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Importing Political Polarisation? The Effect of Trade-induced Polarisation in the EU countries

MASTER THESIS

MSc Economics & Business, International Economics

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ABSTRACT

Analysing the effect of international trade exposure on political polarisation for the EU-15 and EU-25 countries for 1999-2019 and 2004-2019, respectively, data shows a shift in voting behaviour. By employing an instrumental variable approach to account for supply and demand shocks and data from the European Parliament's elections, modest evidence, in line with the literature, show an increase in import and net trade exposure leads to a shift in voting behaviour from the centre-left (socialists & democrats) towards the centre-right and far-right political groups, with a modest increase in the share of liberal democrats. However, this evidence is not entirely conclusive, as data fully shifts when including a list of eastern European countries, in this case, with higher support for the socialists and democrats, and a decrease in the share of the liberal democrats. In addition, export exposure moderates the effect of import and net exposure by positively and significantly impacting the voting share of mainstream groups while slightly decreasing the voting share of the liberal democrats, the far right, and the extreme right. Lastly, no evidence was found that the far and extreme left political groups were impacted by trade exposure to a significant extent.

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1. Introduction

In the context of a bloody civil war between the Union (North) and the Southern States in the fight against the enslavement of African Americans in the United States, Abraham Lincoln pronounced his famous speech, “A house divided against itself cannot stand."[1]. Even though we are currently living in a completely different context, these words cannot be more relevant nowadays. Within the last two decades, we have seen a growing presence of the so-called far-right and far-left wing political parties in many EU and Western world countries. Even in countries characterised by bipartisan chambers, such as the US, there has been an increase in political polarisation in a few of the elected representatives of the Republican and Democratic parties (Autor et al., 2020). Also, in the US, as a result of political polarisation, there is a rise in the popularity of the tea party and similar-minded conservatives in the republican party, mainly attributed to a parallel rise in trade exposure (Autor et al., 2020).

Academia has provided comprehensive analyses estimating the root cause of a party's system polarisation, in some cases placing the unintended consequences of international trade, such as those arising from economic concerns like unemployment. Evidence shows that industries in the US more exposed to international trade with China (or any other low-wage manufacturing countries) have seen a higher exit of local plants (Bernard et al., 2006); large contractions in employment, and more specifically, manufacturing employment (Pierce and Schott, 2016; Acemoglu et al., 2016) and a lower income for affected workers (Autor et al., 2013; Caliendo et al., 2019; Autor et al., 2020). In a research performed by Autor et al. (2013), it was reported that import competition accounts for one-quarter of the aggregate decline in US manufacturing employment. Nonetheless, there is also evidence that a shift in electoral results may only be temporary, as Mian et al. (2014) found that although voting behaviour is more polarised after a financial crisis, the effect tends to be transitory. Specifically, right-wing populist movements tend to arise during times of economic hardship (Hutchings and Valentino, 2004; Inglehart and Norris, 2016; Algan et al., 2017). In line with the results provided by Mian et al. (2014), Funke et al. (2016), with a dataset of 20 advanced European economies, found that after financial crises, policy instability increased sharply as government majorities shrank and political

[1] As a matter of fact, the quote "a house divided against itself cannot stand" is obtained from the Bible in Matthew 12:22-28

support fragmented. Even though these political voting shifts may be temporary, they can have a long-lasting effect on a country's economic and trade policies.

Traditionally, research papers have focused on the effect of the unintended consequences of trade, such as unemployment and financial crises, on voting. More recent studies, however, have attempted to uncover the direct role of international trade in general politics: political polarisation in the US and Europe, Brexit, or even Donald Trump's election as president of the United States. To estimate this effect, most of the papers from the literature follow a similar identification strategy, a methodology developed by Autor (MIT), Dorn (Zurich), Hanson (Harvard) and Majlesi (Lund) in Autor et al. (2013), and later modified in Autor et al. (2020). Accordingly, using the methodology derived by these authors, this master's thesis tries to answer the following question:

H: Does international trade exposure (imports, exports and net exposure) in goods from China have an impact on political polarisation in EU-15 countries (election results) during the period 1999-2019?

This thesis is organised as follows: literature review, data, methodology (including descriptive statistics and possible sources of bias), results, conclusion and final remarks.

2. Literature review

2.1. What drives political polarisation?

2.1.1. Financial Crises

Financial crises is a factor that can have a significant impact on political polarisation and the public's general trust. Several research studies link the severity of financial crises to an increase in political polarisation. Funke et al. (2016) found that financial crises increased political polarisation, legislative instability and stimulated political turmoil, however this was only true for recessions that had a financial nature. Dal Bo et al. (2019) found a strong positive correlation between Sweden's Radical Right electoral success and the impact of the economic reforms and the financial crisis across Swedish municipalities. Along the same line, Ho De Bromhead et al. (2013) showed that during the Great Depression, far-right shifts in the EU countries that had prolonged economic downturns experienced greater success. In Russia,

Ananiev and Guriev (2015) provided evidence linking the severity of Russia's 2009 crisis to a strong decline in the public's the general trust.

