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Vitor Cavalcante, Luca Moreno-Louzada, Naercio
Menezes Filho

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Vitor Cavalcante

Luca Moreno-Louzada

Naercio Menezes Filho

Vitor Cavalcante
Universidade Nova de Lisboa
Nova School of Business and Economics
R. da Holanda 1,
2775-405 Carcavelos, Portugal
vitorfcavalcante@gmail.com

Luca Moreno-Louzada
Insper Instituto de Ensino e Pesquisa
Cátedra Ruth Cardoso
Rua Quatá, nº 300
04546-042 – São Paulo, SP – Brasil
lucaml1@insper.edu.br

Naercio A. Menezes Filho
Insper Instituto de Ensino e Pesquisa
Cátedra Ruth Cardoso
Rua Quatá, nº 300
04546-042 – São Paulo, SP – Brasil
naercioamf@insper.edu.br

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Globalization and Political Preferences in the Developing World

Abstract

This paper investigates the influence of globalization on the recent political shift towards right-leaning ideologies in Brazil. Specifically, we examine the role of increasing export demand and import competition in shaping ideological preferences at local labor markets. Employing a shift-share instrumental variable approach, we find that regions with higher exposure to increasing export demand have experienced a shift towards right-leaning political preferences. We argue that this shift in ideological preferences is driven by improved labor market outcomes, which reduced reliance on social security policies.

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JEL codes: F13, D72, F16, F14

1 Introduction

There is growing evidence that economic repercussions of globalization have political consequences. Previous research in developed economies has predominantly examined the effects of the negative economic shocks triggered by import competition, often suggesting a potential backlash against globalization and growing support to nationalist political movements (Rodrik [2018](#)). However, emerging economies may face distinct economic impacts of global trade. For example, while developed countries grappled with manufacturing displacement due to import competition, developing economies like Brazil stood to benefit from increasing commodity exports (Costa, Garred, and Pessoa [2016](#)).

In this paper, we examine this issue by studying how globalization played a role in driving political shifts in Brazil. Specifically, we examine the influence of China’s entry into the World Trade Organization (WTO) in 2001 on the evolving political preferences at local markets in Brazil. While recent globalization shocks in developed nations have bolstered support for right-wing parties (Colantone and Stanig [2018a](#)), due to the downturn in labor market conditions resulting from rising import competition, our empirical evidence aims to bring light to a different perspective. We posit that the scenario unfolds differently in emerging markets, as those who stand to gain from an escalation in export demand may also exhibit a proclivity for political transformations.

Employing a shift-share instrumental variable approach using data from 4,249 municipalities for the period of 2000 to 2010, we find that local labor markets with higher levels of exposure to increasing export demand from China exhibited a shift towards right-leaning political preferences, but no significant political response was observed in relation to rising

import competition. These findings complement the existing body of literature showing that exposure to import competition from China has fueled political polarization (Autor et al. 2020), led to increased support for right-wing parties, and fostered a rise in nationalist sentiment and authoritarian values in developed countries (Colantone and Stanig 2018a, 2018b). In contrast to this research, focused on developed countries, our study suggests that the potential drawbacks linked with rising import competition in sectors such as manufacturing are likely offset by the benefits of expanding export demand in sectors like agriculture and mining.

With regards to mechanisms, we investigate two different sets of hypotheses. First, we examine whether the individual-level economic improvements brought about by the China shock led to a decline in the demand for re-distributive policies and a heightened endorsement of a more liberal economic agenda. Alternatively, our second hypothesis hints to a supply-side mechanism, as conservative actors in the primary sector might benefit from growing profits, increasing their participation in politics through intensified local influence and campaign funding.

We compare the effects of the trade shocks on different variables in an attempt to distinguish between these mechanisms. Our analysis shows that the rise in exports to China led to several improvements in labor market outcomes, such as increased income and wages, lower unemployment and lower informality rates. Moreover, in regions benefited by the growing demand for exports we note a diminishing proportion of families benefiting from social programs, paralleled by a decrease in per capita spending on social security. These results support the hypothesis that the rightward shift in ideological preferences observed in Brazil is caused by a demand-side effect following labor market improvements driven by

exports to China.

In turn, we find little evidence to sustain the conclusion that the effect is driven by benefited conservative elites who gained political power. We find that, while the increased export demand led to an increase in the share of right-wing candidates in Proportional Representation (PR) elections, it had no impact on campaign funding of right-wing candidates nor did it translate into greater political strength of politicians affiliated with the agribusinesses or religious groups. Therefore, we hypothesize that in municipalities more exposed to rising export demand, where social security becomes less relevant due to improved labor market outcomes, individuals become less supportive of the left-wing's welfare state platform and more supportive of right-wing parties.

2 The Political Economy of Globalization

2.1 Income and Political Preferences

Extensive research has examined the relationship between individuals' socioeconomic status and their political preferences. However, there is no consensus regarding the degree to which a shock can generate political responses, as well as about the direction of such changes and their durability. According to Margalit (2019), we can identify three different theoretical approaches. The first considers individual self-interest as a primary motivator of their political views. Consequently, changes in labor market conditions, their position in the income distribution, or their expectations about future outcomes could impact one's political behavior (Meltzer and Richard 1981; Iversen and Soskice 2001; Mares 2006). The

second states that preferences and voting behavior may also be shaped by values and deeply held beliefs (Campbell et al. 1980). In this case, political behavior could be less susceptible to short-run changes in economic conditions. The third approach argues that the experience of an economic shock can trigger a process of learning, which ultimately leads to a more enduring change in political views (Page and Shapiro 2010).

The impact of economic shocks on political attitudes tends to be significant, while the changes in voting behavior are often less consistent and modest in magnitude. Negative economic shocks can lead to increased support for left-wing parties, which prioritize income distribution and government protection, or fuel support for right-wing anti-establishment and populist parties. Similarly, positive economic shocks may shift attitudes to the right, with individuals becoming less supportive of re-distributive policies. For instance, Doherty, Gerber, and Green (2006) reveals that lottery-induced affluence increases hostility toward estate taxes and government redistribution. Brunner, Ross, and Washington (2011) demonstrates that positive economic shocks in California decrease support for re-distributive policies based on ballot proposition returns and exogenous labor demand shifts. Moreover, surveys conducted by Karadja, Mollerstrom, and Seim (2017) and Fernández-Albertos and Kuo (2018) support these findings, showing that individuals who perceive themselves as richer demand less redistribution.

Recent research has also focused on how government transfer programs influence voting behavior. For example, municipalities that were early beneficiaries of the *Progresa* program in Mexico saw increases in voter turnout and in the incumbent's vote share during the 2000 presidential election (De La O 2013). Similarly, households benefiting from such programs in Uruguay were found to be 11 to 13 percentage points more likely to favor the current govern-

ment compared to the previous one (Manacorda, Miguel, and Vigorito 2011). In Colombia, women enrolled in an anti-poverty program exhibited a higher likelihood of voting for and supporting the incumbent party candidate (Conover et al. 2020). Examining the case of *Bolsa Família* in Brazil, Zucco Jr (2013) reveals that conditional cash transfers (CCTs) correlated with enhanced performance of the incumbent party presidential candidates across three elections, transcending party boundaries. Additionally, Frey (2019) demonstrates that the program plays a role in politically empowering the impoverished, which fosters heightened electoral competition, increases the quality of candidates, and diminishes support for candidates affiliated with populist parties.

In the past two decades, Brazil has undergone a remarkable ascendancy of right-wing political ideology, a transformation that climaxed with the election of the right-wing candidate Jair Bolsonaro in 2018, following nearly 15 years of left-wing incumbency. When considering this body of literature, it becomes evident that individual political inclinations can experience shifts in response to income fluctuations and that re-distributive policies can hold a pivotal role in securing the support of beneficiaries for incumbent leaders. Within this conceptual framework, our study delves into the hypothesis that alterations in labor markets, driven by heightened export demand and increased import competition, could also wield an influence on the landscape of political preferences. In particular, this paper highlights a potential mechanism through which changes in income could shape political inclinations, by lessening the populace's dependence on social security initiatives.

2.2 Political Response to the China Shock

Globalization can be viewed through various economic phenomena, including international trade, international finance, and international labor flows. Recently, an emerging literature has focused on the China shock as a means of understanding the political consequences of globalization and international trade. Studies conducted in the United States have found that import competition from China has resulted in more authoritarian values (Ballard-Rosa, Jensen, and Scheve 2022), wider support of protectionist policies by politicians (Feigenbaum and Hall 2015), boosted electoral participation, increased support for democrats (Che et al. 2022), political polarization (Autor et al. 2020) and varying political behavior among groups with different identities (Baccini and Weymouth 2021). In the United Kingdom, more exposed regions to the trade shock exhibited more authoritarian values and higher support for Brexit (Colantone and Stanig 2018a; Ballard-Rosa et al. 2021). In Western Europe, rising import competition increased support for nationalist, isolationist and radical-right parties (Colantone and Stanig 2018b, 2019).

