samples using stabilized inverse-probability weights constructed from observed pre-accession characteristics. The weighted product coefficient is 0.299, close to the unweighted 0.270. The weighted firm coefficient rises from 0.385 to 0.841. The product result is therefore stable to this observed-selection correction, whereas the firm magnitude is sensitive to the reweighting. Selection on unobservables remains, so the weighted firm estimate serves as a sensitivity diagnostic.

Table A13: Balanced-Panel Selection and Inverse-Probability Weighting

Specification	Estimate	Standard error	95% CI	Observations
<i>Panel A. Firm fixed baskets</i>				
Unweighted retained firm sample	0.385*	(0.220)	[-0.045, 0.816]	19,396
Inverse-probability weighted	0.841**	(0.345)	[0.166, 1.516]	19,396
<i>Panel B. Product tariff lines</i>				
Unweighted retained product sample	0.270**	(0.125)	[0.026, 0.515]	3,902
Inverse-probability weighted	0.299**	(0.127)	[0.050, 0.548]	3,902

Notes: Retention models use pre-accession customs observables and fixed effects to predict inclusion in the balanced fixed-basket or preferred product sample. Stabilized inverse-probability weights are capped at the ninety-ninth percentile. The outcome regressions otherwise reproduce the preferred specifications. These estimates address selection on observed variables; they do not correct selection on unobserved product or firm attributes. Firm standard errors are clustered by top-import HS6 and product standard errors at HS4.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

C.8 Fixed-basket tariff paths

Figure A3 applies each firm's fixed 2000 ordinary-trade import basket to every annual MFN schedule from 1998 through 2011. Average input tariffs decline sharply for both groups. The DCF mean falls from 12.60 to 5.80 percent, while the non-DCF mean falls from 14.89 to 7.32 percent. DCF baskets face lower tariffs throughout the period, but the raw gap predates WTO accession and narrows from 2.29 to 1.52 percentage points. The figure therefore documents a persistent difference in tariff levels rather than a gap that first appears after accession.

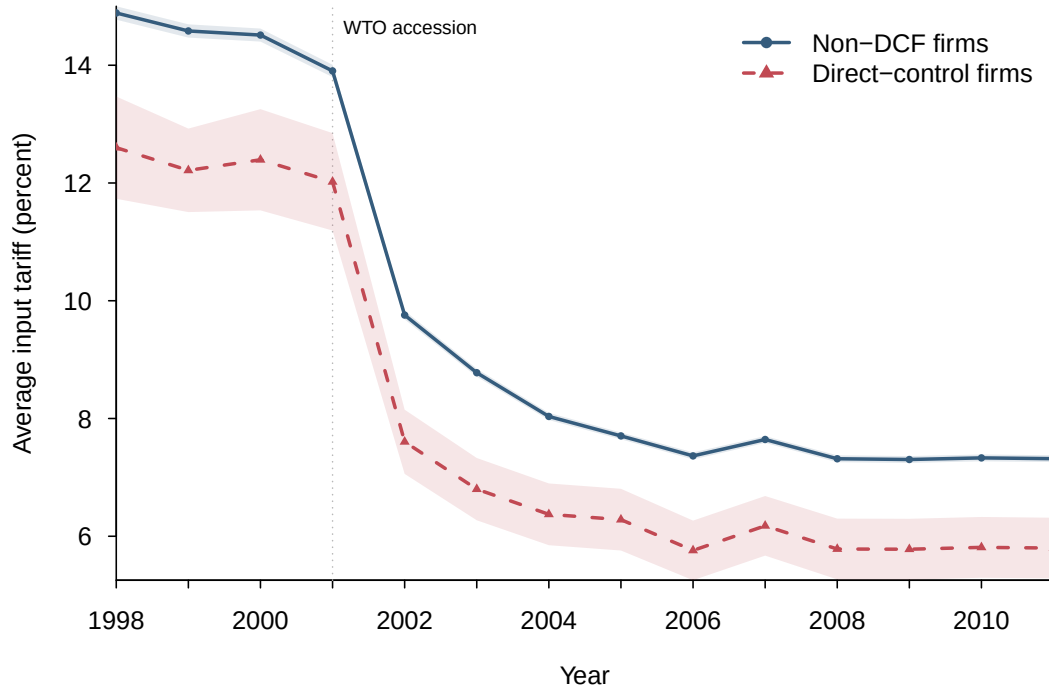


Figure A3: Input Tariffs by Direct-Control Status, Holding 2000 Baskets Fixed

Notes: Annual MFN tariffs are applied to fixed 2000 ordinary-trade HS6 baskets. Product weights are renormalized over lines observed in every year from 1998 through 2011. Lines report group means for 19,397 firms, including 199 DCFs. Shaded bands are 95 percent confidence intervals.

C.9 Exposure nonlinearity and specification stability

Figure A4 replaces the linear product exposure with indicators for quartiles of positive DCF exposure, leaving zero exposure as the reference group. The first two quartiles have small and imprecise coefficients, while the estimates rise to 0.491 in the third quartile and 1.010 in the fourth. This pattern suggests that the average association is concentrated among products with substantial DCF demand. Evidence for a dose-response relationship remains weak: a linear regression restricted to positive-exposure products yields 0.365.

