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Import shocks and voting behavior in Europe revisited

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Import Shocks and Voting Behavior in Europe Revisited

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Import Shocks and Voting Behavior in Europe Revisited*

Abstract

We provide first evidence for the long-run causal impact that Chinese imports to European regions had on voting outcomes and revisit earlier estimates of the short-run impact for a methodological reason. The fringes of the political spectrum gained ground many years after the China shock plateaued and, unlike an earlier study by Colantone and Stanig (2018b), we do not find any robust evidence for a short-run effect on far-right votes. Instead, far-left and populist parties gained in the short run. We identify persistent long-run effects of import shocks on voting. These effects are biased towards populism and, to a lesser extent, to the far-right.

Keywords: globalization, import shocks, populism, voting behavior

JEL classification: D72, F6, J2

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1 Introduction

Exports from China rose substantially since the early 1990's and then exploded around the country's entry to the WTO in 2001. Western economies suddenly faced strongly rising import competition, which has later been coined the 'China Shock'. This competition was concentrated on several manufacturing industries, which themselves were often clustered in certain regions. Over the last decades, there was also a lasting increase in support for fringe political parties in Europe, accompanied by a decline in traditional party families such as social democrats and conservatives. Given the Brexit Vote and Trump's presidential victory, scholars have extensively examined the potential link between the China shock and voting behavior. Economists generally posit that import competition negatively affects specific industries and local labor markets, which is not leading to Pareto improvements and instead generates both winners and losers (Autor et al. 2014, Dauth et al. 2014, Yi et al. 2024). As per this argument, the adverse impact on workers might subsequently translate into political consequences, favoring fringe political parties (Autor et al. 2020, Colantone and Stanig 2018b, Dippel et al. 2022). We will make two contributions to the literature on the political consequences of trade shocks. First, we extend the literature on the short-run effects of the China shock on voting outcomes by revisiting results on the pan-European perspective put forward by Colantone and Stanig (2018b). Second, we are first to analyze whether the China shock has long-run effects on voting behavior across Europe.

The link between economic globalization and populism is typically discussed within the theory of 'embedded liberalism' put forward by Ruggie (1982). The basic idea is that economic globalization increases economic prosperity but is unstable, as it leads to economic insecurity and creates winners and losers. The compromise after World War II was to combine trade openness with a set of extended social policies aiming on buffering adverse economic shocks and income insecurity. While individual hardship can be mitigated by the welfare state to some extent, the capability of the welfare state is limited and, thus, profound and enduring increases in economic globalization can undermine the foundations of embedded liberalism and raise concerns on whether redistribution can be sustained. The problem is likely aggravated by the fact that capital is mobile, which limits governments' possibilities to finance social insurance by taxing capital. Against the background of the China shock, skyrocketing inequality, and the demise of traditional industrialized regions, so the argument goes, political actors promising protectionist measures to shelter workers against globalization gained ground.[1]

[1]Colantone and Stanig (2019) and Margalit (2019) give a detailed discussion of these theoretical concepts. Recently, Bergh and Kärnä (2022) show in a pan-European setting that economic hardship measured as unemployment predicts left-wing populism.

The impact of trade shocks on voting behavior may be attributable to their influence on economic conditions or to voter discontent with globalization (Rodrik 2021). However, it is not immediately evident whether the unequal burdens resulting from global competition would affect vote shares. The underlying assumption is that those who suffer from global competition would oppose it (and thus may vote for economic nationalism), while those who benefit would support it. However, there is a substantial body of evidence suggesting that personal (economic) circumstances explain very little of the variation in people's attitudes. Margalit (2019) gives a nice treatment of this debate and summarizes (Margalit 2019:164): *Researchers have thus concluded that a model that assumes voters' opinions about trade are shaped by their position in the labor market and the fortunes of their industry (...) is of little use in explaining mass attitudes on trade.*

Colantone and Stanig (2018b) conducted a causal analysis of the short-run impact of the China Shock on voting behavior in European regions for 15 Western European countries. Following the above line of thoughts they proposed that trade's unequal effects on workers would bolster 'economic nationalism' (a term also used in Ruggie (1982) to describe the international regime of the 1930's) rather than support traditional left-wing parties focused on redistribution. Their argument was based on the notion that voters lost faith in the efficacy of left-wing policies in mitigating the hardships caused by trade, leading them to seek refuge in actors promising protection against import competition. By combining the increase in a region's exposure to Chinese imports with regional election data, Colantone and Stanig (2018b) find empirical support for a rise in vote shares for nationalist and radical right parties. Interestingly, Bergh and Kärnä (2021) find no short-run association between various measures of globalization (including economic globalization) and populist vote shares across European countries. We revisit the causal analysis of Colantone and Stanig (2018b) on the short-run impact of the China shock on election outcomes across European regions for a methodological reason. Colantone and Stanig (2018b) relate trade shocks to a region's *level* of, e.g., radical-right vote share, and therefore literally demonstrate that trade shocks are stronger in regions that have higher votes for radical-right parties. We will show in several placebo tests that import shocks were stronger in regions that had higher vote shares for radical-right (and other fringe) parties even *before* the import shocks happened. In contrast to Colantone and Stanig (2018b), we will relate the trade shock, which essentially is a *change* in import competition, to *changes* in vote shares for several party families (such as e.g. radical-right). Unlike Colantone and Stanig (2018b), this allows us to test whether trade shocks indeed led to changes in vote shares.[2]

[2] A first-difference approach applied to party vote shares would not capture within-party changes in political

Studies investigating the effects of trade shocks in Europe in a single country setting look into the impact of trade shocks both on the labor market and on voting behavior, or combine both.[3] Dauth et al. (2014) studied the impact of increased trade exposure (from Eastern Europe and China) on the German labor market from 1988-2008. Compared to US evidence (Autor et al. 2013), they find only small employment effects. Looking at trade exposure in Germany, Dippel et al. (2022) further investigated the consequences for nationalist voting behavior. They show that exposure to trade leads to increasing support for nationalist parties during the shock period and find evidence for subsequently higher support for AfD[4] in 2013. For the case of Italy, Caselli et al. (2020) studied the impact of immigration intensity and import exposure on voting behavior. They find that both had a positive impact on election results of the far-right but only an increase in immigration can explain changes in voting behavior towards right-wing and traditionalist, authoritarian and nationalist parties. Barone and Kreuter (2021) further find a shift towards populist voting, deterioration of labor market conditions and increased inequality for Italian regions with higher import exposure.

Our second contribution is a long-run analysis of the effect of the China Shock. We ask the question of whether any impacts on voting behavior have a delayed onset. The aforementioned studies on the political consequences of trade shocks do not analyze potential long-run effects of import shocks. It is straightforward to adapt the theoretical concepts of embedded liberalism and economic nationalism sketched above to understand why there can and should be long-run effects of the China shock on voting. As detailed earlier, the core idea in earlier studies is that voters will lose faith in redistribution if they start believing that governments may not be able to sustain redistribution. This is already a longer-run perspective. The China shock is essentially a period of increasing imports from China and thus accumulates over time and became a permanent burden for import competing European regions.[5] In the short run, when the burden imposed by import shocks is not yet fully felt and when it is still unclear whether the shock is transitory or permanent, voters may turn to left-wing parties and seek for social insurance. Supporting this view, Margalit (2019) concludes his literature review stating that the demand for redistributive policies does increase after economic shocks but that this effect

orientation over time, such as the degree of populism exhibited by a party. To address this, we incorporate new data that provides a time-varying measure of populism intensity for each party. Results do not differ from those using a time-invariant party classification measures.