2.1.2. Unemployment

Unemployment, either derived from international trade or due to financial crises, has also been an essential variable to consider when analysing the rise of political polarisation. While studying the impact of the Great Recession on voting for anti-establishment parties, Algan et al. (2017), using regional data across Europe, found a strong link between the increase in unemployment and voting for non-mainstream populist parties. A one-percentage-point rise in the unemployment rate correlates with an increase in anti-establishment parties' voting by 2-3 percentage points. They also found a strong correlation between the increase in unemployment and a decline in national and European political institutions' trust: a 5-percentage point rise in regional unemployment is associated with a 3.5 percentage point decrease in confidence in the country's parliament. In Algan et al. (2017), unemployment also correlates strongly with national court mistrust.

Dustmann et al. (2017) further showed that regional unemployment is systematically linked to non-mainstream vote in European Parliament elections. By making use of data from the European Social Survey, they discovered that unemployment (and GDP) shocks at the regional level are accompanied by a trust deficit (defined as the ratio of political to general trust). Consistent with these results, Guiso, Herrera, Morelli and Sonno (2017), with individual-level data from multiple surveys in Europe, showed a link between perceived job insecurity and an individual's vote for the populist right at the same time that trust in traditional parties declines, while also discouraging voter turnout.

In Germany, Dauth et al. (2014) reported differential effects between import and export exposure on manufacturing employment in German local labour markets. It appeared as if manufacturing workers' exposure to trade was decisive for their political response towards more polarized candidates. In Sweden, Dehdari (2018) studied the effect of economic distress on support for radical right parties, using Swedish election data and layoff notices among low-skilled native-born workers. The author's results are in line with hypotheses that indicate voters, as to labour market concerns, attribute their impaired economic status to immigration.

2.1.3. Immigration concerns

Several research papers have provided mixed and ambiguous results regarding the effect of immigration on voting. While studying the impact of economic shocks on support for the radical right parties with election data and low-skilled native-born layoffs in Sweden, Dehdari (2018) found results in congruence with theories suggesting that voters blame immigration for worsening their economic status due to labour market concerns. This result, however, is called into question by Becker, Fetzer, and Novy (2017). Becker, Fetzer, and Novy (2017) looking at possible correlates of Brexit vote at a district level in the UK, found a high significance between low levels of formal education, low income, historical manufacturing employment, and, to a smaller extent, unemployment, but not immigration. However, immigration's relation to voting results is not as significantly impactful as compared to education, which appears to have a greater influence. Mayer (2007) discovered a negative relationship between the number of years of formal education and the willingness to vote for the far-right.

2.1.4. Psychological and social concerns

Psychological concerns as a result of financial crises and labour market's distress has also been linked to a swift towards more polarized political candidates. From a psychological perspective, Colantone, Crinó and Ogliari (2015) studied the impact of workers exposed to international trade on mental distress. They found a statistically significant big impact on mental distress, in part due to worsening labour market conditions. Moreover, by introducing the social identity theory into a trade model, Grossman and Helpman (2018) showed that adverse shocks, like those derived from globalisation, could lead to a psychological response of self-identification towards a particular social group (e.g. white working-class), leading to an increase in support of political agendas that promote higher trade protection policies. Along similar lines, Gennaioli and Tabellini (2019) exemplify a scenario where, as globalisation increases, group identity would shift from traditional class conflict towards a nationalist versus cosmopolitan (cultural) conflict. Politicians may use this identity shift strategically, amplifying cultural identification to raise turnout among core supporters. In this regard, Oesch (2008) showed that electors of the *National Front* for the 2002 French presidential election cared mostly about social concerns (cultural homogeneity) rather than economic ones. This will be later confirmed by Mayer (2013b) for the French presidential election in 2012.

2.1.5. International trade

Despite the fact that the previous literature has extensively examined international trade and political polarisation, there are not many papers that focus on trade directly affecting political polarisation, and only several that do it for a group of countries at a supranational level, like the EU. To my knowledge, only Colantone & Staning (2018b) estimate the direct relationship between international trade exposure with China and political polarisation in the EU-15 countries using country general elections data and assigning political parties based on the number of positive and negative "public claims" regarding autarky and nationalism. However, assigning political parties based on 'what they say' might not provide a good identification method as it can be influenced by the author's personal political biases or by false public claims from politicians deploying strategic extremism to be elected (Glaeser et al. (2005)). Instead, I will use election data from the European Parliament (EP), where national parties from the member states are not organised by nationality but by politically and ideologically affiliated groups (e.g. Alliance of Liberals and Democrats for Europe or the Group of European Socialists).

2.2. The link between international trade and voting results

The majority of the literature examine the effect of trade on voting behaviour, but it does not provide a theoretical mechanism by which trade exposure directly affects voting results. Instead, it is presumed that the effect is derived indirectly from the unintended consequences of trade exposure, such as economic shocks and unemployment. An example would be society becoming more polarised due to an increase in labour market concerns as a result of a manufacturing facility in Germany closing down due to the increased competition from abroad. To my knowledge, only Dippel et al. (2020) performed an analysis to identify a possible mechanism by which trade would affect specifically voting results. They conducted a *mediation analysis* in IV to uncover the consequences of trade shocks (net exposure) through their effect on unemployment. A *mediation analysis* is a model that decomposes the total effect of a treatment variable (e.g., trade exposure) on a final outcome (e.g., voting share) into firstly, a direct effect, and secondly into an indirect effect through a mediating variable (e.g., unemployment). From Dippel et al. (2020) analysis, they find that most of the relationship between trade exposure and political polarisation can be indeed explained through the labour market influence (indirect

effect), by which trade affects voting results the most as compared to solely looking at the effect of trade on election results (indirect effect).