Few studies have investigated the impacts of the China trade shock on political outcomes in developing countries, where the effects could differ depending on the nature of trade relations. A notable exception is Campello and Urdinez (2021) that shows that people and legislators from areas negatively affected by import shocks in Brazil tend to have negative views about economic ties with China, while those from areas benefiting from export shocks do not necessarily have more positive views about the country.

In the framework introduced by Rodrik (2021), diverse forms of globalization shocks exert an impact on economic conditions, which subsequently wield influence over political

outcomes through four distinct causal pathways: (i) a direct demand-side mechanism arising from economic transformations, (ii) an indirect demand-side impact, facilitated by the amplification of cultural and identity divisions, (iii) a supply-side effect characterized by political candidates adopting more populist platforms in response to economic shocks, (iv) another supply-side dynamic where political candidates embrace platforms deliberately designed to stoke cultural and identity tensions, thereby diverting voters' attention from economic concerns. By examining the impact of rising import competition and export demand on local markets in an emerging economy with significant economic ties to China, we contribute to the ongoing debate on the political consequences of globalization.

In contrast to the findings in developed countries, our study does not uncover any significant effect from increasing import competition. However, we find that increasing export demand has played a crucial role in shaping labor market outcomes and, subsequently, political preferences. Our findings suggest that the improvement of labor market conditions and reduced dependence on redistributive policies due to the China shock contributed to the transformation of political preferences. Our findings highlight the nuanced relationship between globalization and political outcomes, emphasizing the importance of considering specific trade relations, stage of economic development, and sectoral specialization in understanding the diverse effects of globalization on the local political dynamics.

3 The Brazilian Context

For a variety of reasons, Brazil is an stimulating setting for the study of the political consequences of trade liberalization. During the last two decades China has become one of

Brazil's main trade partners (see [Figure 1](#)). The country's geographical diversity and size make it possible to observe local labor markets with a wide range of comparative advantages. Furthermore, the political system of Brazil can be characterized as a relatively early democracy, beginning only in 1985. However, the country has been experiencing constant political instability, with two presidential impeachments, in 1992 and 2016, a series of corruption scandals involving high-level politicians, and the rise of extreme right-wing candidates at every election level. This trend was exemplified by the victory of Jair Bolsonaro in the 2018 presidential election. Therefore, understanding the forces at play in the country's political system has become a topic of broad interest.

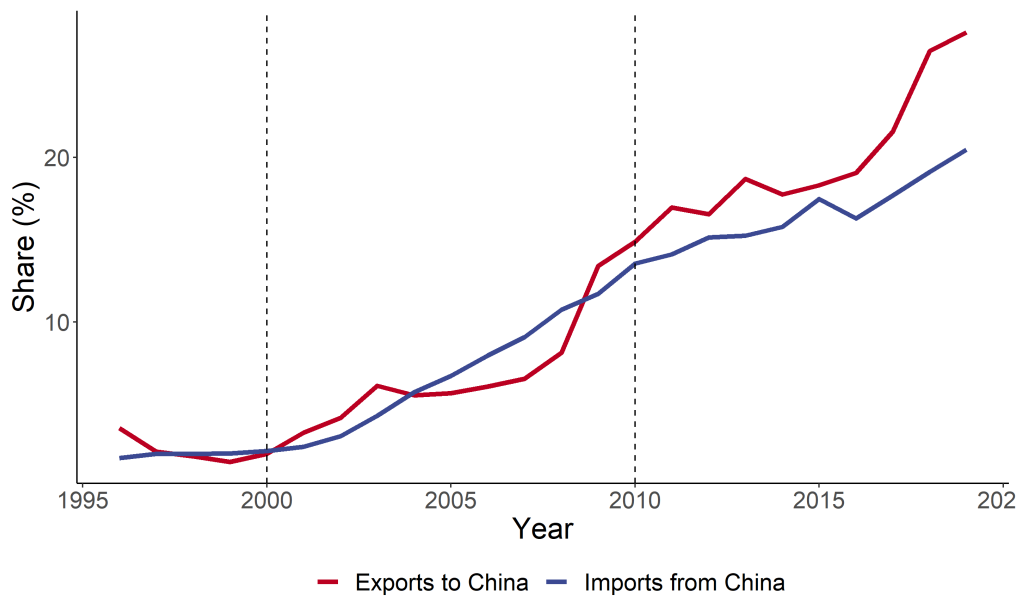


Figure 1: **China's participation in Brazilian trade flows.** This figure shows the share of exports and imports between Brazil and China as a share of total Brazilian exports and imports, between 1996 and 2019.

3.1 Politics

Following a 20-year military dictatorship, Brazil underwent a process of democratization in 1985. Every four years, general elections are held in Brazil to elect the President of the Republic, state governors, senators, and federal deputies. Furthermore, municipal elections, also held every four years, are conducted to elect mayors and city council members. Between the mid-1990s and 2010, two political parties emerged as the main contenders in presidential elections in Brazil: the center-right *Partido da Social Democracia Brasileira* (PSDB), which controlled the executive branch from 1995 to 2002 under Fernando Henrique Cardoso (FHC), and the center-left *Partido dos Trabalhadores* (PT), which held power for most of the following decade under Luiz Inácio Lula da Silva. Despite having a multiparty system and a weak partisan identity environment, the political science literature in Brazil suggests that the biparty dispute has played an important role in creating a divide between supporters of the two major political parties at the national level (Limongi and Cortez 2010; Braga and Pimentel Jr 2011). While PSDB and PT were the main protagonists of political disputes, a third political force was illustrated by *Movimento Democrático Brasileiro* (MDB), *Partido Progressista* (PP), *Partido Trabalhista Brasileiro* (PTB) and *Partido Republicano* (PR), which shifted its allegiances between the two major parties depending on the distribution of political power (Melo and Câmara 2012).

Overall, the period from 1995 to 2010, under the presidencies of FHC and Lula, can be characterized as a time of macroeconomic stabilization, economic growth, and improvements in social indicators, including increases in the minimum wage. The PSDB initiated significant reforms, including privatization and market liberalization, during FHC's presidency.

Meanwhile, Lula’s government continued the agenda of macroeconomic stability and implemented a conditional cash transfer program, Bolsa Família, which by 2005 had benefited more than 30 million of Brazil’s poorest people, and income redistribution became a key feature of his political agenda (Hall 2006).

Ideology measured at the party level based on Power and Rodrigues-Silveira (2019) presented in Figure S1 showcases the evolution of party ideology in Brazil from 1994 to 2018. Notably, the PT party remained on the left side of the ideological spectrum throughout the entire period. However, it experienced a significant shift towards the center between 2000 and 2014. This suggests a moderation in the party’s ideological stance during that period. In contrast, the PMDB and PSDB party moved towards the right over time. The PSL party underwent a remarkable rightward shift, especially from 2014 to 2018. These results demonstrate the dynamic nature of party ideologies in Brazil and the complex interplay of factors influencing political preferences and party positioning over time.

3.2 The China Shock

In the beginning of the 21st century, the country faced another important international trade shock. In 2001, China became a WTO member as it continued to emerge as an important worldwide economic force. This would affect Brazil as both an importer and exporter. Brazil received approximately 2.3% of its imports value from China in 2000 and sent approximately 2.0% of its exports to China; by 2010, these shares had increased to 14.5% and 15.1% respectively. In 2009, China surpassed the United States as the largest purchaser of Brazilian goods. The Sino-Brazilian relationship reached new heights in 2010,

with China becoming Brazil's largest trading partner. In 2018, China was the country with the highest share of Brazilian imports and exports, representing approximately 19% of total imports and 28% of total exports, as shown in [Figure 1](#). Brazil's trade relations with China are characterized by Brazil exporting products from its agricultural and extractive sectors, while importing manufactured goods. This has left regions in Brazil specialized in textiles, electronics, and machinery particularly vulnerable to rising import competition from China, while regions specializing in agriculture and mining are more exposed to increasing export demand from China.

The increased presence of China in international markets initially led to higher competitiveness in manufacturing in Latin America (Moreira [2007](#)). However, primary sector exports became increasingly relevant in Brazil's trade relations (Jenkins [2015](#)). While Chinese imports may have amplified the negative effects of import penetration on manufacturing wages and employment (Paz [2018](#)), China's demand for Brazilian commodities has been linked to wage growth and higher levels of labor market formality in affected regions (Costa, Garred, and Pessoa [2016](#)). China's impact on the Brazilian economy was twofold: While it had negative effects on labor-intensive manufacturing, it contributed to a commodity boom in Brazil, particularly in mining and soybean cultivation. Moreover, there is growing evidence that imports from China had positive economic effects in developing countries due to productivity gains, as opposed to the mostly negative effects usually found in developed countries (Alfaro et al. [2022](#); Halpern, Koren, and Szeidl [2015](#); Goldberg et al. [2009](#)).

Campello and Urdinez ([2021](#)) found that people and legislators from areas negatively affected by import shocks tend to have negative views about economic ties with China, while those from areas benefiting from export shocks do not necessarily have more positive views

about the country . This paper contributes to the literature by enhancing the understanding of the consequences of the China shock, by examining the initial political response at local labor markets to the increase in import competition and export demand following China's accession to the World Trade Organization (WTO) in 2001.