[3] A review of studies on the broader question of how economic shocks impact voting behavior is given in Margalit (2019).

[4] Alternative für Deutschland, German right wing populist party.

[5] Autor et al. (2021) analyzed the duration of the China shock for the US labor market and show that the shock plateaued in 2010. They find persistent labor market effects present up until 2019 and, for instance, estimate that increased import competition can explain 55% of the observed decline of the manufacturing employment population. They do not, however, analyze voting outcomes.

is often short-lived. Only in the longer run, when it became obvious that Chinese imports are here to stay, the sound theoretical arguments for effects of trade on voting reviewed above kick in. That is, voters may lose faith in redistribution and turn to economic nationalism to protect themselves against trade only after the permanent nature of the change was fully felt.

A recent paper by Barth et al. (2023) adds another mechanism for understanding long-run effects. They explore the relationship between trade openness and voters' inclination towards social insurance in the face of income risks, incorporating an income channel alongside the traditional risk channel. The income channel captures the willingness to pay for social insurance. They argue and find empirical support for the notion that a negative income effect can dominate the risk channel and thus leads to less extensive social insurance despite rising trade openness. This argumentation provides insight into the long-term effects of trade because initial income losses may be buffered by the welfare state, whereas over time, they rise and overshadow the risk channel, which reduces support for costly left-wing redistributive policies in the longer run. Hence, voters may progressively disengage from redistributive left-wing parties over the long term.[6]

Colantone and Stanig (2018a) studied the long-term impact of the China shock on the Brexit referendum in 2016. They find systematically higher leave vote shares in regions with higher import exposure. As the Brexit referendum took place only once, an investigation of *changes* in regard to the leave share is not possible. Given the uniqueness of the referendum, the study does not give further insight into the long-run effects of trade shocks on voting behavior in general elections. An open question is thus whether, in a pan-European setting, regions that suffer from trade shocks do favor populist and right-wing parties even many years after the trade shock plateaued.

We demonstrate that the rise in vote shares for fringe political parties in Europe materialized many years after Chinese import numbers stabilized. From this background, it is not surprising that we find that the China shock did not change far-right vote shares and overall populism intensity (averaged over the entire political spectrum) in the short run. We rather show that regions being more severely hit by the China shock had higher far-right vote shares and higher populism intensity *prior* to the shock. Interestingly, the trade shock was most pronounced in

[6]There have been other important long-run changes that might have an impact on voting behavior, in particular rising immigration. Accompanied by trends of immigration, studies show a decrease in demand for redistributive policies when ethnic diversity increases (Achard and Suetens 2023; Dahlberg et al. 2012; Edo et al. 2019). When there is a mismatch between the politician or elite representation of the voters opinion on these views, populist parties might benefit (Kärnä and Öhberg 2023). Note that within many countries refugees are assigned to regions based on certain fixed distribution schemes (Dustmann et al. 2019) that are arguably unrelated to the prevalence of Chinese import shocks.

regions within a few small and wealthy countries. Our results do not necessarily stand in contrast to country-specific analyses discussed before (Autor et al. 2020; Barone and Kreuter 2021; Caselli et al. 2020; Dippel et al. 2022). The countries analyzed differ not only in their culture and political system. The studies also differ in their empirical specification (e.g. import exposure versus net trade exposure), their level of regional aggregation (e.g. county versus county-by-congressional-district cells), and many other details (e.g. the exact timing of shocks and voting). Furthermore, the impact of the China shock seem to depend on specific aspects of the affected region (e.g. whether having white minority in Autor et al. 2020).

Secondly, we find small positive effects on the contemporaneous vote shares of far-left and populist parties. This is in line with some results in Autor et al. (2020), who report positive effects for left-wing democrats (in regions without a white population majority). Our findings do not support the hypothesis that trade shocks immediately foster support for far-right parties at the expense of (redistributive) left-wing parties.

Thirdly, we document that the rise of the fringes of the political spectrum materialized many years after the China shock plateaued. When examining the long-term changes in voting outcomes (measured many years after the China Shock had stabilized) in relation to the increase in Chinese imports between 2000 and 2007, we identify persistent long-term effects of import shocks. Long-run effects are in favor of populist parties and overall populism intensity, and, to a lesser extent, the far-right. This suggests that debates on the relevance of trade shocks on voting behavior should more closely consider long-run effects.

2 Data

We collected election data for 15 European countries from the EU-Ned Database (Schraff et al. 2023), which provides information on the electorate and election results at the NUTS 2 regional level, harmonized according to the NUTS 2016 classification. This novel data set considers territorial changes of NUTS regions, enabling the comparison of election results over time at the NUTS2 level.[7] We will use data for national parliament elections, only.

The election data is initially recorded at the individual party level and needs to be classified into different party families for our multi-country analysis. We utilized two distinct data sets for party classification. Firstly, the PopuList classification data set (Rooduijn et al. 2019) includes information on all parties from European countries that obtained at least 2 percent or had

[7]The EU-Ned data is also available at the NUTS3 level but we will operate on the NUTS2 level because variables on regional employment shares necessary to construct the trade shock measure are not available at the NUTS 3 level for many countries. The data was converted to the NUTS2 2023 classification.

one seat in at least one of the national parliamentary elections from 1990-2020. It provides classifications for each party as far-right, far-left, or populist. Parties are permanently assigned to a specific party family, which means changes in the political agenda within parties cannot be analyzed. For more details see appendix A. In the classification process, the PopuList follows the *ideational* approach, which is particularly suitable in comparative studies (Mudde 2017). For the far-left and far-right classification, parties could be divided into radical and extreme parties. It is often argued that populism and extremism are incompatible due to their relation to democracy, but distinctions between radical and extreme are often not clear and therefore the PopuList summarized those parties in groups of far-right and far-left. Far-right parties are defined as nativist and authoritarian, following the definition in Mudde (2007). Far-left parties are outlined as parties advocating for changes to the structure of the economy and organization of power, criticizing contemporary capitalism and demanding redistribution of wealth and other assets (March 2012). For the employed definition of populism, the PopuList follows Mudde (2004), which emphasizes two main characteristics for populist parties. For one, they advocate the idea that the society is divided into two separate groups, the elite and the common people, and second, that the general will of the people should be dominant in the political agenda.

The second party classification data set used is the Varieties of Party Identity and Organization (V-Party, Lindberg et al. 2022), which offers a more specific and *time variant* classification of parties. Parties that achieved at least 3 percent of the vote in their respective elections are classified by a team of country experts based on various indicators. This data set also includes a populism index that measures the extent to which a party employs populist rhetoric in the election year. The populism index varies over time and, in conjunction with election results per region and party, allows us to calculate the populism intensity of the election results per region and election year. Further details on the data set can be found in appendix A and a description on how the populism intensity is determined follows in section 3.