In this regard, Dauth et al. (2014) found differential effects of trade exposure from China and Eastern Europe on employment depending on the nature of the trade flow in Germany. Finding that an increase in import competition leads to a substantial loss of employment in import-competing industries, while an increase in export exposure substantially increased job creation when export opportunities arising in export-competing industries. If the labour market were the link by which trade affects voting results, the nature of the initial structure of an industry, whether the industry is import or export oriented, would play a crucial role on the total effect of trade on political results. Therefore, we should expect different and opposing results of trade on voting results when including import exposure and export exposure as explanatory variables separately. Import exposure would lead to an increase in the election of more polarized political representatives as a result of an increase in labour market distress. Alternatively, export exposure would reduce the support for more polarized candidates due to an increase in the employment prospects. Analysing the effect of the aggregate effect of trade (net exposure) separately into import exposure and export exposure will provide us with a valuable picture of how the nature of trade flow would affect political polarisation.

2.3. Literature review of the effect of trade on voting behaviour

2.3.1. United States

In the US, Autor et al. (2020) found that the effect of trade (mainly import exposure) on the election results is not negligible. By investigating the effect of import exposure from China on different measures of political expression during the period 2000-2016, they found evidence that most trade-exposed electoral districts become more polarised with trade increasing support either both for the far-left and the far-right at the same time or only to the far-right. Most exposed counties experienced an increase in the Fox News channel's consumption, higher polarisation in campaign contributions towards more extreme candidates, and an increase in the willingness to elect a conservative Republican to Congress (especially in districts with a majority of white population). In counties where the majority of the population was a minority, they were more likely to vote for a liberal Democrat instead, at the cost of moderate Democrats.

To estimate the effect of trade exposure, Autor et al. (2020) use a modified version of the model derived from Autor et al. (2013). The model derived from Autor et al. (2013) has been used in several other papers that investigate the effects of trade exposure on political expression in other countries, and it will be used in this paper as well. This model is an IV analysis characterised by employing, as an explanatory variable, the trade exposure in a region of a high-income country from and to a low-income manufacturing country for an industry, weighted by the initial share of employment in the industry over the total employment in the high-income country. The instrumental variable will always be the trade exposure from China (or other low-income manufacturing countries) to a third high-income country, and it is used to account for endogeneity concerns regarding supply and demand shocks. This model will be further discussed in the methodology section of this thesis.

Also, in the US, Feigenbaum and Hall (2015) showed that trade shocks increased support for protectionism in trade-exposed districts, irrespective of party. They report that in electoral safe Democratic and electoral safe Republican districts, import rivalry increased support for protectionist trade bills to an equal degree and about twice as much in competitive electoral districts. Finally, Che et al. (2016) found that trade exposure leads to an increase in political polarisation and a higher likelihood of Trump-voting in 2016 in the US counties affected most by China's entrance to the WTO.

2.3.2. France

In France, Malgouyres (2017) found limited but significant evidence of a positive impact of import exposure on voting results that has been increasing over time of trade on the *National Front*'s vote share, the French far-right. He made use of the instrumental variables model derived by Autor et al. (2013) in First Differences (FD) with imports from 6 low-wage manufacturing countries to France for the period 1995-2012.

2.3.3. Germany

In Germany, Dippel et al. (2020) also used the model derived in Autor et al. (2013) to investigate the effect of import exposure, export exposure and the aggregate effect of trade, net trade exposure (imports minus exports), between China and a group of Eastern European

countries and Western German counties[2] For the presidential election results over the period 1987-2009, they showed, with highly significant results, that only the extreme right vote share was impacted by trade exposure (net exposure) at the cost of the voting share of established parties.[3] They also found that even though voting for the extreme right increases with import exposure, this is moderated when exporting opportunities arise (export exposure), decreasing the effect. In addition, import exposure also leads to a modest increase in the voting share of the liberal democrats at the expense of Christian Democrats and Socialists, suggesting that while the "losers from trade" choose to vote for political parties that support protectionist bills, the "winners from trade" would support parties that demand a higher degree of trade liberalisation. They found no evidence of the relationship between trade exposure and support for far-left political parties. However, as mentioned by Dippel et al. (2020), it is important to note that the effect of voting for the far-right in Germany might be diluted due to public concerns regarding the link between the far-right parties in Germany and the *Third Reich*.

2.3.4. European Union

Up to this point, all the papers that focused on the effect of trade on political polarisation decided to take the far-right and far-left political parties in the political spectrum for granted. That is, they decided which parties belonged to the far-right and far-left based on personal judgement without further analysis. In the EU countries and based on national elections, Colantone & Staning (2018b), also using the model derived on Autor et al. (2013) and mapping parties based on ideology scores, investigated the impact of import exposure from China on the electoral results of 15 Western European countries during the period 1988-2007. Based on Lowe et al. (2011), they calculated an ideology score with the number of claims in a positive or negative direction based on public claims on Nationalism, Protectionism (Net Autarky following Burgoon (2009)), Nationalistic Autarkic (combining elements of both nationalism and net

[2] Dippel et al. (2020) exclude East German counties and Berlin from their analysis due to the effect of its historical communist roots on the East German side's politics. Berlin could not be assigned to either East or West Germany and was dropped as a result.