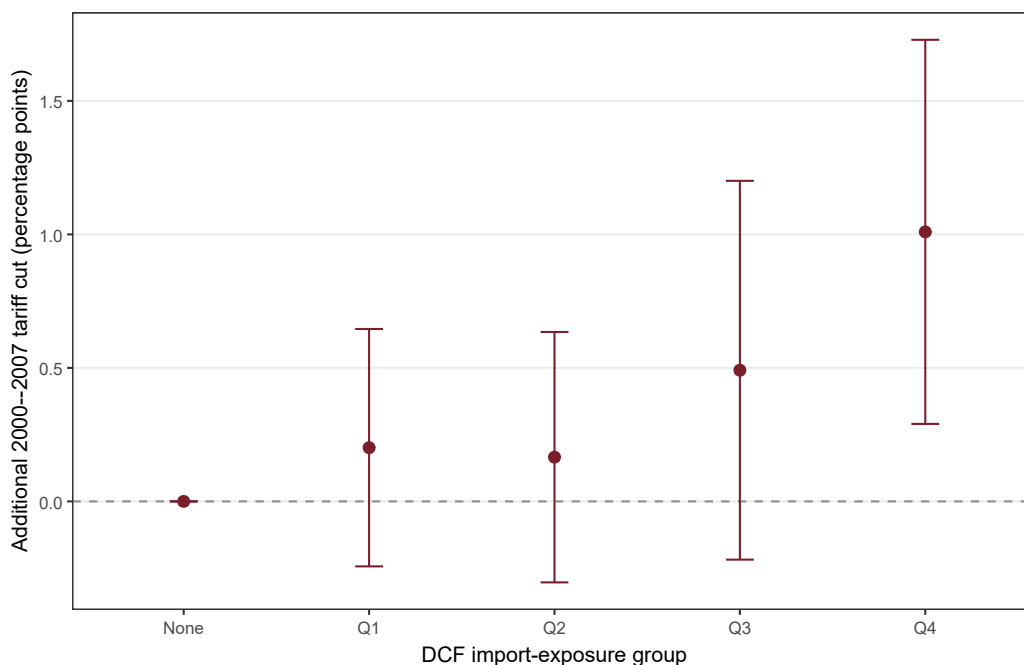


Figure A4: Nonlinear Product Exposure

Notes: Coefficients and 95% confidence intervals are relative to HS6 products with zero DCF imports. Q1–Q4 are quartiles of positive DCF import exposure. The model otherwise reproduces the preferred product specification, with standard errors clustered at HS4.

Figure A5 summarizes ten disclosed variants of the product model. Coefficients are positive in every case. They range from 0.265 using a five-degree-of-freedom baseline-tariff spline to 0.583 when weighted by 2000 import value. Trimming, alternative spline degrees, and importer-count weighting remain comparatively close to the preferred 0.271 estimate. The positive-exposure-only and import-value-weighted models are much less precise, showing that the magnitude depends on the support and weighting scheme.