To calculate the impact of the China shock per region as described below, we gathered data on regional employment shares by industry using the NACE Rev 1 classification. Additionally, we obtained trade data between each country and China at the national level, categorized by 2-digit industries. The trade data was sourced from CEPII-BACI (Gaulier and Zignago 2010) at product level and is assigned to NACE Rev 1 via several re-classifications.[8] The regional employment data and the regional sectoral employment data were collected from the Eurostat

[8]Initially, the trade data was provided with HS92 codes, which were matched with SITC3 codes and then further linked to ISIC 3 codes. ISIC 3 codes were easily matched with the corresponding NACE Rev 1 two-digit codes, allowing for the alignment of trade data with employment data from specific industries. As the data was provided in current US $, it was converted to constant 2005€.

regional database and supplemented by national statistical offices. The regional employment data was based on the NUTS2 2006 and NUTS2 2010 classifications. Each regional data set, including employment and election data, was converted to the NUTS 2013 classification using conversion tables provided by Eurostat and the Eurostat NUTS Converter.[9]

3 Empirical Strategy

We investigate the effect of increased import competition from China on changes in regional vote shares and populism intensity in 15 European countries at the NUTS2 geographical level. We look at the immediate impact of changes in imports from China measured in the years directly before elections from 1997 to 2007 and run regressions of the following structure

$$\Delta Y_{crt} = \alpha_{ct} + \beta * ImportShock_{crt} + \epsilon_{crt} \tag{1}$$

where c indexes countries, r the NUTS2 region, t the year of election and ϵ the error term. $\Delta Y_{crt} = Y_{crt} - Y_{cr,t-h}$ is the change of a specific party family's vote share or the populism intensity of a region r as described below over a legislation period of length h.[10] We follow the literature and include country×year (i.e. election) fixed effects α_{ct}. Election fixed effects imply that we compare regions within the same country and election while removing any election-specific peculiarities such as, for instance, country specific shocks, the general political climate, or the charisma of current national party leaders.

Measurement and instrumentation of the trade shock follows the seminal work by Autor et al. (2013) who employ a shift-share design that assigns Chinese imports to regions by combining industry-specific imports to the whole country with the industry composition of the regions. Regions having relatively higher base-year employment in an industry with increasing Chinese imports to the country get assigned a stronger trade shock compared to regions that did specialize less in this industry. Specifically a region's growth in Chinese imports per worker is measured as

$$ImportShock_{crt} = \sum_j \frac{L_{rj(t_0)}}{L_{r(t_0)}} * \frac{\Delta IMPChina_{cj(t,t-k)}}{L_{cj(t_0)}} \tag{2}$$

where $\Delta IMPChina_{cj(t,t-k)}$ is the increase of imports per country c and 2-digit industry j over the last k years prior to the election year t, $L_{rj(t_0)}$ is the baseline industry employment in region r in the year before the first election considered, and $L_{r(t_0)}$ is total regional employment in the

[9] see `https://urban.jrc.ec.europa.eu/nutsconverter/#/`

[10] Legislation periods correspond to four years in most cases and five years for France and Austria but can be shorter if early elections take place.

same year. $L_{cj(t_0)}$ is the total employment per industry and country at the beginning of the sample.

Chinese imports could have increased in a specific destination country because of unobserved characteristics of that destination country. If these unobserved characteristics are related to voting behavior, OLS estimation would be inconsistent. Following the logic in Autor et al. (2013), the import shock is therefore instrumented by

$$IVImportShock_{crt} = \sum_{j} \frac{L_{rj(t_0)}}{L_{r(t_0)}} * \frac{\Delta IMPChinaUS_{j(t,t-k)}}{L_{cj(t_0)}} \tag{3}$$

which is similar to the measure for the import shock per region, except that instead of the imports per industry from China to the specific European country c we use $\Delta IMPChinaUS_{j(t,t-k)}$, i.e. the imports per industry from China to the US between t and $t-k$. Following Colantone and Stanig (2018b), we set $k = 2$. This econometric strategy follows the goal to only use variation in the import shock that rooted in rising Chinese competitiveness in specific industries rather than in any factors operating at the level of the importing European region.

The election outcomes are defined the following way:

$$share_{r,z,t} = \sum_{p} \frac{votes_{p,r,t} * d_z}{votes_{r,t}} \tag{4}$$

$$int_{r,t} = \sum_{p} \frac{votes_{p,r,t}}{votes_{r,t}} * i(populism)_{p,t} \tag{5}$$

$share_{r,z}$ is the share of votes per region r in election year t of parties classified by dummy d_z, where z is either the group of parties classified as far-right, far-left or populist. $share_{r,z}$ thereby only captures the level of party shares from both sides of the political spectrum or populism in general, or changes thereof ($(\Delta)share_{r,z}$). int_r measures the populism intensity from 0-1 per region r, as results of all parties p are weighted by the populism index of the respective party (obtained from VDem data as described in the previous section) in each election year t.

Long-run specification

For estimations investigating the long-run effects we use the following specification:

$$\Delta Y_{cr2000+t_c} = \alpha_c + \beta * ImportShock_{cr2007} + \epsilon_{cr}. \tag{6}$$

We run three different regressions and for each include the import shock calculated as the difference between 2007 and 2000, covering the main period of the import shock. $\Delta Y_{cr2000+t_c}$ is

the change of electoral outcome of each region between the election closest to the year 2000 and successively longer time periods ($2000 + t_c$) similar to Autor et al. (2021). National elections usually take place every four or five years. By choosing the multi-year windows for $t_c = [7 - 11; 12 - 15; 16 - 19]$, we analyze changes in the voting behavior from before the China shock to three later election periods, i.e. the first election after the China shock (2007-2011) and two later election rounds (2012-2015 and 2016-2019), respectively. Each of the three regression periods includes changes of elections outcomes from 2000 to *one* election per region of the respective time period t_c. Pooling elections in time periods instead of performing year-by-year regressions makes sure that we have a sufficient number of observations by period and that we capture the full cross-section of countries and regions within the same pooled period, which avoids that results vary just because of year-by-year compositional changes in the regions analyzed.

We include country fixed effects α_c and instrument $ImportShock_{cr2007}$ with corresponding 7-year shocks to the US analogously to our short-run specification explained above. Note that any unobserved post-treatment shocks will only affect our long-run results if they are systematically related to voting behavior and to the IV variation we are using. As we control for country-fixed effects, any shocks at the national level are controlled for. Hence, we should only be worried about shocks at the within-country NUTS-2 level that are correlated with the rise in China's competitiveness and affect voting. One concern could, for instance, be that in the long run national governments create support schemes to sectors or regions mostly affected by the China shock. If those support schemes mitigate the consequences of the China shock, they may work against finding long-run effects.

4 Results

4.1 Descriptive Evidence

Panel A of Table 1 shows summary statistics for national parliament election years spanning from 1997 to 2007. The average vote share for the far-left (far-right) parties was 5.6 (5.0) percentage points. There is substantial regional variation, with far-left parties obtaining over 20 percent of the vote in East German and Portuguese regions, and far-right parties exceeding 30 percent in Austrian regions. The overall populist intensity, across all parties, is approximately 0.22, with the highest levels observed in Greek regions. Populist parties, on average, receive a vote share of 9.7 percent, with particularly high levels in Austrian and Italian regions, surpassing 30 percent.