[3] Dippel et al. (2020) make a distinction in Germany between established and non-established parties. Established parties are were continuously represented at the parliament for 22 years: Christian Democrats (CDU, CSU), social democrats (SPD), liberal democrats (FDP) and Greens. Non-established parties are Extreme-Right, Far-Left and other small and modestly represented political parties.

autarky, also based on Burgoon (2009)) and economic conservatism. Higher scores denote more nationalist and isolationist positions. Later, they combined the scores with the party vote shares to compute district-level summaries that reflect each district's political orientation in each election. Authors found that a one standard deviation increase in import shock leads, ceteris paribus, to a 1.7 percentage point increase in support for radical-right parties. However, and in accordance with Dippel et al. (2020), they found no evidence of the relationship between import shock and the voting share of far-left political parties. This is consistent with other authors, such as Sommer (2008), who argued that the left typically does not reject globalisation per se but only criticises some aspects of it, like an unfair distribution of resources and a profit-oriented economic order. Accordingly, the far-left wing voting results would not be affected as a result of trade externalities.

Based on the existing literature we therefore expect that *import exposure* leads to a strong increase in the voting share of the far-right together with a slight increase in the voting share of the liberal democrats (pro-trade political group), at the expense of other established political groups. In contrast, for *export exposure*, we would see a moderating effect of the import exposure effect, with an increase in the voting share of established political groups while reducing the voting share of the liberal democrats and far-right-wing political groups. For the aggregate effect of trade exposure, *net exposure*, we would observe similar results as those obtained from the increase in *import exposure*. Finally, no variable of trade exposure (*imports, exports and net exposure)* would significantly impact the support of the far left and extreme left political groups.

2.4. How does this thesis contribute to the current literature?

This thesis contributes to the current literature in a variety of ways. Firstly, this thesis is the first paper to use European Parliament (EP) voting and election data to identify international trade's effect on political polarisation. This method allows for a better identification strategy, providing a more accurate measure of the results, as compared to national election data, for three main reasons:

1) The EP is a multiparty electoral system with a political spectrum that contains seven different political groups with a diverse range of ideologies, from the far-left (European United Left) to the far-right (Identity and Democracy), as compared to papers that

have focused on the voting outcomes of countries with bipartisan political chambers (US), or with focus on a specific political party within a country (*National Front* in France). Therefore, it facilitates identifying the political ideology of electoral candidates on the political spectrum, contributing to the current literature by comparing the effect of trade on the voting results of the mainstream, liberal democrats, far-left and far-right political groups.

2) It is the internal decision (self-selection) of the national political parties from the EU members to join a specific political group based on a common political affiliation. For example, the European People's Party-political group comprises the *Christian Democrats in Germany* (CDU), the *Christian Democrats in Spain* (PP), and other national parties with liberal-conservative and centre-right political views. This avoids possible errors in group selection for the national parties while at the same time providing a good party mapping strategy.

3) The EP political groups remain relatively stable over time, with minimal changes facilitating the identification strategy. This contrasts with national data, where political parties usually emerge, evolve and disappear over time, this is especially the case for parties that move further from the centre of the political spectrum.

Moreover, instead of performing the analysis with the growth rate in voting share between the initial and the final year of the whole sample, I will perform a panel regression with four periods of 5 years. In addition, this thesis will be focusing on country-level data, at a more aggregate level rather than regional level data usually performed in literature, but with a larger period that covers 1999-2019, as compared with current literature that is usually focused on up to the year 2008. Lastly, it will also include ten additional Eastern European countries that joined the EU in 2004, covering 25 countries from the period 2004-2019.

3. Data

The data is a strongly balanced panel dataset of 15 European Countries for 20 years that includes 4 European Parliament general elections during the period 1999-2019. The data is observed at a country level and includes imports and exports from and to China. By using panel data, we are able to compare countries at different points in time (within comparisons) and country to country at the same point in time (between comparisons).

The electoral results from the European Parliament allow for the effects of international trade on political polarisation for a group of countries for a reasonable time period to be analysed. The 15 countries in the dataset are Western European countries that joined the EU before the 1999 EP election; the full list of countries can be found in the Appendix. Although the United Kingdom voted to leave the EU in a referendum held in 2016, its electoral results for the year 2019 are included as Brexit did not officially take place until January 31st, 2020. Eastern European countries that joined the EU at a later point in time are excluded from the first dataset and included in a second panel with 25 countries (EU-25) for the period 2004-2019. Including these countries reduces the sample period, but their historical roots can deviate from the results of the main database. Politics in Eastern EU countries tend to be more polarised since many of the countries were former Soviet Union republics (e.g. Lithuania or Latvia) or were considered satellite states of the Soviet Union (e.g. Poland). In the following subsections, the methodology used to calculate the main variables will be described.