Studies have also taken advantage of the reduction in import tariffs that took place in the early 1990s to examine the impact of trade liberalization on various outcomes. These studies reveal that regions where the most significant industries faced larger tariff cuts experienced persistent adjustment and declines in labor market conditions, affecting not only workers in the tradable sector but also those in the non-tradable sector (Kovak 2013; Dix-Carneiro and Kovak 2017, 2019). Moreover, regions more exposed to tariff reductions also experienced temporary increase in criminality (Dix-Carneiro, Soares, and Ulyssea 2018). Closely related to our research question, Ogeda, Ornelas, and Soares (2021) examines the impact of the trade liberalization in the 1990s on left-wing presidential candidates' vote share in regions that were more affected by tariff cuts. The study finds a permanent relative decline in left-wing candidates' vote share and suggests that the weakening of labor unions as the underlying mechanism behind this phenomenon. Finally, Iacoella, Justino, and Martorano (2020) argues that the trade reform had long-term effects, which contributed to the rise of populism among both left- and right-wing politicians in Brazil's presidential elections of 2002 and 2018. Taken together, our study add to previous research on international trade shocks in Brazil by investigating the influence of a different trade shock, that impacted exports and imports of different regions, on labor market outcomes and political preferences.

4 Data and Methodology

4.1 Local Labor Market Exposure to International Trade Shocks

Our empirical strategy involves running regression models where changes in local ideology variables are regressed against variables that capture the effects of the China shock resulting from its entry into the WTO. The method we use to achieve this goal is based on a theoretical model proposed by Autor, Dorn, and Hanson (2013), that was further adapted to the Brazilian context by Costa, Garred, and Pessoa (2016). Firstly, we build the indicators of exposure to Import Supply and Export Demand shocks for each Brazilian municipality ¹. Therefore, for each municipality, m , at time period t we estimate:

$$IS_{m,t} = \sum_j \frac{L_{m,k,t}}{L_{m,t}L_{Br,k,t}} \left(M_{k,t+10}^{Ch,Br} - M_{k,t}^{Ch,Br} \right) \quad (1)$$

$$XD_{m,t} = \sum_j \frac{L_{m,k,t}}{L_{m,t}L_{Br,k,t}} \left(X_{k,t+10}^{Ch,Br} - X_{k,t}^{Ch,Br} \right) \quad (2)$$

In which, $M_{k,t}^{Ch,Br}$ is the value of imports from China to Brazil of product k at time t , $X_{k,t}^{Ch,Br}$ is the value of exports from Brazil to China of product k at time t , $L_{m,k,t}/L_{m,t}$ is the number of workers in sector k relative to all workers in the municipality m at time t , and $L_{Br,k,t}$ is the total number of workers in sector k at time t in the Brazilian economy.

The underlying concept of the model is that local markets exhibit varying degrees of exposure to the growth of Chinese export supply and import demand, which depend on their industry specialization before the China shock. Specifically, any changes in imports at

1. To account for the modification of boundaries or the creation of new municipalities throughout the years, we used a correspondence of minimal comparable areas (Reis et al. 2008)

the country-industry level at a particular point in time will have a more significant impact on local markets where a larger share of workers were originally employed in that industry. The analysis that follows involves comparing municipalities that have similar initial shares of workers assigned to various industries but possess different degrees of specialization within those industries. The impact of the shock will be most noticeable in regions where a larger share of workers were employed in industries that experienced more substantial growth in both imports from and exports to China. This effect will be further amplified in years when the increase in Chinese imports and exports in those industries was more significant.

Importantly, our main goal is to capture the causal effect of import competition and export demand from China on ideological preferences in Brazil. However, we would not be able to do so in the presence of additional shocks that are both relevant to explain variations in political preferences and our measures of exposure to international trade shocks. For instance, the occurrence of specific supply or demand shocks in Brazil related to productivity growth may generate significant changes in trade patterns with China as well as it may have an impact on people’s perception of politicians that ultimately would be captured by our ideological preferences indicator. Therefore, we need to use an instrument for local labor market exposure to import competition and export demand from China to avoid concerns related to endogeneity.

To build an instrument of local labor market exposure to the China shock we use information on growth in trade between China and countries other than Brazil. Following the strategy proposed by Costa, Garred, and Pessoa (2016), we take the product of the initial trade level and the fixed effects from a series of auxiliary regressions. Initially, $M_{k,t}^{j,i}$ is defined to be the total imports of country j in sector k in year t from all countries other than Brazil

(i), and $X_{k,t}^{j,i}$ is defined to be the total exports of country j in sector k in year t to all countries other than Brazil (i).² Then the auxiliary regressions are performed using data on $M_{k,t}^{j,i}$ and $X_{k,t}^{j,i}$, as specified by:

$$\frac{M_{k,t+10}^{j,i} - M_{k,t}^{j,i}}{M_{k,t}^{j,i}} = \alpha_k + \phi_{Ch,k} + v_{i,k} \quad (3)$$

$$\frac{X_{k,t+10}^{j,i} - X_{k,t}^{j,i}}{X_{k,t}^{j,i}} = \gamma_k + \delta_{Ch,k} + v_{i,k} \quad (4)$$

Wherein, $M_{k,t}^{j,i}$ is the value of imports of a country j to a country i of sector k , α_k illustrates industry fixed effects and $\phi_{Ch,k}$ represents the deviation in growth rates of China's imports in sector k excluding trade with Brazil, as compared to this weighted cross-country average. Analogously, $X_{k,t}^{j,i}$ is the value of exports of a country j to country i of a product associated to sector k in year t ; γ_k is the fixed effects of sector k ; and $\delta_{Ch,k}$ represents the deviation in growth rates of China's exports in sector k excluding trade with Brazil, as compared to this weighted cross-country average. Next, we relate the subsequent estimates of $\hat{\phi}_{Ch,k}$ and $\hat{\delta}_{Ch,k}$ to municipality-level measures of local labor markets exposure to the China shock³:

2. The list of Latin American countries was obtained from the World Bank and includes the following countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Bolivia, Brazil, Belize, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Curaçao, Aruba, St. Martin Island, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, and Venezuela.

3. Again following Costa, Garred, and Pessoa (2016), we winsorize our trade variables and instruments by attributing values below the 1st and above the 99th percentiles, weighted by municipality-level workforce size, to the values of the 1st and 99th percentiles.

$$ivIS_{m,t} = \sum_j \frac{L_{m,k,t}}{L_{m,t}L_{Br,k,t}} (M_{k,t}^{Ch,Br} \hat{\phi}_{Ch,k}) \quad (5)$$

$$ivXD_{m,t} = \sum_j \frac{L_{m,k,t}}{L_{m,t}L_{Br,k,t}} (M_{k,t}^{Ch,Br} \hat{\delta}_{Ch,k}) \quad (6)$$

To perform the proposed methodology of gauging local labor market exposure to the international trade shock and identifying the appropriate instrumental variables, we utilized multiple datasets. First, we collect data from the BACI database, developed by Centre d'Études Prospectives et d'Informations Internationales (CEPII), for all countries available at the United Nations Statistical Division's COMTRADE and for all products imported and exported from and to China for the years of 2000 and 2010 (Gaulier and Zignago 2010)⁴. BACI provides data on bilateral trade flows for 200 countries and 5,000 products.⁵ Products correspond to the “Harmonized System” nomenclature (6 digit code). Next, the number of workers in each sector at each point in time in a given municipality was obtained through the Brazilian Demographic Census (Censo Demográfico) of 1991, 2000, and 2010. Lastly, we collect data from the Brazilian System of National Accounts (SCN) on 43 sectors⁶ and their net revenue (shipments) for the year of 1995, deflated to 2000 by the implicit price deflator.

Additionally, our empirical framework requires categorizing employed individuals in the

4. Data from BACI has the advantage of reconciling the data reported by importers and exporters in the UN COMTRADE separately. Therefore, if a country tends to report data that differs substantially from its commercial partner, the data will receive a lower weight on determining the reconciled trade flow.

5. All values are deflated using PCE (Personal Consumption Expenditure) of 2000 prices and converted to US dollars using the OECD exchange rate of each year.

6. We choose the classification at the 43 level, because it is the most aggregated among the ones available at SCN.

Census Data and products from BACI into sectors. In the Brazilian Census, individuals are asked to state their sector of activity based on CNAE Domocílio 5-digit classification. Thus, we build a concordance by assigning products in the trade data to CNAE Domocílio sectors, which requires combining some of the traded good's sectors when they cannot be identified separately in the trade data. Finally, to reproduce our methodological framework based on Autor, Dorn, and Hanson (2013), we collect data from United Nations' Harmonized System of 1992 (HS1992) and 1996 (HS1996), the 3rd version of the International Standard Classification of all Economics Activities (ISIC3), as well as the sector classification available at the National Household Sample Survey (PNAD).

4.2 Municipal Ideological Score (MIS)

To estimate the China shock on political preferences, we use a novel Municipal Ideological Score (MIS) based on Power and Rodrigues-Silveira (2019) for the context of Brazil. The authors propose building an ideological indicator by combining information from the Brazilian Legislative Survey (BLS), a survey administered to members of the national congress, and the municipal level results for Proportional Representation (PR) elections. Namely, for the national lower house and for the city councils.