More interesting for our empirical analyses will be changes over time as summarized in Panel B of Table 1. The average regional change in imports, here measured over a two-year time span

before an election, was positive at 210 Euros per worker. The variation in this measure is substantial, and we will examine it in more detail both below and in the robustness section (section 4.3). Changes in vote shares are calculated as the difference from the previous election in each region. Notably, the average change per party family is very small. For instance, the average increase in populist vote shares was just 0.5 percentage points per election, which is rather small compared to the mean vote share of 9.7 percent. A similar pattern is observed for the rise in far-left parties. Interestingly, between 2000 and 2007, both populism intensity and the vote share of far-right parties actually *declined*. Of course, there is rich heterogeneity across regions and time that we are going to explore. Overall, our data indicates that the period of the 'China Shock' did not coincide with a surge in far-right and populist parties. As we will demonstrate in section 4.4, though, vote shares for the political fringes rose sharply in the years after the rise in import shocks faded out.

Regional variation in import shocks and voting outcomes

Import shocks exhibit significant variation across regions as depicted in Figure 3, which displays variation in import shocks for NUTS2 regions by countries. The dotted horizontal line represents the overall mean of 0.21. Regions in Austria, Switzerland, Germany, Greece, Spain, France, Ireland, Italy, Norway, Portugal, Sweden and the UK all experience relatively homogeneous and relatively small import shocks. Conversely, regions in Belgium, Finland and the Netherlands have been strongly affected by trade shocks and show a substantial within country variation in import shocks. As we will include country×year fixed effects in our regressions, only cross-region within-country variation will be used. Figure 3 implies that the variation used in our regression will disproportionately contributed by regions in the comparably small and wealthy countries Belgium, Finland and the Netherlands.[11]

Figure 1 presents the regional variation in shock exposure from 2000-2007 and average change in the four voting outcomes from the first to the last election included in the 1997-2007 data set. Panel A highlights again the substantial within country variation in import shocks also depicted in figure 3. Regions with largest shocks are located in Belgium, the Netherlands, Finland and Greece. The maps displaying changes in voting outcomes show that there are very few regions with an increase in any of the party family shares. There does not seem to be a strong correlation between the intensity of the import competition and the voting outcomes. Only regions in Belgium and the Netherlands show high import exposure and an increase in populist voting.

[11] Belgium and the Netherlands host major ports and are thus the point of entry for many imported goods. We will run robustness tests excluding those regions.

Correlations between import shocks and vote shares

Figure 4 depicts the relationship between changes in voting outcomes on one hand and changes in import competition on the other hand in a more stringent manner. The binned scatter plots show positive correlations between all four voting outcomes and import competition. Whereas the import competition pattern seems to be robustly linear for the vote share of far-left and far-right parties, correlation patterns with populism intensity and populist vote shares are primarily driven by regions with very strong increases in import competition. Magnitudes are generally similar but the increase for the far-left and populist party family is strongest. In Section 4.3, we will thoroughly examine whether any of our regression results are influenced by elections preceded by exceptional trade shocks.

4.2 Main Regression Results

Table 2 presents our core results on the causal impact of the China shock on election outcomes across European regions. In the upper panel, we start with the 'wrong' specification where levels in voting outcomes are regressed on the change in Chinese imports. The OLS results in columns 1-4 are qualitatively similar to some of the levels-on-differences results in Colantone and Stanig (2018b).[12] Specifically, where import shocks are most pronounced, far-right parties (but also populist parties) tend to have higher vote shares. Consistent with the theoretical argument put forth by Colantone and Stanig (2018b), the far-left parties appear to be incapable of capitalizing on rising import competition. This general pattern persists in the IV regressions shown in columns 5 - 8. However, as emphasized in the introduction, this empirical association between vote shares measured in levels and import shocks does not necessarily inform us about whether import shocks actually caused *changes* in vote shares. Rather, these results demonstrate that, within the same year and country, regions experiencing above-average vote shares for populist and right-wing parties, as well as high levels of populist intensity, were more heavily affected by import shocks.

To further highlight the limitations of using vote shares in levels, we conduct several placebo analyses in which we lag the voting outcomes in levels by up to three election periods. This yields a time structure where the elections actually *precede* the trade shock and can thus not be

[12] As Colantone and Stanig (2018b) use a more granular aggregation level for voting outcomes but still use NUTS2-level shocks, they have repeated observations of the import shock at NUTS2 level for all districts in the same NUTS2 region per election year. We therefore compare the coefficient by changes of one standard deviation of the import shock. The interpretation of the far-right IV estimate, for example, is quite similar: Colantone and Stanig (2018b), an increase in one standard deviation of the shock (0.133) leads to an increase in far-right voting of 1.7 percentage points. The standard deviation of our import shock variable for the short-term sample is 0.272 and the effect per standard deviation is 1 percentage point.

affected by it in a causal way. In panel B, we show the results for elections directly preceding a trade shock. We find a strong positive link between vote shares in levels and subsequent trade shocks both in OLS and IV, which implies that the trade shock did indeed hit regions with higher *pre-existing* vote shares for populist and right-wing parties. In Panel C and D we follow the same approach as in Panel B, but using elections that go back two and three election periods respectively. We loose some observations in the beginning of the sample because early election data is not available for all countries. Taken together, Panel B to D of Table 2 provide strong evidence that the link between vote shares in levels and import shocks depicted in Panel A rather reflects the regions' pre-shock patterns of political support instead of any effect of trade shocks.

Panel E of Table 2 shows our main results for short-run effects using the preferred differences-on-differences specification. Here, the change in regional voting behavior is regressed on the change in Chinese imports to that region. Results in Panel E strongly contrast with the findings in panel A. The OLS results indicate no significant relationship between import competition and the vote shares of far-right parties, while showing a positive association between import competition and the vote shares of left-wing and populist parties. There is no strong link to the populism intensity of parties. IV estimation closely corroborates sign and magnitude of the estimated coefficients.[13]

Our main findings for the short-run impact shown in Panel E of Table 2 thus suggest that trade shocks causally increased vote shares for left-wing and populist parties, but not for right-wing parties. The overall level of populism, as measured by the general populism score, did not experience a significant increase due to trade shocks. Coefficients are generally small compared to the sample means of the dependent variable. Even a massive increase in the import shock being two standard deviations above the mean (i.e. 2*0.272 + 0.210) only raises the far-right vote share by 0.14 percentage points compared to a region with no increase in imports. This effect is very small considering the average far-right vote share of 5 percent. The impact on far-left and populist parties is somewhat larger but still modest in magnitude.

4.3 Robustness

In Section 4.1, we provided evidence that a number of elections were preceded by exceptionally large import shocks in some regions, which were correlated with significant gains in vote shares for left, right, and populist parties. Upon closer examination of these import shocks, we identi-

[13]Standard errors are essentially unchanged when we cluster at the NUTS2 level. We prefer using robust standard errors as the number of observations (i.e. elections) within clusters is quite small.

fied 21 observations where elections were preceded by exceptional trade shocks, defined as two standard deviations beyond the mean. These shocks were concentrated in Belgian, Dutch, and Finnish regions, with the majority occurring in 2006 or 2007. Figure 4 illustrates that elections following extreme shocks yielded positive and substantial changes in voting outcomes. Rather than considering these elections as outliers to be discarded, we view them as valuable sources of information. Despite their exceptional nature, they can provide meaningful insights into the relationship between import shocks and voting behavior.