3.1. Explanatory variable: trade exposure

Autor et al. (2013) constructed a methodology to investigate the effects of trade on political polarisation. The referenced methodology have been used in later papers that study the effects of trade-induced political polarisation in other countries and will form the basis of the empirical strategy of this thesis. A country-specific indicator, T_{ct} , is used to account for the exposure to Chinese imports and exports in country *c* at time *t*.

$$T_{ct} = \sum_s \frac{L_{cs}}{L_c} \Delta IM_{cst} \qquad T_{ct} = \sum_s \frac{L_{cs}}{L_c} \Delta EX_{cst} \qquad T_{ct} = \sum_s \frac{L_{cs}}{L_c} (\Delta IM_{cst} - \Delta EX_{cst})$$

Import Exposure *Export Exposure* *Net Exposure (imports- exports)*

ΔIM_{cst}, ΔEX_{cst} and $\Delta IM_{cst} - \Delta EX_{cst}$ are respectively the change in imports, exports and net exposure from and to China over the past n years, in country c and industry s. In order to account for *ex-ante* industry specialisation in a country, the change in trade is weighted by the relative importance of employment in an industry in a given country c $\frac{L_{cs}}{L_c}$. L_{cs} is the number of

workers in country c and industry s, and L_c is the total number of workers in a country c, both measured at the beginning of the sample period.

As per Autor et al. (2013, 2020), countries will be differently exposed to trade depending on their ex-ante specialisation at the beginning of the period; the change in trade will affect the industries in a country more strongly where many people were initially employed. By accounting for ex-ante industry specialisation, we exclude the effect of the relative importance of the industry in terms of the initial share of employment and only consider the effect of the level of specialisation in trade-intensive industries.

Trade data for imports and exports is obtained directly from the United Nations Commodity Trade Statistics Database (COMTRADE) at a SITC 3 level. The employment data, on the other hand, is obtained from *Eurostat.*[4] for the EU-15 countries. Depending on the time period considered, the employment data is reported at a NACE 1.1 industry level (detailed) for the years 1999-2008 and at a NACE 2 industry level (detailed) for the years 2009-2014. To compare the employment data between NACE 1.1 and NACE 2 industries, NACE 2 (ISIC 4) industry-level data is converted to NACE 1.1 (ISIC 3.1) level data according to the correspondence tables provided by *Eurostat*. Trade data and employment data are linked by employing the crosswalk described in Dauth et al. (2014), together with the correspondence tables provided by the UN Statistical Division. In total, the data contains 23 industries (see Appendix for the list) at a 2-digit level of specification.[5] (e.g. *manufacturing of textiles*). It is important to note that some industries were excluded due to the complexity in transforming NACE 2 (ISIC 4) to NACE 1.1 (ISIC 3.1) industry-level data. The complete list of industries can be found in Table 2 of the Appendix. The dataset used in this study also includes industries such as “agriculture, hunting and related service activities” and “fishing, fish farming and related service activities”; however, the literature is, for the most part, only focused on the manufacturing industries. As a result, a second analysis is performed by only including the manufacturing sectors from the dataset. It is important to note that extreme values, such as those that arose by years in which trade increased from 0 to a high value for a specific sector in a

[4] The employment data reported by *Eurostat* is equivalent to the employment data reported by the *World Labor Organization*.

[5] Only industries relating to trade in goods are included in the analysis; industries of services are excluded as a result.

specific country, have been excluded to avoid the great influence of a small number of observations on the database.

3.2. Dependent variable: Δ vote share

In order to measure how trade exposure affects voting behaviour, I will focus on political group electoral results data from the European Parliament (EP) for five different elections held in 1999, 2004, 2009, 2004 and 2019; however, excluding the elections held in 1999 while accounting for the EU-25 countries. The vote share is calculated by the change in the share of the number of elected deputies in the EP of a political group between two election years. The data is obtained directly from the EP website to create a dataset of party group set at a country level prior to Brexit. The EP has a multigroup system that ranges from the far left to the far-right. Elections are held on a country basis, and national political parties present their candidacy to the EP; once the elections are concluded, national parties decide either to join a political group based on their political affinity or to remain independent (also known as non-attached members). The majority of the national political parties belong to one of the seven political groups in the EP. A group must consist of at least 23 deputies, and joining one of them provides a national party stronger influence during the policy process at the parliament. The sole fact of belonging to a political group provides a good identification strategy from an ideological standpoint as the group's ideology can easily be identified through their publicly available manifestos. The full list of political groups can be found in Table 5 in the Appendix. Figure 2 provides a representation of the political groups and their positioning in their political spectrum.

On the one hand, the majority of the political groups have remained stable over time, although some small changes, such as a party's name, have occurred throughout the years. The 'Group of the European Liberal, Democrat and Reform Party' in 1999 has been renamed as the 'Alliance of Liberals and Democrats for Europe' for the elections held in 2004, 2009 and 2014. The group changed its name again to Renew Europe for the 2019 elections. In this way, it was possible to straightforwardly identify five political groups that were present during the period 1999-2019 (EPP, SD, Renew Europe, Greens and the European United Left). On the other hand, however, far-right political groups have changed considerably over time, especially during the period 1999-2004. As a result, two political groups from the period 1999-2004 have been matched according to a similar ideological identity to two political groups found for the period

2009-2019: Identity and Democracy (also previously named as Europe of Freedom and Direct Democracy group in 2009 and 2014, and Independence/Democracy in 2004) and the European Conservatives and Reformists group. Both groups are known to have an ideology that is closer to the far right-wing side of the political spectrum, with the Identity and Democracy group also voicing Eurosceptic views.