The BLS records parliamentary information for all electoral years since democratization in 1985. As part of the survey, respondents classify themselves, their own party, and all other parties on an ideological scale from 1 (left) to 10 (right). Based on this information, Power and Zucco Jr (2012) make use of the survey to propose a method that calculates each parliamentarian's ideological profile and each party's ideological position in a political

spectrum from -1 (extreme left) to 1 (extreme right), correcting for scale problems within parliamentarians and across survey waves.⁷

Importantly, Brazil conducts PR elections every two years, alternating between Legislative and Municipal elections. During Legislative elections, citizens vote for their representatives in the federal Chamber of Deputies. Meanwhile, in Municipal elections, they elect members of the Municipal Chamber. Notably, the BLS is held every four years, specifically in years without elections.

Power and Rodrigues-Silveira (2019) source the ideological scores for political parties from the BLS wave that most closely precedes the respective election. However, it's crucial to understand that due to the distinct nature of Legislative and Municipal elections, our ideological scores may exhibit variations. These fluctuations might not necessarily reflect genuine shifts in ideology but rather the election type's influence. Consequently, in our primary findings, we focus on year-to-year changes where ideological scores derive from identical election types.

The methodological framework proposed by Power and Zucco Jr (2012) was further used by Power and Rodrigues-Silveira (2019) to build a municipal level ideological index that aggregates ideological contributions of each party in a given election year by the equation:

$$\sum_{i=1}^n v_i \cdot s_i \quad (7)$$

Where, v_i indicates the proportion of votes for (local or national) legislative elections in a given year and s_i denotes the ideological score of a given party in the closest year when the

7. Power and Zucco Jr (2012) addresses scale issues using a one-shot Bayesian estimation procedure that proved to be considerably more efficient than a two-step estimation process by maximum likelihood by Power and Zucco (2009). For more details about the method see the Web Appendix C of Power and Zucco (2012).

BLS was conducted. This approach proves to be useful in the context of Brazil because: (i) it does not consider executive elections, which are heavily personalized and introduces noise by actor-level variables (name recognition, charisma, media projection, debate performance, etc.); (ii) PR elections have a much larger pool of competitors; (iii) it is blind to party coalitions or vote-pooling that is determinant to set distribution of elected PR election candidates and (iv) the nationally captured ideology are brought down to the municipal level.

The MIS indicator is of critical importance, and it is essential to note that it has two distinct versions. The first variant, $MIS(na)$ considers solely those political parties that have representation at the national congress and whose politicians participate in the Brazilian Legislative Survey. Consequently, smaller parties that may not be represented at the national level but participate in local politics are excluded. To address this limitation, an alternative score has been proposed, referred to as $MIS(imp)$. This alternative score considers all parties, and smaller parties receive an imputed value based on the scores of other parties with close ideological alignment. Our main analysis is based on the $MIS(na)$, which excludes smaller parties. Nonetheless, to ensure the robustness of our results, we conduct several additional tests using the alternative score, $MIS(imp)$.⁸

4.3 Other variables

In our analysis of mechanisms, we also estimate the effect of the trade shock on different socioeconomic and political variables. Specifically, we again use data from the Brazilian

8. For more information on how Power and Rodrigues-Silveira (2019) “imputed” ideology values for smaller parties see the methodological notes available at <https://doi.org/10.7910/DVN/5P03UL>.

Demographic Census to calculate variables such as the employment rate, informality rate, and average household income across municipalities in 2000 and 2010. We also use data from the Ministry of Development and Social Assistance with the share of families covered by Bolsa Família, the Brazilian conditional cash transfer (CCT) program in 2004 (when the program started) and 2010. From the Brazilian Institute of Geography and Statistics (IBGE), we obtain data on municipal GDP and its composition in 2000 and 2010.

In terms of political variables, we obtain data from the Superior Electoral Court (TSE) detailing campaign revenues for candidates in municipal legislative elections in 2004 (the earliest available data) and 2012. We also collect information on congress representatives associated with both the Agrarian Caucus (sourced from Vigna (2001) and the official Legislative House website) and the Evangelic Caucus (courtesy of Binde (2018)). These groups represent the voices of Brazilian agribusiness, rural landowners, and Evangelic voters in Brazil’s National Congress. Combining the lists of names with electoral information from the Superior Electoral Court, we calculate the share of votes in each municipality that were for candidates that, when elected, became affiliated to each caucus.

Finally, the dataset from Power and Rodrigues-Silveira (2019) encompasses electoral participation and Dalton’s political polarization index. Electoral participation (voter turnout) is defined as a ratio of the total votes cast to the total number of eligible voters. Political polarization is calculated as ten times the square root of the aggregate of products between the vote proportion for each party and its absolute deviation from the mean local ideological position. The index spans from 0, indicating no polarization, to 10, indicating extreme polarization.

5 Empirical Analysis

Our baseline specification relies on the estimation of a Two-Stages Least Squares (2SLS) regressions that relate changes in the local ideological scores at each municipality, m , between the pre-shock period, $t - 1$, and the post-shock period t , with changes in instrumented exposure to the international trade shock, as follows:

$$\text{MIS}(na)_{m,t} - \text{MIS}(na)_{m,t-1} = \beta \widehat{\text{IS}}_{m,t} + \theta \widehat{\text{XD}}_{m,t} + \delta \text{T}'_m + \epsilon_m \quad (8)$$

Wherein, our dependent variable is the difference in Ideological Scores at the municipality level between two periods of time. Our main coefficients of interest are represented by β and θ that capture the effect of import and export competition on ideology, respectively; T' represents a matrix of pre-shock local conditions used as controls, namely the size of the workforce, proportion of rural residents, a cubic polynomial of income per capita and shares of workforce employed in manufacturing, mining, agriculture and in informal labor markets at the municipality level for year of 2000; and, finally, ϵ_m is the error term. Also, we follow Costa, Garred, and Pessoa (2016) and cluster standard errors by mesoregion.⁹

Table 1 presents statistics on our ideological indicators, turnout and controls for the period under analysis. The data reveals that, on average, Brazilian municipalities exhibited a center-right political ideology. High turnout rates are attributed to the mandatory voting requirement in the country, although abstaining from voting does not carry severe penalties, and citizens can justify their absence to avoid potential fines. Examining the 2000s, we observe that agriculture held a relatively significant position in Brazil, along with

9. 127 mesoregions in total.

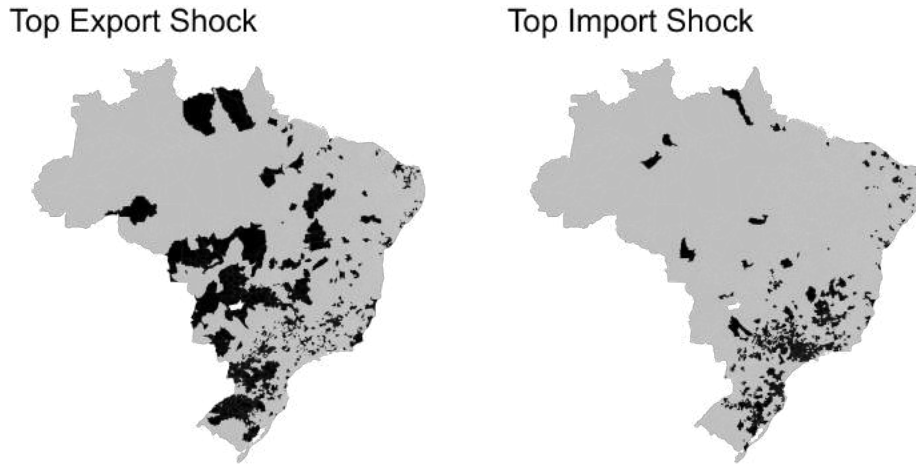


Figure 2: **Municipalities in the top quintiles of the trade shocks.** This figure shows the distribution of the municipalities in the top 20% of exposure to the export shock XD_m (left) and the import shock IS_m (right).

the non-traded sector, while manufacturing did not emerge as the primary activity in most municipalities.

Figure 2 illustrates the geographical distribution of municipalities in the top 20% of exposure to the export shock (XD_m) on the left and the import shock (IS_m) on the right. It is evident that the southeastern regions of the country, where manufacturing holds a more prominent position, were more affected by the import competition shock. In contrast, rural areas, particularly in the central region but also scattered throughout the country, were more exposed to the consequences of increasing export demand from China. When comparing these maps with Figure 3, which displays the municipalities with largest changes in ideology between 1998 and 2010, there seems to be some correlation between regions with highest exposure to exports and largest changes in ideology.