Table 3 in Panel A presents regression results after excluding the 21 observations corresponding to elections with exceptionally large import shocks. The findings show notable differences compared to our main results. Specifically, the OLS results exhibit substantial variations, particularly for the vote shares of populist and far-right parties, where the relationship with import shocks even changes sign. Importantly however, the results for our preferred IV specification remain broadly consistent with our main results except that the coefficient on populist votes shares is reduced.

Panel B and C in Table 3 show the results when using a different party classification data. We use the party family classification for radical right/ nationalist parties and socialist/radical left parties by the Manifesto database (Lehmann et al. 2023). The Manifesto database does not include parties with a vote share below 5 percentage points per election and therefore not only differs from the PopuList in differences in the classification but also by excluding parties with a small vote share. Coefficients for the level specifications are quite similar in size to the results shown in Panel A in Table 2 for far-left and far-right. For the model using changes in election outcomes, the coefficient for the far-left is very similar to Panel E in Table 2, whereas the coefficient for the far-right is even negative (although also not statistically significant) when using the Manifesto classification. Overall, using this alternative classification strengthens our core short-run finding that the China shock did not causally increase vote shares for far-right parties.

4.4 Long-run effects

So far we analyzed the impact of import shocks materializing in the two years directly preceding elections. It is possible, however, that these shocks need some time until they affect voting outcomes or that they have dynamic economic effects visible only in the longer run. Figure 2 shows the changes in vote shares by party family from the first to the last election covering years 1997-2019. The increase in populist and far-right voting is evident in most countries. Whereas there is a positive correlation between the increase in import competition from 2000 to 2007

(Figure 1) and populist or far-right voting in the long run for, e.g., regions in Belgium, Finland, the Netherlands, and Spain; vote shares for these parties also increased in regions not being strongly affected by imports as, e.g., regions in East Germany and Italy.

To shed light on the long-run effects we study election outcomes separately in three time periods following the rapid increase in Chinese imports. The first period covers the years 2007-2011, the second comprises years 2012-2015, and the most recent period includes the years 2016 to 2019. Panel A of Table 4 presents descriptive evidence for the dependent variable we will use in the subsequent long-run analysis; i.e. the change in voting outcomes between a current election and the first election for that region in our data.[14] It is evident that a significant portion of the change in voting outcomes occurred well after the initial China shock. Populist and far-right parties experienced significant gains, along with an overall increase in populist intensity. These gains were primarily observed during the period from 2012 to 2015, i.e. well after the 'Great recession' but in close proximity to the sovereign debt crises in the 'GIPS' countries. For instance, populist intensity as well as vote shares of populist parties were substantially increased in the period 2012 to 2015 compared with initial elections. During the period from 2016-2019, gains for populist and far-right parties even rose a bit further. Far-left parties lost out initially but their vote shares were about 2.5 percentage points higher in the last compared to the first elections. One key characteristic of the post-China shock period was thus the substantial gain for the political fringes.

To capture the full power of the China shock, we compute the increase in imports over the full duration from 2000 to 2007 in our long-run analysis. The voting outcomes we analyze are the differences between the current voting outcomes, measured between 2007 and 2019, and the first voting outcomes observed in our data. Figure 5 shows that initial import shocks are strongly positively related to changes in voting outcomes of all fringe parties. Whether these correlations can be causally attributed to the China shock will be scrutinized in the following regression analyses. The 7-year China shock (2000-2007) is instrumented accordingly using the same 7-year time window. By examining the voting outcomes in the three previously mentioned time periods separately (2007-2011; 2012-2015; 2016-2019), we aim to determine when the shock manifests in voting behavior.[15]

Figure 6 displays the IV results for the long-run analysis. We find no sizeable effect for far-left parties. However, positive effects are observed for other party families, although the estimates

[14] To facilitate comparability of earlier and later periods, panels B and C present results the same way as in Table 1.

[15] Our choice of the time periods makes sure that we only have one election per region and time period. Our regressions are carried out separately by time period and thus include country fixed effects instead of country×election fixed effects.

may exhibit some noise. The most precisely estimated effects are found for the period from 2012 to 2015. Import shocks occurring between 2000 and 2007 resulted in increased vote shares for populist and far-right parties, as well as an overall rise in populist intensity. The effect sizes are moderate, with coefficients around 0.01 for far-right parties, which is notably larger than the short-term effect presented in Table 2. An increase in the import shock that is equivalent to two standard deviations above the mean[16] increases the far-right vote share by 2.4 percentage points in the long run compared to a region without trade shock. This effect is sizeable compared to the far-right average vote share of 9.7 percent. Similarly, the corresponding effects for the far-left, populism intensity, and populist vote share are 1.7; 3.8; 3.7 percentage points, respectively, in the period 2012 to 2015. When evaluated at the mean of the dependent variable in period 2, which represents the average long-run change relative the first election (Table 4, panel A), a region hit by the average trade shock of 816 Euro per worker compared to a region not hit by any trade shock witnessed a 50 percent stronger increase in the share of far-left parties, an 12 percent stronger increase in populist parties, a 16 percent stronger increase in far-right parties, and a 20 percent stronger increase in overall populist intensity. Overall, we conclude that there are persistent long-run effects focused on populism and the far-right.

5 Conclusions

We analyzed the causal impact of the sharp increase in Chinese imports to European regions on voting outcomes. To ensure that we isolate the variation in the import shock coming from rising Chinese competitiveness from any factors operating at the level of the importing region, we instrumented Chinese exports to European regions with Chinese exports to US regions. Additionally, our estimates only consider the variation in import shocks between NUTS2 regions within the same countries and the same election year, thus controlling for any other country and time-specific confounding factors. We document that the fringes of the political spectrum gained ground after the China shock plateaued. The short-run effect of import shocks, measured as the increase in imports two years before an election, is generally small and favors far-left and populist parties.

Long-run effects of trade exposure tell a different story. By 2019, we see substantial growth in the fringes of the political spectrum, and we demonstrate that a portion of this growth can be attributed causally to increased import competition between 2000 and 2007. Interestingly, the long-run effect is more pronounced for the far-right and populist movements, while the far-

[16]The average region's 7-year import shock amounts to 816 Euro per worker with a standard deviation of 804 Euro per worker.

left does not benefit. Hence, our results do line up with the notion that voters lean towards populists and the far-right instead of the far-left when being hit by trade shocks (Autor et al. 2020; Colantone and Stanig 2018b) but we show that this happened in European regions only in the long run and only after voters initially increased support for the far-left.

Even in the long-run, trade shocks only explain a relatively small portion of the strong growth in the fringes of the political spectrum. What is more, our results imply that trade exposure can only explain rises in fringe party vote shares and overall populist intensity that are very small relative to the overall level of fringe voting and populist intensity. This limited role for economic forces lines up well with discussions by political scientists who emphasize cultural roots for right-wing populism (Inglehart and Norris 2016, Margalit 2019) and casts doubts on whether compensation schemes for losers of trade openness could be effective in fighting right-wing populism in Europe.