It is important to note that a small number of national parties decided not to belong to any of the groups represented at the EP, known as non-attached or non-inscrits. This is the case for parties such as the Brexit Party in the UK (UKIP), the Communist Party of Greece, the Five Star Movement in Italy, or Together for Catalonia in Spain. As they do not have common political values and they do not represent a big proportion of the total elected deputies (57 out of 751 in 2019 before Brexit, 27 out of 705 after Brexit), non-attached members are excluded from the analysis. Other national parties have also been moving between groups throughout the period considered; however, the groups' ideology has been steady over time, and as our focus is on an aggregated group level, its effect is expected not to have a significant impact on the analysis.

3.3. Instrument

The literature has provided evidence of some possible endogeneity concerns while estimating the effect of trade exposure on voting results. That is the result of possible domestic demand and supply shocks at the same time affecting trade exposure, employment and local voting behaviour. To overcome endogeneity, Autor et al. (2013, 2020) instrumented trade exposure of the US with China with the trade exposure of other high-wage countries with China. The assumption behind this is that Chinese trade with other high-income countries is independent of domestic shocks in the country considered, and it only depends on the supply-side improvements in China. This methodology have also been used later on by the most relevant papers in the literature in trying to estimate the effect of trade exposure, such as Dippel et al. (2020) and Magrouyes (2017), and will also be the methodology used in this thesis. Our main instrument is formed by substituting from the explanatory variable the growth in trade exposure (imports, exports and net exposure) from and to China with the US for sector s at time t. Instrumenting using the trade exposure of China with Switzerland and Norway has also been considered, but the US instrument has the strongest meaningful first stage considering all the explanatory variables: imports, exports and net exposure. Regarding the exogeneity of the

instrument, we assume that the voting results in the EU-15 and the EU-25 are not influenced by the trade exposure of the US with China.

$$Z_{ct} = \sum_s \frac{L_{cs}}{L_c} \Delta IM_{cst} \qquad Z_{ct} = \sum_s \frac{L_{cs}}{L_c} \Delta EX_{cst} \qquad Z_{ct} = \sum_s \frac{L_{cs}}{L_c} (\Delta IM_{cst} - \Delta EX_{cst})$$

Import Exposure Instrument | *Export Exposure Instrument* | *Net Exposure (imports - exports) Instrument*

4. Methodology

4.1. Specification and estimation strategy

The main empirical estimation strategy of this thesis is the following:

Identification: Instrument (Z) → Trade exposure (T) → Political outcome (Y)

$$Y_{ct} = \boldsymbol{\alpha_c} + \boldsymbol{\alpha_t} + \beta_1 T_{ct} + \epsilon_{ct} \text{ (}\textit{second stage equation}\text{)}$$

$$T_{ct} = \boldsymbol{\alpha_c} + \boldsymbol{\alpha_t} + \alpha Z_{ct} + u_{ct} \text{ (}\textit{first stage equation}\text{)}$$

Where Y_{ct} is the voting outcome measured as the difference between the final and the initial year for period t (e.g., 2014-2019) in country c. T_{ct} is our main variable of interest and captures trade exposure, measured as the total increase in trade exposure with China in country c and time t, weighted by the initial share of employment. Z_{ct} is our instrumental variable.

$\boldsymbol{\alpha_c}$ is a vector of country fixed effects. By including country fixed effects, it is possible to account for omitted variable bias that might arise due to time-invariant characteristics that are not observed and are unique to each country, such as a change in the GDP. Country fixed effects control for time-invariant characteristics of the country that influence election results and might be correlated with trade exposure, T_{ct}.

$\boldsymbol{\alpha_t}$ captures a trend over time that is common to all countries. In this case, by using time fixed effects, we eliminate the possibility of omitted variable bias caused by unobservable characteristics that vary over time but are common to all countries. No interaction term of time-fixed effects and $\boldsymbol{\alpha_c}$ has been included since that is the dimension of the data.

4.2. Descriptive statistics

Table 6 and Table 8 show descriptive statistics for our main explanatory variable and the US instrument, that is the growth rate of trade exposure of the EU (T) and the US (Z) with China weighted by the initial share of employment over the sample period 1999-2019 for EU-15 and 2004-2019 for EU-25 countries. For the EU-15 countries, both sector-weighted imports and exports increased from China to the EU on average of 16,3% in imports and 30,65% in exports. However, it is important to note that this growth may not necessarily reflect the actual increase; as noted before, some of the observations have been drop out to avoid a small number of extremely high outliers having an enormous influence on the results.

Table 7 and Table 9 show descriptive statistics for voting results for the EU-15 and EU-25, respectively. The voting results have been calculated using the difference between the final and the initial year election results based on the percentage of the total number of elected representatives over the total number of seats (i.e., MEPs). On average, only the EPP, SD and Extreme Right (ID) political groups for the EU-15 (EU-25 in brackets) lost representation in the parliament by -2.34 (-3.25), -1.90 (-1.29) and -0.43 (-1.44) percentage points, respectively, between the time-period observed. However, the results depend, to a great extent, on the country and time period observed. For instance, the UK's total representation of the far-right wing political groups in the EP experienced a 38-percentage point increase in 2009 (from 10,65% in 2004 to 49,32% in 2009).