Table 1: Summary statistics

	Mean	SD	N
<i>Panel A: Political Variables</i>			
1998:			
Ideology	0.28	0.22	4,250
Ideology (imputed)	0.30	0.22	4,250
Turnout	0.76	0.10	4,250
2000:			
Ideology	0.24	0.17	4,019
Ideology (imputed)	0.27	0.17	4,019
Turnout	0.86	0.07	4,019
2002:			
Ideology	0.18	0.19	4,267
Ideology (imputed)	0.19	0.19	4,267
Turnout	0.80	0.07	4,267
2010:			
Ideology	0.05	0.14	4,267
Ideology (imputed)	0.07	0.14	4,267
Turnout	0.80	0.06	4,267
<i>Panel B: Controls</i>			
2000:			
Size Agric.	0.24	0.13	4,266
Size Manuf.	0.06	0.06	4,266
Size Rural	0.38	0.21	4,266
Size Non-traded	0.27	0.09	4,266
Income per cap.	137.28	85.54	4,266
Workforce	22,359	129,215	4,266
<i>Panel C: Labor market</i>			
2000:			
Unemployment	0.10	0.05	4267
Informality	0.34	0.10	4267
Wage	72.05	34.07	4267
2010:			
Unemployment	0.07	0.04	4267
Informality	0.31	0.13	4267
Wage	101.61	36.46	4267
<i>Panel D: Bolsa Familia</i>			
2004:			
Cost per capita	42.75	35.43	4267
Share of families	0.20	0.13	4267
2010 :			
Cost per capita	106.74	63.67	4267
Share of families	0.31	0.16	4267

Note: This table shows summary statistics for our main variables: mean, standard deviation, and sample size.

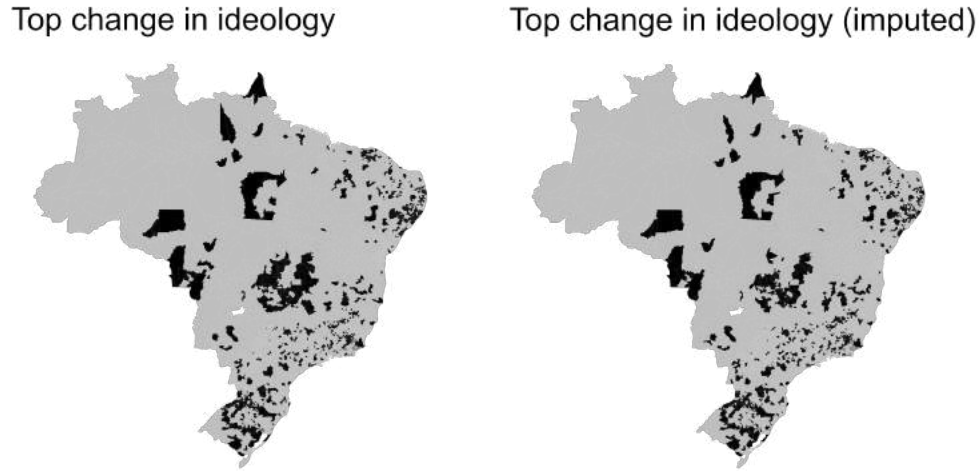


Figure 3: **Municipalities in the top quintiles of the change in ideology.** This figure shows the distribution of the municipalities in the top 20% of change in ideology between 1998 and 2010, measured with two alternative ideology indicators.

5.1 Results

5.1.1 Political Response to the China Shock

In this section, we present the results of our analysis, focusing on the relationship between increasing export demand to China and the political response of local labor markets in Brazil. Table 2 describes the key outcomes of our study, with column 1 presenting the OLS results for the relationship between trade shock exposure and the ideological score, considering only parties represented in the chamber of deputies or senators. Column 3, on the other hand, displays the OLS results when we incorporate imputed values for parties not represented at the national level but with some level of representation in local elections. The results indicate that municipalities with higher levels of exposure to increasing exports to China exhibit a tendency towards more conservative and right-leaning political ideologies.

Table 2: Main results — effect of the China Shock on ideology

	<i>Dependent variable:</i>			
	Ideology		Ideology (imputed)	
	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)
Exports	0.012*** (0.002)	0.011*** (0.003)	0.010*** (0.003)	0.010*** (0.003)
Imports	0.024 (0.015)	0.007 (0.017)	0.029* (0.015)	0.011 (0.017)
N	4,249	4,249	4,249	4,249
R ²	0.316	0.316	0.280	0.279

Note: This table shows results from Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in ideology. The trade shock is measured using the difference in trade between 2000 and 2010. The ideology change using the two indicators is measured using the difference between 1998 and 2010. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. *p<0.1; **p<0.05; ***p<0.01

When instrumental variables are employed in our shift-share framework to address potential endogeneity issues in our analysis, we find consistent results in terms of both significance and magnitude regarding the relationship between exposure to increasing export demand and local-level political preferences. In our preferred specification, shown in column 2 of [Table 2](#), we find that a \$1,000 increase in exports per worker is associated with a 1.1 percentage points rightward shift in local-level ideology. We find very similar results across both variations of MIS. Importantly, our analysis does not reveal any discernible impact of rising import com-

petition from China on regions that were more exposed to this shock. These results highlight the differential effects of export demand and import competition on local political dynamics in the context of the China shock in Brazil.

To ensure the reliability of our findings, we estimate models with different specifications and outcome measures, as presented in [Table S1](#) and [Table S2](#). We examine models with and without state fixed effects, population-weighted estimations, inclusion of lagged outcome variables, consideration of changes in ideology across mixed elections, and analysis of right-wing candidate vote shares in presidential elections. Across all specifications, our results remain consistent, indicating that the increase in export demand caused a shift towards right-wing ideological preferences. Additionally, we employ different approaches to calculate standard errors following the most recent advances in the econometric literature about the use of shift-share instrumental variables (Borusyak, Hull, and Jaravel [2022](#); Adao, Kolesár, and Morales [2019](#)). These works caution against using geographically clustered standard errors in shift-share designs due to residual correlation between regions with similar sectoral compositions, and Adao, Kolesár, and Morales ([2019](#)) develop a methodology to adjust for these issues. As a robustness exercise, we provide confidence intervals built with these alternative standard errors in [Table S3](#). Again, the exercise confirms the robustness of our results for exports, while showing that the results for imports are not significant.

We also conduct a dynamic analysis by using the change in mortality between 2000 and different years, from 1994 to 2018, as the dependent variable. The regressors remain the same; the trade shock variables are always calculated using the changes in trade between 2000 and 2010. Thus, besides investigating longer-term effects of the trade shocks, this analysis serves as a robustness test for pre-trends and placebo effects (when using data prior

to 2000). The left graph of Figure 4 depicts the results for presidential election years, while the right graph also incorporates municipal years. As expected, the placebo regressions using data from before 2000 yield statistically null coefficients, while the estimates after China's entry into the WTO are all positive. Moreover, the impact of exports remained positive even after 2010, which means the China shock had long-term effects on political preferences.

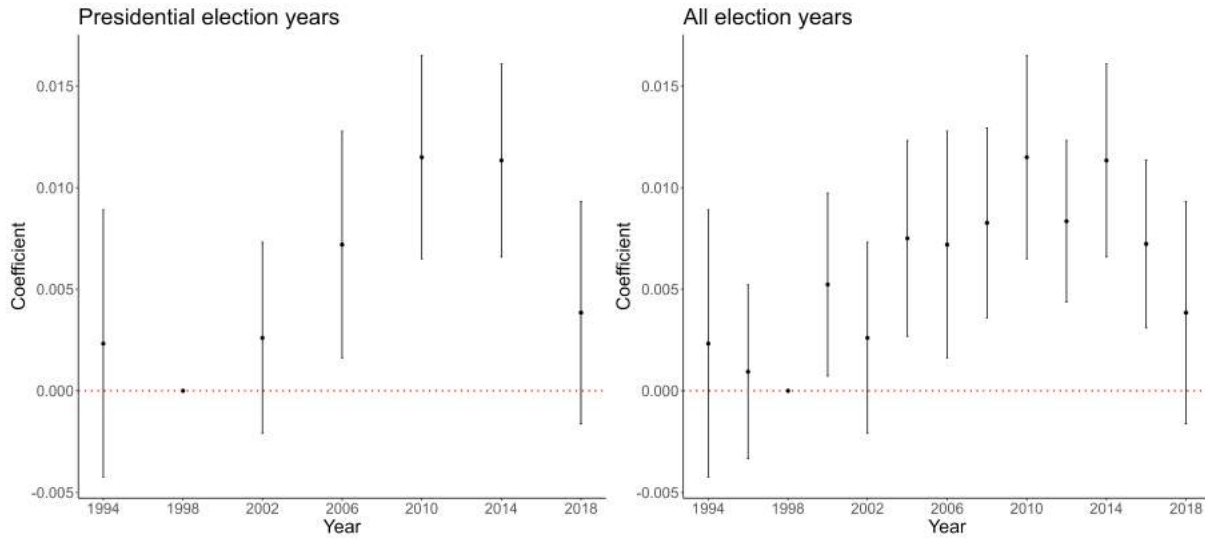


Figure 4: **Dynamic effect of exports on ideology.** This figure shows coefficients from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese export shocks on changes in municipal ideology between 1998 and different years. The left panel shows presidential election years and the right shows both presidential and municipal election years. The export shock is always calculated considering the difference in exports between 2000 and 2010. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. 95% confidence intervals are plotted based on standard errors clustered at the mesoregion level.