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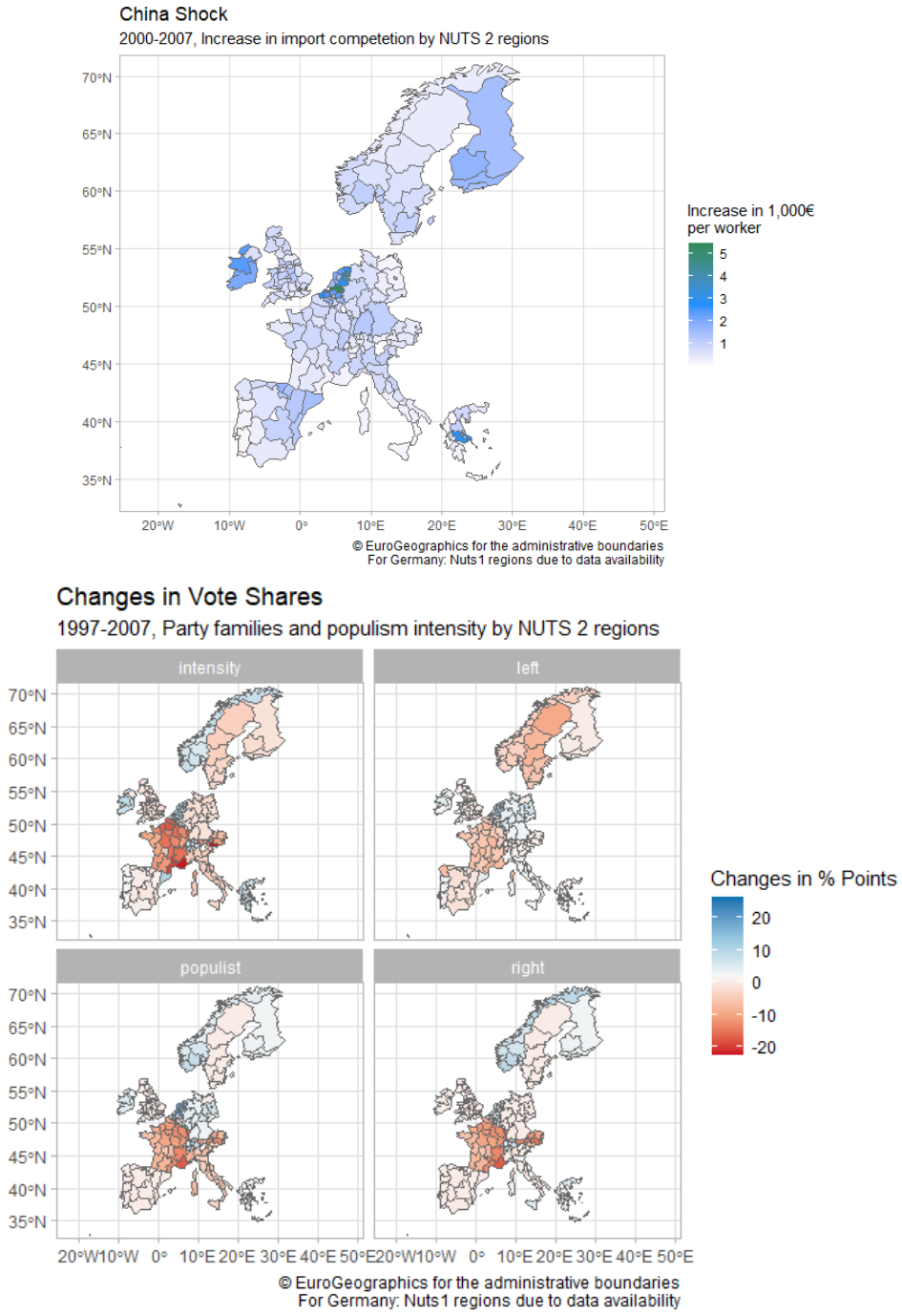
Figures and Tables

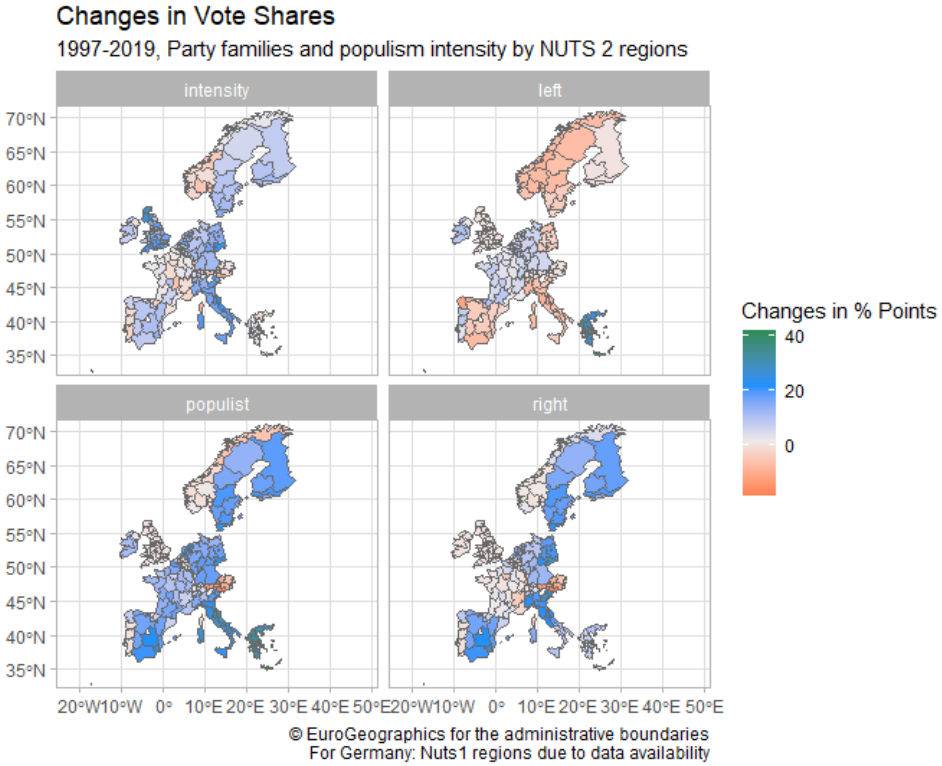
Figures

Figure 1: China Shock and short-run Changes in Voting



Notes: The upper map shows the long-run import shock calculated for the period from 2000-2007. The lower maps show the changes per NUTS 2 region and party family from the first to the last election in the 1997-2007 data set.