In facilitating further comparisons between countries, Figures 3 and 4 display the map of countries and the change in voting results for the far left and wing political groups during the total sample period. On the one hand, in Figure 3, it can be seen that in Poland, Belgium, Italy and the Czech Republic, the voting share of the far-wing political groups increased by more than 20 percentage points during the sample period, while it decreased in Portugal, Ireland, Denmark, Latvia and Lithuania. Conversely, Figure 4 depicts an increase in the voting share of the far left-wing political groups, increasing by more than 20% in Ireland and decreased in Italy, Sweden, The Netherlands, Belgium, Latvia and the Czech Republic. As a general rule, the voting share of the far-right political groups increased significantly more often for most in of EU-25 countries than the voting share of the far left.

4.3. Identifying assumptions

In order to interpret our estimates as causal, and regarding the validity or exogeneity of the instrument, we assume that the voting results in the EU-15 and the EU-25 are not influenced by the trade exposure of the US with China. In addition, and based on the results of our robustness check, we assume that there is no reverse causality between trade exposure and voting results in OLS.

4.4. What else can impact or bias the results?

4.4.1. Inaccurate political self-identification or non-inscrits political parties

Even though it is possible to account for political ideology based on party self-selection into one of the political groups considered, some parties do not necessarily join the group whose political ideology align the most with their political views, other parties change their group throughout the years, while others do not join any political group at any time. This can have a strong impact on the final results (selection bias). That is the case, for instance, for *Fidesz – Hungarian Civic Alliance*. Even though this party has traditionally belonged to the European People's party since 2004 and up to March 2021, it is known for high authoritarian tendencies that have been increasing over time[6]. Another example is the *National Front* in France, this party presented its candidacy to the EP elections as a non-aligned member in 1999, 2004 and was part of a smaller ultranationalist group called EURONAT in 2009 (not considered in this research). It was not until 2014 that the party joined a political group to run for the elections.

4.4.2. The importance of value chains: upstream and downstream effects

In the context of global supply chains, firms have increasingly outsourced production stages to other companies in other countries and this fragmentation can have an impact on the electoral consequences of rising trade exposure. When import competition rises in an industry, downstream consumers and upstream producers are affected differently than in a non-fragmented economy. Upstream suppliers will be hurt for the increased competition from abroad since they will face lower demand and reducing revenue, while downstream producers, on the other hand, can benefit from cheaper inputs provided by foreign suppliers, increasing their income. If we consider that worsening of the economic conditions in the country (e.g., unemployment) is the way by which trade affect voting results, it would be necessary to consider input-output linkages

[6] Kingsley, P. (2018). As West Fears the Rise of Autocrats, Hungary Shows What's Possible. *New York Times*, 10.

between industries, as the overall effect of trade on voting results would be affected by two different competing forces in the market. However, due to the complexity of using impot-export linkages between companies, this effect will not be considered in the methodology section of this thesis.

4.5. Robustness

For the purpose of seeing how the results differ, the main regression will also be estimated for only the manufacturing industries of the EU-15 countries and all the industries for the EU-25 countries. The main regression has also been estimated using Switzerland and Norway trade data as instruments; however, in this case, as the instruments are not strong enough, the US trade data has remained in use during all the regressions displayed in the results section. However, its influence declined in 2019, as a result of the new duties imposed by the US on Chinese products. Table 14 presents the first stage of the model considering the US, Norway and Switzerland as instruments.

5. Results

5.1. The effect of import and net exposure

The literature points out that import exposure and the aggregate effect of import exposure, net exposure, lead to a high increase in the vote share of the far-wing political groups, a small increase in the liberal democrats and a decrease in the vote share of the mainstream political groups (centre-left and centre-right). Table 10 shows the IV regression results for our main specification of the EU-15 countries in all industries for the period 1999-2019. The results are divided by the combination of four main political groups: mainstream political groups (EPP and SD), liberal democrats (ALDE), far-left wing political groups (Greens and the European United Left) and far-right-wing political groups (Conservatives and Reformists and Identity and Democracy). The columns are based on import, export and net trade exposure and each column is split into two: one column with only country fixed-effects and another with country and time fixed-effects, in order to check for any possible time trend that must be biasing the overall results.

Column 1 of import exposure shows that when we only control for country time-invariant characteristics, the vote share of mainstream parties is positively and significantly correlated

with import exposure, but negatively significant with net exposure. This effect changes, however, when we include country and time fixed effects, in this case, the results are no longer statistically significant but are coherent with our first hypothesis. Along the same lines, when we only control for country-fixed effects voting for the far-right wing groups decrease with import exposure and increase with net exposure. However, as we include country and time fixed effects, the voting share of the far-right groups shifts positively with a parallel rise in import exposure. The fact that the results obtained after including country and time fixed effects are no longer significant can be explained by the effect of a *transitory political polarisation*. As explained Mian et al. (2014), political polarisation may increase after financial shocks and decrease afterwards, affecting general politics for a short period of time. Finally, there is a small but non-significant increase in the voting share of the liberal democrats.