Regarding heterogeneity, our analysis reveals that changes in ideology resulting from rising export demand are driven not only by municipalities at the extremes of the income distribution but also by municipalities with higher shares of white population. As shown in

[Table S4](#), municipalities with higher shares of white population exhibit a significant rightward shift in political preferences. This finding suggests that the effect of export demand on political ideology varies not only across income levels but also across racial demographics.

Finally, in [Table S5](#) of our appendix, we present evidence that there is no strong relationship between increasing export demand and changes in neither voter turnout nor polarization. The stability of voter turnout rates indicates that the shift in political preferences is more likely influenced by other factors, such as the economic impact of the China shock, rather than changes in the overall participation of voters. Meanwhile, the slightly negative effect on polarization, significant at 10%, suggests that the trade shocks do not lead to increases in polarization as it was observed in other countries.

5.1.2 Mechanisms

To gain insights into the potential economic changes in local markets caused by the China shock, we examine the impact of exposure to rising import competition and increasing export demand on labor market outcomes. Our analysis builds upon previous research conducted by Costa, Garred, and Pessoa ([2016](#)) during the same period, which revealed that local labor markets with higher exposure to Chinese import competition experienced slower growth in manufacturing wages. In contrast, locations that benefited from the rising Chinese commodity demand between 2000 and 2010 experienced faster wage growth.

The results displayed in [Table 3](#) offer a comprehensive overview of the ramifications of the China shock on local labor markets. In summary, our findings highlights that the surge in China’s export demand has had a meaningful impact. It has increased both local-level household income and wages, as well as decreased unemployment and informality rates.

Table 3: Mechanisms — Effect of the China Shock on the labor market

	Log income	Log wage	Unemployment	Employment	Gini	Informality
	(1)	(2)	(3)	(4)	(5)	(6)
Exports	0.013*** (0.002)	0.010*** (0.003)	−0.001*** (0.0003)	0.001 (0.001)	−0.001 (0.001)	−0.002* (0.001)
Imports	0.046*** (0.011)	0.045*** (0.011)	−0.006** (0.003)	−0.011*** (0.003)	0.018*** (0.005)	−0.004 (0.005)
N	4,266	4,266	4,266	4,266	4,266	4,266

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in different labor market variables between 2000 and 2010. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Specifically, our analysis shows that a decade-long \$1,000 per worker increase in municipal area exposure to Chinese exports corresponds to a noteworthy 1.3 log-point increase in mean earnings, coupled with a 1.0 log-point upswing in wages.

It is important to mention that rising import competition also exhibits positive labor market outcomes concerning income, wages, and unemployment, because in developing countries imports from China allowed firms to source better inputs, which increased productivity (Alfaro et al. 2022). However, this rise in imports also led to heightened inequality and reduced employment in manufacturing, so that it did not change local-level political preferences, as described above.

Taken together, these results suggest that the disadvantages stemming from rising import

competition, particularly in sectors like manufacturing, appear to have been counterbalanced in developing countries by the benefits of access to new technologies. Moreover, increasing export demand benefited areas with comparative advantage in sectors such as mining and agriculture, increasing income and employment. As previous literature has shown, higher income is generally associated with a more conservative political ideology. [Figure S2](#) shows that this relationship is present in our data, as there is a positive correlation between average income and right-wing votes across municipalities. Municipalities in higher deciles of the average household income distribution exhibit more rightist political tendencies. This association is consistent both in terms of the ideology indicator and the vote share in presidential elections, even after adjusting for demographic factors.

However, though the positive relationship between income and right-wing ideology may help explain the results we observe for exports, it does not explain why we find no result for imports, as column (1) of [Table 3](#) shows that both shocks led to income increases. Column (5) of the same table provides a possible explanation by showing that the import shock led to increases in inequality while there was no such effect for exports. We thus turn to investigate the effect of the China Shock on incomes by decile within municipalities in [Figure 5](#), to analyze which workers had income gains with these shocks. This figure displays coefficients analogous to those in column (1) of [Table 3](#), but running a separate regression for each income decile within municipalities. It shows that exports had a positive effect on incomes of workers throughout the whole distribution, particularly among the poorest workers in the bottom of the distribution. Meanwhile, imports increased incomes only among the richest in each municipality.

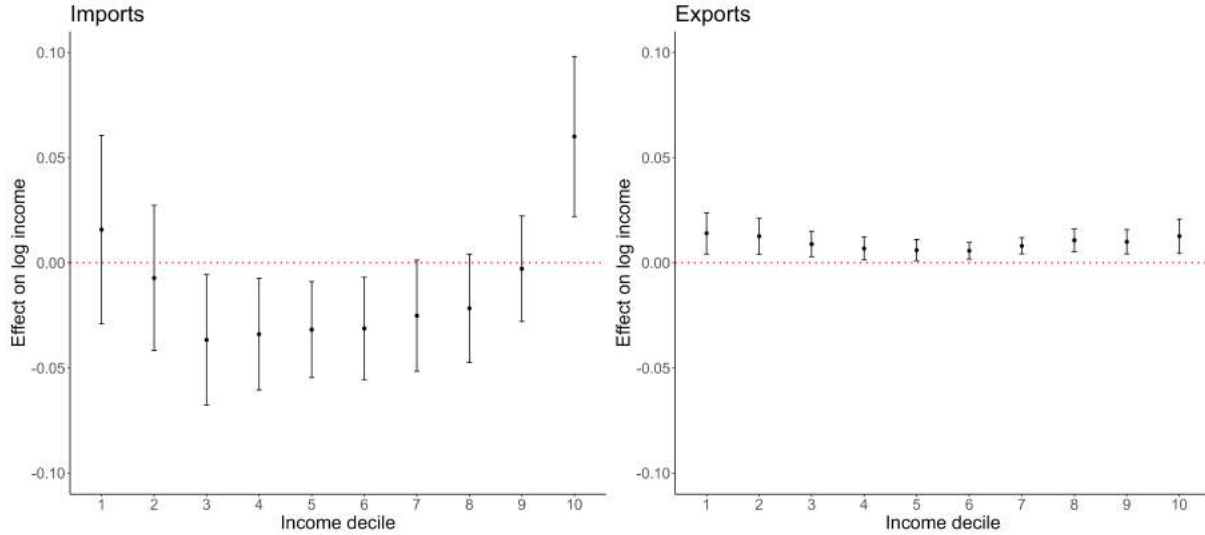


Figure 5: **Effect of the China Shock on average income by decile.** This figure shows coefficients from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese export and import shocks on changes in average income between 2000 and 2010. We run one regression for each decile, such that these regressions are analogous to column (1) of [Table 3](#), but consider average incomes in deciles within each municipality instead of the total average income in the municipality. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. 95% confidence intervals are plotted based on standard errors clustered at the mesoregion level.

These results are also reflected in terms of reliance on social security programs. The findings presented in [Table 4](#) show that the expansion of export demand is closely linked to a decline in the proportion of families benefiting from the *Bolsa Família* program, which is accompanied by a parallel reduction in per capita expenditure in the program, while there is no effect for imports. This outcome gains particular importance within the Brazilian context, as the *Bolsa Família* program was established by the primary left-wing party, PT, and has

remained a cornerstone of its political agenda since its establishment. Meanwhile, right-wing parties have often criticized the program during their political campaigns. Thus, the diminished significance of this social program in municipalities more exposed to escalating export demand following the China shock can be interpreted as one of the mechanisms contributing to the observed rightward shift in Brazil.

Table 4: Mechanisms — Bolsa Família

	Share of families covered	Value spent per capita
	(1)	(2)
Exports	−0.003*** (0.001)	−1.140*** (0.391)
Imports	0.004 (0.006)	−0.339 (1.703)
N	4,266	4,266

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in the Bolsa Família (Brazil’s CCT program) coverage between 2004 and 2010 in each municipality. Column (1) considers the number of families included in the program divided by the total number of families in each municipality, while Column (2) considers the total value spent in the program divided by the total population in each municipality. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

We also consider the hypothesis that beneficiaries of trade, those who experienced an

increase in income due to surging export demand, may inherently incline towards endorsing right-wing candidates. Such a predisposition, if prevalent, might manifest in amplified campaign contributions to right-leaning political aspirants, in periods of increased export revenues. We find that the increase in exports leads to a growth in the value added of the agricultural sector (Table 5). It could be that these specific groups who benefit from increased profits also achieve greater potential for political influence.

Table 5: Alternative mechanisms — Effect of the China Shock on the agricultural sector

	Value added per capita	Value added (% of GDP)
	(1)	(2)
Exports	0.128** (0.055)	0.002* (0.001)
Imports	0.119 (0.140)	0.009 (0.007)
N	4,266	4,266

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in the agricultural sector between 2000 and 2010. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Yet, Table 6 shows that the China Shock had no significant effects on the financial support for candidates aligned with right-wing parties, measured by the total value of contribution (column 1) or the average contribution (column 2).