Figure 2: Long-run Changes in Voting

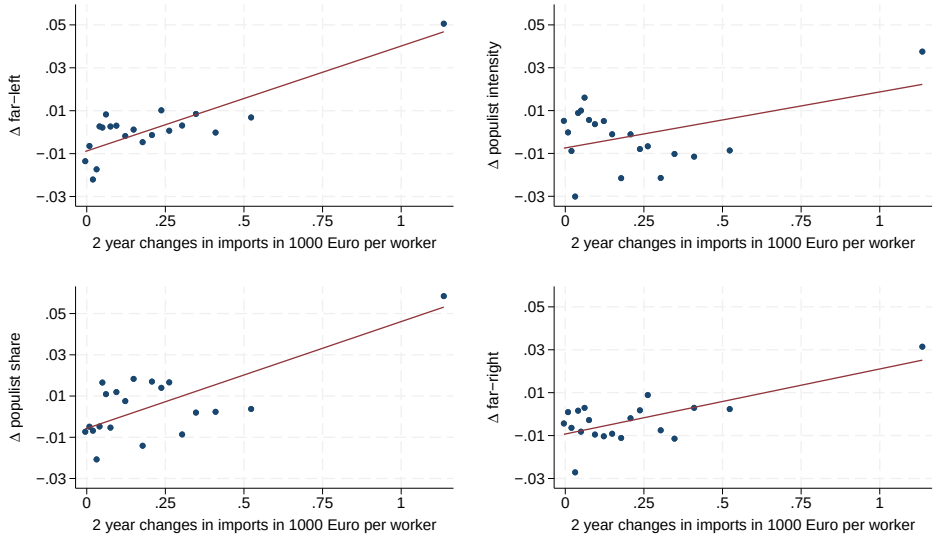


Notes: The maps show the changes per NUTS 2 region and party family from the first to the last election in the 1997-2019 data set.

Figure 3: Regional Import Shocks by Country

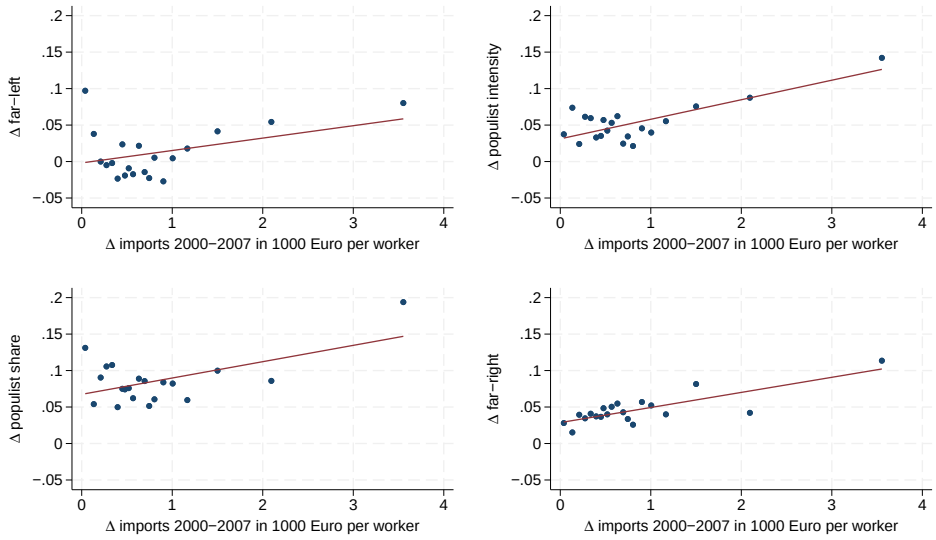
Note: Box plots for two-year changes in Chinese imports (1,000 Euro per worker) in election years between 1997 and 2007 for NUTS2 regions by country.

Figure 4: Import Shocks and short-run Changes in Vote Shares



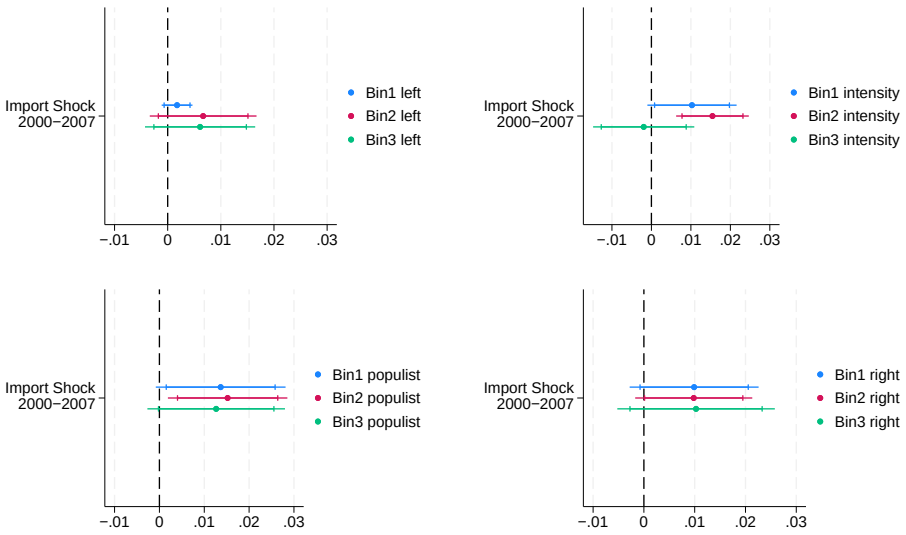
Notes: Binned scatter plots. Changes in vote shares to the last election are depicted on the vertical axis and two-year changes in Chinese imports (in election years) between 1997 and 2007 are shown on the horizontal axis.

Figure 5: Import Shocks and long-run Changes in Vote Shares



Notes: Binned scatter plots. Changes in vote shares to the election closest to the year 2000 are depicted on the vertical axis and the corresponding China shock over the time period 2000-2007 is shown on the horizontal axis.

Figure 6: Long-run Effects on Voting



Notes: IV coefficients for a regression of long run changes in vote shares on 7-year changes in imports in 1,000 Euro per worker (from 2000 to 2007). Changes in vote shares are differences to a region's first election in our data, i.e. before the steep rise of imports from China (around 2000). Bin1 vote shares (upper estimate) pertain to years 2007-2011, bin2 (middle) to years 2012-2015, and bin3 (lower) to years 2016-2019. Dots (lines) denote point estimates (90 and 95 percent confidence bands). First-stage F-statistics are 20.3.

Tables

Table 1: Summary Statistics Short Run

	mean	sd	min	p25	p75	max	n
Panel A: Levels							
electorate (in millions)	1.481	1.692	0.025	0.534	1.753	13.257	493
share far-left	0.056	0.059	0.000	0.000	0.084	0.266	493
populist intensity	0.220	0.095	0.000	0.157	0.264	0.483	493
share populist	0.097	0.107	0.000	0.000	0.180	0.432	493
share far-right	0.050	0.083	0.000	0.000	0.068	0.386	493
Panel B: Differences							
2 year shock (in 1,000 €/worker)	0.210	0.272	-0.032	0.045	0.278	2.445	493
Δ far-left	0.002	0.034	-0.219	-0.010	0.012	0.171	489
Δ populist intensity	-0.002	0.051	-0.143	-0.029	0.028	0.185	489
Δ populist share	0.005	0.059	-0.195	-0.003	0.026	0.254	489
Δ far-right	-0.003	0.039	-0.195	0.000	0.008	0.115	489

Notes: Summary statistics at NUTS2 level. Data covers the years 1997- 2007. Statistics are on the NUTS2×election level. Changes of election outcomes are in comparison to the previous election.