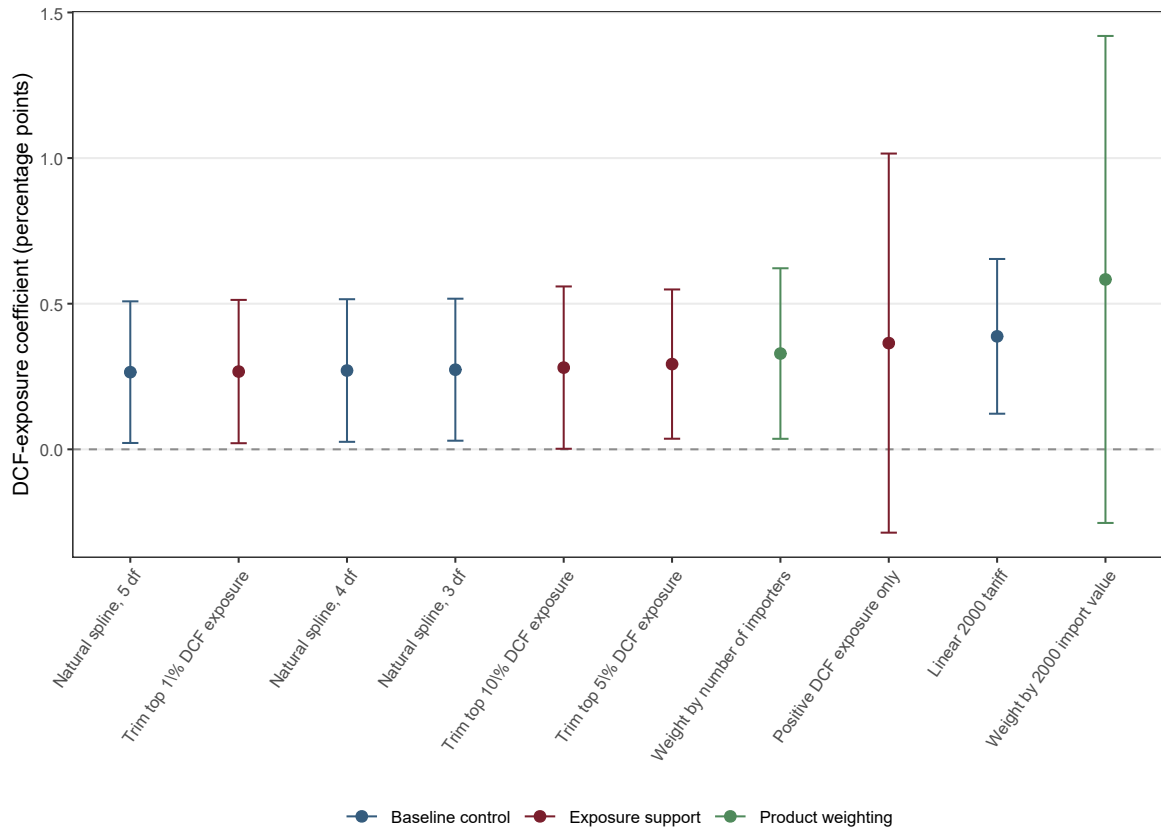


Figure A5: Specification Curve for the Product-Level Tariff Cut

Notes: Points are coefficients on DCF import exposure with 95% confidence intervals. Rows vary the baseline-tariff control, exposure support, or product weighting while retaining the remaining preferred controls and HS2 fixed effects. Standard errors are clustered at HS4.

C.10 Alternative horizons and outcome definitions

Table A14 shows that the product-level association appears at multiple endpoints. Estimates are 0.218 through 2003, 0.274 through 2005, and 0.271 through 2007. The proportional and log specifications yield coefficients of 2.620 and 3.732. The product result persists across endpoints and outcome scales.

Table A14: Product-Level Tariff Reductions Across Horizons and Outcome Definitions

Specification	Estimate	Standard error	95% CI	Observations
<i>Panel A. Alternative horizons</i>				
Tariff cut, 2000–2003	0.218**	(0.101)	[0.021, 0.415]	4,376
Tariff cut, 2000–2005	0.274***	(0.096)	[0.085, 0.462]	4,376
Tariff cut, 2000–2007	0.271**	(0.125)	[0.026, 0.515]	3,902
<i>Panel B. Alternative outcomes</i>				
Proportional tariff reduction (percent)	2.620***	(1.006)	[0.647, 4.592]	3,873
Log tariff reduction $\times 100$	3.732***	(1.191)	[1.398, 6.067]	3,902

Notes: Estimates use the HS1996 product panel. Panel A retains percentage-point reductions and varies the endpoint. Panel B fixes the endpoint at 2007 and replaces the outcome with the proportional cut or the change in $\log(1 + \text{tariff})$. All specifications retain the preferred importer and producer controls and HS2 fixed effects. Standard errors are clustered at HS4.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

C.11 Export exposure as a negative-control exposure

If DCF exposure merely captured general participation in trade, DCF exports should predict the outcomes in the same direction as DCF imported-input demand. Table A15 instead reports coefficients near zero. DCF export exposure has a coefficient of -0.029 for the tariff cut and 0.003 for any interim-duty listing. When import and export exposure enter jointly, the import coefficients remain 0.276 and 0.027 , while the export coefficients remain close to zero. This negative-control result is more consistent with an imported-input channel than with generic trade intensity, while still leaving open other differences between the products DCFs import and export.

Table A15: DCF Import Exposure and the Export-Exposure Placebo

Specification	Estimate	Standard error	95% CI	Observations
<i>Panel A. Tariff cut, 2000–2007</i>				
DCF import exposure; entered alone	0.271**	(0.125)	[0.026, 0.515]	3,902
DCF export exposure; entered alone	−0.029	(0.079)	[−0.185, 0.126]	3,902
DCF import exposure; joint model	0.276**	(0.127)	[0.027, 0.526]	3,902
DCF export exposure; joint model	−0.051	(0.082)	[−0.211, 0.109]	3,902
<i>Panel B. Any interim-duty listing</i>				
DCF import exposure; entered alone	0.027***	(0.007)	[0.013, 0.041]	4,431
DCF export exposure; entered alone	0.003	(0.005)	[−0.006, 0.013]	4,431
DCF import exposure; joint model	0.027***	(0.007)	[0.013, 0.041]	4,431
DCF export exposure; joint model	0.001	(0.005)	[−0.008, 0.011]	4,431

Notes: DCF import exposure measures demand for a product as an imported input. DCF export exposure measures the value of DCF exports in the same HS6 category and serves as a negative-control exposure for the imported-input channel. All exposures are standardized logs. Every model includes the preferred importer and producer controls, flexible 2000-tariff adjustment, and HS2 fixed effects. Standard errors are clustered at HS4.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.