Lastly, we examine whether municipalities with higher exposure to export demand had

Table 6: Alternative mechanisms — Campaign Funding

	Total (right)	Average (right)
	(1)	(2)
Exports	0.004 (0.020)	−0.002 (0.015)
Imports	−0.050 (0.093)	−0.072 (0.075)
N	4,264	4,264

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in campaign funding among rightist candidates between 2004 and 2012. Data is not available for before 2004. Dependent variables are calculated as follows: "Total" is the total value, in 2012 BRL, of revenues received by candidates, among candidates running for the municipal legislative house ("vereador") affiliated with parties classified as having rightist ideology, and "Average" is the value divided by the number of candidates that were running. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

an increase in the vote shares for two prominent caucuses in Brazil—the Agrarian Caucus (AC) and the Evangelical Caucus (EC), both of which have recently aligned with right-wing ideologies. However, as illustrated in [Table 7](#), our analysis does not unveil any significant impacts on the vote shares of these groups resulting from either rising import competition or increasing export demand. Intriguingly, there is some evidence to suggest that regions with higher exposure to export demand witness an increase in the share of candidates identified

with right-wing ideologies (column 3), hinting at potential supply-side dynamics instigated by the China shock, as well.

Table 7: Alternative mechanisms — Candidate ideology

	AC vote share	EC vote share	Candidate share (right)
	(1)	(2)	(3)
Exports	−0.002 (0.004)	0.003 (0.002)	0.004* (0.002)
Imports	0.009 (0.019)	−0.006 (0.009)	0.020* (0.011)
Observations	4,266	4,266	4,264

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in different variables related to candidate ideology. Columns (1) and (2) show the effect on the vote shares for politicians affiliated to the Agrarian Caucus (AC) between 1998 and 2010, to the Evangelical Caucus (EC) between 2002 and 2010. The dependent variable is defined as the share of votes in the elections for federal legislative representatives in each municipality that were for representatives identified as belonging to the AC. Column (3) shows changes in the share of rightist candidates among all candidates for the municipal house ("vereador") between 2000 and 2012 in each municipality. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

6 Discussion

This paper examines the role of globalization in Brazil’s recent political shift towards right-leaning ideologies and the potential drivers of this relationship. By taking advantage of China’s accession to the WTO in 2001 and employing a shift-share instrumental variable (SSIV) approach with data from 4,249 municipalities between 2000-2010, we identify a trend towards rightist ideologies in local markets that experienced increasing export demand. The ideological shift appears to be linked to improved labor market conditions, including higher income and wages and lower unemployment, informality rates and reliance on social security policies.

Our study contributes to the growing research literature that investigates political responses to economic shocks. Therefore, our results support the view that economic changes can shape political behavior. Our findings suggest that economic gains from increasing export demand caused a rightward shift in political preferences and an increase in electoral support for the right-wing presidential candidate during our period of analysis. Particularly, we present evidence of local political response resulting from economic gain.

By examining the impact of the China shock on a developing country that maintains close ties with China, our study provides evidence of how emerging economies can experience international trade shocks in distinct ways compared to developed economies. While existing literature in the U.S. and Europe primarily associates the rise of import competition with a rightward shift in political preferences due to deteriorating labor market conditions, our findings reveal a different pattern in Brazil. Specifically, we illustrate a relationship between improving labor market conditions—stemming from a surge in export demand—and

a shift toward more conservative political preferences. This indicates that the drawbacks associated with escalating import competition in sectors like manufacturing are counter-balanced by the benefits of expanding export demand in sectors such as agriculture. As a result, employment prospects improve, reliance on social security diminishes, and there is a corresponding inclination towards politicians advocating economic liberalism, typically represented by right-wing parties in Brazil.

Based on the literature indicating that individuals experiencing positive income shocks are less likely to support redistributive policies and that beneficiaries of such policies may exhibit pro-incumbent voting behavior, we hypothesize that in municipalities more exposed to rising export demand, where social security becomes less relevant due to improved labor market outcomes, individuals become less supportive of the left-wing's welfare state platform and more supportive of right-wing parties with a more liberal agenda.

Our research adds a significant dimension to the broader understanding of economic shocks and their political implications, but it is not without its limitations. A primary challenge is tracing the exact origins of these political movements. We explored the hypothesis that municipalities with greater exposure to export demands experienced an uptick in vote shares for two major Brazilian caucuses: the Agrarian Caucus (AC) and the Evangelical Caucus (EC). Both have recently aligned with right-wing ideologies. Our findings did not highlight any significant link between increased export exposure and heightened vote shares for candidates from these caucuses. However, we identified an increase in the share of right-wing candidates in municipalities more exposed to increasing export demand.

This prompts crucial avenues for further research: Which right-wing candidates, unaffiliated with AC or EC, might have benefited electorally from the China Shock? What

underlying mechanisms could account for our findings? Is the shift a result of evolving party ideologies or the emergence of new candidates (supply-side factors)? Or is it primarily shaped by voters' increasing preference for right-wing parties (demand-side factors)? Although our analysis supports a demand-side rationale—evidenced by diminished reliance on social security policies—and offer preliminary evidence in favor of a supply-side argument, underscored by higher proportions of right-wing candidates in areas experiencing increasing export demand, the broader narrative remains inconclusive. Therefore, further research can better elucidate the potential mechanisms for the interplay between globalization and political shifts.

In summary, our research highlights the intricate relationship between economic drivers and political dynamics in emerging markets. While global integration offers economic advantages, it's imperative for policymakers to anticipate the political repercussions stemming from shifts in trade strategies or global disturbances that influence local markets' engagement with the international stage. Understanding these political ramifications of economic shifts is pivotal for informed policy-making in developing countries, especially when they lean on international integration as a lever to spur more advanced economic growth.

In contrast to research focusing on developed countries, our study does not reveal any significant political response to increasing import competition. This suggests that the drawbacks linked with rising import competition in sectors such as manufacturing were likely offset by the benefits of expanding export demand in sectors like agriculture and mining. These findings shed light on the complex relationship between globalization, labor markets, and political dynamics, offering valuable insights into the political implications of international trade shocks in emerging economies.

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Supporting Information

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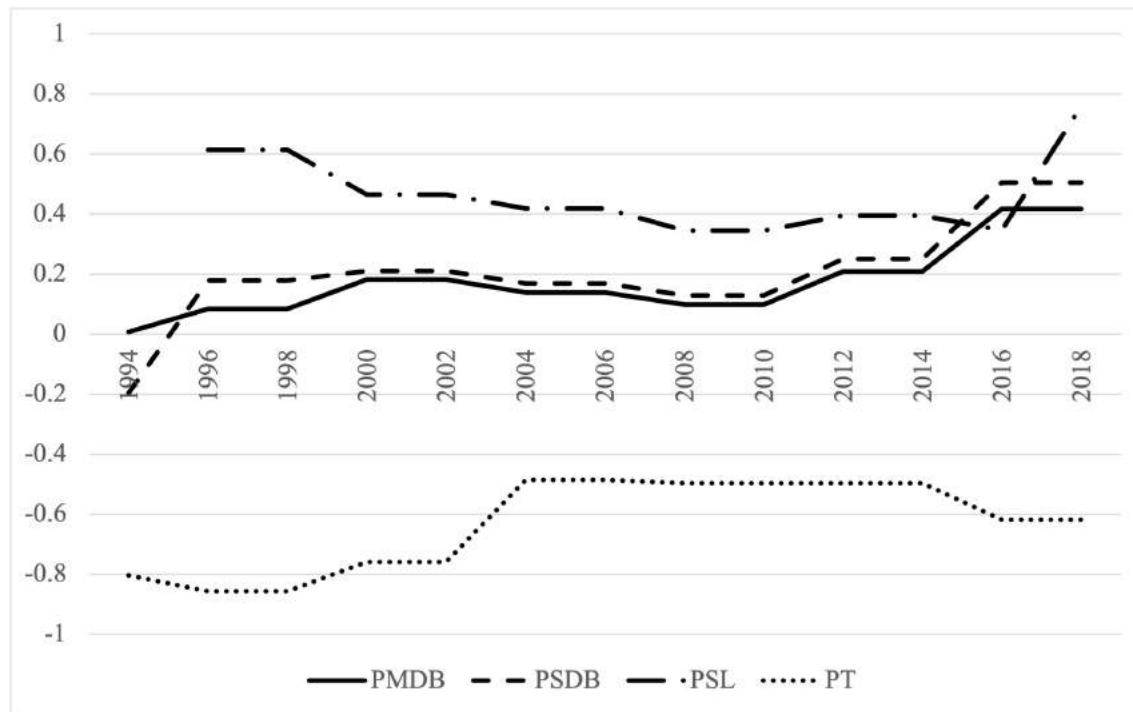


Figure S1: **Party level ideology.** This figure displays the temporal progression of ideology, as measured at the party level, for a set of selected parties. The data utilized in this analysis is sourced from Power and Rodrigues-Silveira (2019). Further information on the calculation methodology can be found in Section 4.2 of the paper.