Table 2: Short-run Effects on Voting

	OLS				2SLS			
	(1) Left	(2) P-Intensity	(3) Populist	(4) Right	(5) Left	(6) P-Intensity	(7) Populist	(8) Right
Panel A: Levels								
Import Shock	-0.0088	0.0568	0.0420	0.0397	-0.0118	0.0353	0.0362	0.0367
	(0.010)	(0.017)	(0.015)	(0.010)	(0.011)	(0.019)	(0.014)	(0.012)
Observations	493	493	493	493	493	493	493	493
Fstage					15.58	15.58	15.58	15.58
Panel B: Lagged Levels (previous election)								
Import Shock	-0.0170	0.0472	0.0254	0.0389	-0.0196	0.0286	0.0208	0.0335
	(0.008)	(0.016)	(0.012)	(0.010)	(0.011)	(0.018)	(0.012)	(0.012)
Observations	489	489	489	489	489	489	489	489
Fstage					15.57	15.57	15.57	15.57
Panel C: Lagged Levels (2 elections prior)								
Import Shock	-0.0228	0.0464	0.0214	0.0382	-0.0218	0.0341	0.0284	0.0355
	(0.008)	(0.018)	(0.014)	(0.012)	(0.011)	(0.019)	(0.015)	(0.014)
Observations	449	449	449	449	449	449	449	449
Fstage					15.53	15.53	15.53	15.53
Panel D: Lagged Levels (3 elections prior)								
Import Shock	-0.0169	0.0392	0.0200	0.0263	-0.0241	0.0339	0.0146	0.0246
	(0.009)	(0.018)	(0.012)	(0.010)	(0.014)	(0.019)	(0.018)	(0.012)
Observations	316	316	316	316	316	316	316	316
Fstage					15.02	15.02	15.02	15.02
Panel E: Changes								
Import Shock	0.0083	0.0089	0.0160	0.0002	0.0080	0.0050	0.0140	0.0018
	(0.005)	(0.008)	(0.009)	(0.006)	(0.003)	(0.005)	(0.006)	(0.005)
Observations	489	489	489	489	489	489	489	489
Fstage					15.57	15.57	15.57	15.57

Notes: Data covers the years from 1997- 2007. The import shock (in 1,000 Euro per worker) is calculated for the change in imports two years before the election. In Panel A, election results enter in levels. In Panel B we lag vote shares in levels by one election and thereby regress level vote shares on subsequent trade shocks. In Panel C and D the same approach is used with the second and third lag respectively. The lower observation count is due to the fact that election data is not available for the first years. In Panel E, differences in vote shares to the last election are used as dependent variable. Columns 1 - 4 show OLS results whereas columns 5 - 8 show IV results for Panels A - E. All regressions include country-year (i.e. election) fixed effects. Heteroskedasticity-robust standard errors are used.

Table 3: Short-run Effects on Voting, Robustness Tests

	OLS				2SLS			
	(1) Left	(2) P-Intensity	(3) Populist	(4) Right	(5) Left	(6) P-Intensity	(7) Populist	(8) Right
Panel A: Excluding Observations with very high Import Shocks (Changes)								
Import Shock	0.0025	-0.0242	-0.0251	-0.0184	0.0101	-0.0029	0.0034	-0.0043
	(0.010)	(0.009)	(0.011)	(0.008)	(0.005)	(0.007)	(0.010)	(0.009)
Observations	467	467	467	467	468	468	468	468
Fstage					33.25	33.25	33.25	33.25
Panel B: Alternative Party Classification (Levels)								
Import Shock	-0.0011			0.0230	-0.0037			0.0244
	(0.010)			(0.007)	(0.012)			(0.010)
Observations	493			493	493			493
Fstage					15.58			15.58
Panel C: Alternative Party Classification (Changes)								
Import Shock	0.0058			-0.0151	0.0060			-0.0102
	(0.005)			(0.011)	(0.004)			(0.008)
Observations	489			489	489			489
Fstage					15.57			15.57

Notes: Data covers the years 1997- 2007. The import shock (in 1,000 Euro per worker) is calculated for the change in imports two years before the election. Election results are changes to last election. All regressions include country-year (i.e. election) fixed effects. Heteroskedasticity-robust standard errors are used. Panel A is identical to Panel E in table 2, but observations with import shocks exceeding the mean import shock by two standard deviations are excluded. Panel B and and C follow Panel B and E of table 2 respectively, using the Manifesto classification for right-wing and left-wing parties.

Table 4: Summary Statistics Long Run

	Panel A: Differences to first election				
	Regions	Share Left	Populist intensity	Share Populist	Share Right
2007 - 2011	194	-0.001	0.008	0.041	0.021
2012 - 2015	194	0.011	0.064	0.105	0.050
2016 - 2019	194	0.025	0.087	0.111	0.065
Total	582	0.012	0.053	0.086	0.046
	Panel B: Levels				
2007 - 2011	194	0.054	0.227	0.132	0.073
2012 - 2015	194	0.065	0.282	0.197	0.101
2016 - 2019	194	0.079	0.305	0.203	0.117
Total	582	0.066	0.271	0.177	0.097
	Panel C: Differences to previous election				
2007 - 2011	194	-0.005	0.011	0.028	0.019
2012 - 2015	194	0.014	0.056	0.062	0.028
2016 - 2019	194	0.018	0.025	0.036	0.038
Total	582	0.009	0.031	0.043	0.029

Notes: Summary statistics at NUTS2 level. Data covers the years 2007-2019. Statistics are on the NUTS2×election level.

A Party appendix

A.1 PopuList

The PopuList (V2) classifies parties of European countries into four party families: populist, far-right, far-left and eurosceptic. Employed definitions for the party classification follow Mudde (2004), Mudde and Kaltwasser (2017), March (2012), and Taggart and Szczerbiak (2004). Initiated by the guardian, the list is a result of a cooperation between journalists and academics. Included are all parties that can be assigned to any of those party families and either had at least one seat or a minimum of 2% of votes for one of the parliamentary elections between 1989 and 2020.

Countries examined by The PopuList include Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

For more details and exact definitions see `https://popu-list.org/`

A.2 V-Dem and V-Party

Varieties of Party Identity and Organization (V-Party) is a data set examining the policy positions and organizational structures of political parties across the world by V-Dem (Varieties of Democracy) Institute. Analysed are all parties per national parliament election that reach 3% of votes. Parties are assessed for each election separately by country specific experts.

The data set include60s a novel populism index based on country experts' assessments of two indicators measuring anti-elitism and people-centrism. Exact questions and catalogue of possible answers as well as further information on coverage and methodology can be found here: `https://www.v-dem.net/data/v-party-dataset/`

A.3 Manifesto Project

The Manifesto Project analyses electoral programs with the help of machine learning. The current version includes electoral programs from more than 60 countries and in 40 languages. The manifestos of parties are analysed to get information on the parties policy preferences and ideologies. Each manifesto per election is analysed separately, the resulting information on and classification of parties is thereby time varying. For each election included, all parties with a vote share above 5 % are included. Further information can be found her: `https://manifesto-project.wzb.eu/`

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