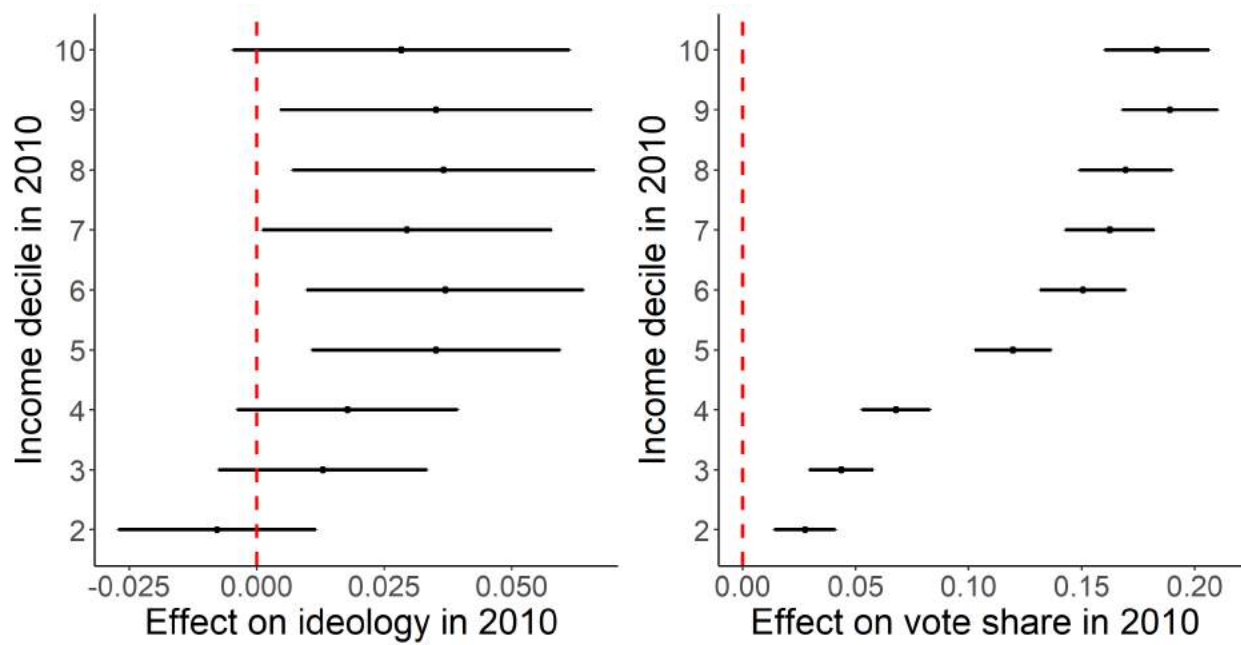


Figure S2: **Relationship between income and ideology.** This figure shows coefficients from OLS regressions of municipal ideology (measured with the municipal ideology indicator on the left and with the vote share of the rightist presidential candidate on the right) on deciles of average household income, comparing average incomes across municipalities in 2010. The regressions include controls for the sectoral and demographic composition of the municipalities (in terms of race, age, and education).

Table S1: Robustness tests — effect of the China Shock on ideology

	Main	No FE	No controls	Weighted	Pre-trend	Mixed elections	Mun. elections	Base 2002	Votes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exports	0.011*** (0.003)	0.016*** (0.006)	0.011*** (0.003)	0.012** (0.005)	0.013*** (0.004)	0.007*** (0.002)	0.003* (0.002)	0.009*** (0.002)	0.006*** (0.001)
Imports	0.007 (0.017)	−0.019 (0.022)	0.031** (0.013)	0.021 (0.024)	0.001 (0.023)	0.021* (0.012)	0.018* (0.010)	0.013 (0.015)	0.004 (0.009)
Period	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010	2000-2010	2000-2012	2002-2010	2002-2010
Dep. var.	Ideology	Ideology	Ideology	Ideology	Ideology	Ideology	Ideology	Ideology	share right
N	4,249	4,249	4,249	4,249	4,248	4,018	4,018	4,266	4,259

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in ideology comparing different specifications. The trade shock is measured using the difference in trade between 2000 and 2010. The ideology change is calculated using the municipal ideology indicator in different years. All regressions include controls for the sectoral composition in 2000 (except column (3)) as well as state fixed effects (except column (2)). Column (4) is weighted by municipality population. Column (5) controls for previous trends in ideology by including the change in ideology between 1994 and 1998, instrumented by the level in 1994 to avoid auto-correlation of residuals. Column (6) uses the difference in ideology between 2000 (municipal election year) and 2010 (presidential election year). Column (7) uses 2000 and 2012 (both municipal election years). Column (8) uses 2002 and 2010. Column (9) uses a different indicator for ideology: the share of votes received by the right-wing candidate in the second round of votes in the presidential election. Standard errors shown in parentheses are clustered at the mesoregion level. *p<0.1; **p<0.05; ***p<0.01

Table S2: Robustness tests: effect of the China Shock on ideology — alternative ideology indicator

	Main	No FE	No controls	Weighted	Pre-trend	Mixed elections	Mun. elections	Base 2002
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exports	0.010*** (0.003)	0.016*** (0.006)	0.009*** (0.003)	0.012** (0.005)	0.011*** (0.004)	0.006*** (0.002)	0.003 (0.002)	0.009*** (0.003)
Imports	0.011 (0.017)	−0.018 (0.021)	0.036*** (0.013)	0.021 (0.024)	0.008 (0.023)	0.021* (0.011)	0.022** (0.010)	0.014 (0.017)
Period	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010	2000-2010	2000-2012	2002-2010
N	4,249	4,249	4,249	4,249	4,248	4,018	4,018	4,266

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in ideology comparing different specifications. The trade shock is measured using the difference in trade between 2000 and 2010. The dependent variable is the change in the imputed ideology indicator in different years. All regressions include controls for the sectoral composition in 2000 (except column (3)) as well as state fixed effects (except column (2)). Column (4) is weighted by municipality population. Column (5) controls for previous trends in ideology by including the change in ideology between 1994 and 1998, instrumented by the level in 1994 to avoid auto-correlation of residuals. Column (6) uses the difference in ideology between 2000 (municipal election year) and 2010 (presidential election year). Column (7) uses 2000 and 2012 (both municipal election years). Column (8) uses 2002 and 2010. Standard errors shown in parentheses are clustered at the mesoregion level. *p<0.1; **p<0.05; ***p<0.01

Table S3: Robustness tests — Standard Error Comparison

	$\hat{\beta}_{2SLS}$	Mesoregion	AKM	AKM0
	(1)	(2)	(3)	(4)
Panel A: Ideology				
Exports	0.012	[0.007, 0.017]	[0.009 , 0.015]	[0.010, 0.024]
Imports	0.006	[−0.028, 0.041]	[−0.020 , 0.032]	[−0.046, 0.041]
Panel B: Ideology (imputed)				
Exports	0.010	[0.005, 0.016]	[0.007 , 0.014]	[0.008, 0.024]
Imports	0.010	[−0.023, 0.044]	[−0.012, 0.033]	[−0.034, 0.042]
N	4,249	4,249	4,249	4,249

Note: This table shows 95% confidence intervals for our main specification of Two-Stage Least Squares (2SLS) regressions that estimates effects of Chinese import and export shocks on the change in ideology between 1998 and 2010. To allow comparability between estimates, in this table the instruments are separately added (i.e we run one regression for each instrument, controlling for the other). Column (1) shows the coefficients based in our main specification with the exception that, here, instruments are separately added such that each row represents a different model). Columns (2) to (4) compare confidence intervals built based on different standard errors. Column (2) is our main specification approach, in which we cluster standard errors by mesoregion, following Costa, Garred, and Pessoa (2016). Columns (3) and (4) use the AKM and AKM0 procedures developed by Adao, Kolesár, and Morales (2019). For these columns, we group our 4-digit sectors derived from the CNAE categorization into 48 larger 3-digit sectors.

Table S4: Heterogeneity: income and demographic profile

	Levels in 2000					
	Top Income	Bottom Income	Top Poverty	Bottom Poverty	Top Black	Top White
	(1)	(2)	(3)	(4)	(5)	(6)
Exports	0.012** (0.005)	0.013 (0.008)	0.008** (0.004)	0.015** (0.006)	0.009 (0.007)	0.008*** (0.003)
Imports	0.011 (0.019)	-0.046 (0.136)	-0.037 (0.064)	-0.002 (0.024)	-0.027 (0.050)	0.009 (0.021)
Observations	1,058	1,067	1,067	1,356	1,066	1,066

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in ideology in sub-samples of municipalities in the top or bottom quartile of the municipality distribution in 2000 of average household income, poverty rate, and share of whites and blacks in the adult population. The trade shock is measured using the difference in trade between 2000 and 2010. The ideology change using the municipal indicators is measured using the difference between 1998 and 2010. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. *p<0.1; **p<0.05; ***p<0.01

Table S5: Additional results: turnout and polarization

	Turnout	Polarization
	(1)	(2)
Exports	0.001 (0.001)	-0.032* (0.018)
Imports	-0.003 (0.004)	-0.167* (0.095)
Observations	4,249	4,249

Note: This table shows results from Two-Stage Least Squares (2SLS) regressions that estimate effects of Chinese import and export shocks on changes in turnout and polarization between 1998 and 2010. The trade shock is measured using the difference in trade between 2000 and 2010. All regressions include controls for the sectoral composition in 2000 as well as state fixed effects. Standard errors shown in parentheses are clustered at the mesoregion level. *p<0.1; **p<0.05; ***p<0.01