From the previous results, we saw that mainstream parties are *positively* and *significantly* correlated with import exposure, but that contradicts the current literature. In order to further investigate the results of import and net exposure on voting results for mainstream and farther right and left-wing political groups, Table 11 demonstrates a separate regression showing the effect of trade exposure on voting for the mainstream political groups separately, EPP and SD, the Extreme Left (European United Left) and the Extreme Right (Identity and Democracy). With country and time fixed effects, import exposure leads to a non-significant increase (0.266) in the voting results of the EPP (centre-right), a highly significant decrease (-0.460) in the vote share of the SD (centre left) and a non-significant increase (0.182) in the vote share of the Extreme Right. As a result of an increase in import exposure, we see a tendency that shifts the vote from the centre-left political towards the centre-right and far-right-wing political groups.

In Table 12, we add to our EU-15 countries and in addition, 10 Eastern European Countries for the period 2004-2019, in order to test the results for a larger number of countries. In this case with country and time fixed effects, the impact of trade on the results is inconsistent with our previous results. Import and net exposure do lead to a significantly high increase (0.338) in the voting share of the Socialists and Democrats and a small non-significant increase in the far left and extreme-left political groups at the expense of the far-right and extreme right groups. These results can be explained by the fact that the ten additional countries included

belonged to the former Soviet Union (e.g., Lithuania or Latvia), or had a strong influence from the Soviet Union as satellite states. (e.g., Poland).

To sum up, we concluded that as a result of an increase in import and net exposure, and controlling for fixed-country and time characteristics, we see a tendency that shifts voting from the centre-left political towards the centre-right and far-right-wing political groups, with a modest increase of the liberal democrats. However, the evidence is not definitive and fully shifts when we include Eastern European countries, with higher support for the SD and far left and with a decrease in the liberal democrats' voting share.

5.2. The effect of export exposure

The literature points out that export exposure leads to a moderating effect of the effect of import and net exposure. It reduces the vote share of the far-wing political groups and the liberal democrats while increases the vote share of the mainstream political groups (centre-left and centre-right). In Table 10, we can see that there is an increase in the voting share of the mainstream political groups, significant when applying country-fixed effects, and a decrease in all the other political groups, but higher for the far-right political groups.

When we split mainstream and add the extreme right political group in Table 11, we see a highly significant but rather small increase in the voting share of the centre-right with country fixed effects. However, non-significant with country and time fixed effects. With country and time fixed effects, our preferred specification, export exposure also leads to a small increase in the voting share of the EPP and SD, and a decrease in the extreme right as per the hypothesis. Liberal democrats voting results also narrow as a consequence of the rise in export exposure.

In the dataset of EU-25 (Table 12), the results are similar to the aforementioned results. Export exposure positively and significantly impacts the voting share of the mainstream groups, while slightly decreasing the voting share of the liberal democrats (significant), far-right and extreme right. This effect is smaller when only considering EU-15 countries' manufacturing industries, although the effect on mainstream and liberal democrats remain significant with country fixed-effects.

5.3. Is the far and extreme left influenced by trade exposure?

The literature does not provide evidence that trade influences the voting share of the far and extreme left political groups. Based on our results, the far and extreme left political groups' voting share has, in general, not been influenced by trade exposure to a great extent. All the regression coefficients, in this case, are modest and non-significant but slightly higher when we regress the results with the EU-25 countries dataset. In addition, it is important to note that country and country-time fixed effects do not change the coefficients significantly. Therefore, we cannot reject the hypothesis that the effect of trade exposure on voting for left-wing political groups is minimal.

6. Conclusion and final remarks

Several recent research papers show evidence of a link between the effect of trade exposure and an increase in the support of more polarised elected representatives and political groups in the US, Germany, France, and the EU countries. In this thesis, I further investigated the effect of import, export, and next exposure on the EP's general elections' results for the EU-15 countries with a time frame of 20 years covering the period 1999-2019. In addition, we also included a second analysis covering the EU-25 countries from 2004-2019. To my knowledge, the study with the largest amount of countries performed up to date in the literature.

Using an instrumental variable approach and controlling for country fixed effects, we found small evidence that 1) an increase in import and net exposure leads to a shift in voting behaviour from the centre-left (highly significant) towards the centre-right and far-right political groups, with a modest increase in the share of liberal democrats. Liberal Democrats, in general, tend to favour bills that support further trade liberalisation and can be described as the political group for the "winners from trade". However, the evidence is not totally definitive and fully shifts when we included our list of EU-10 Eastern European countries. Instead, there is higher support for the centre-left and the far-left groups, as well as a decrease in the liberal democrats' voting share. 2) Export exposure positively and significantly impacts the voting share of the mainstream groups, while slightly decreasing the voting share of the liberal democrats (significant), the Far-right and the Extreme right political groups. With regard to hypotheses 1 and 2, the results become less significant after controlling for time-trend fixed effects, suggesting the existence of a *transitory political polarisation* that may arise for a short period of time due to

financial or economic shocks. Lastly (3), there is no evidence that the far and extreme left political groups' voting share has, in general, been influenced by trade exposure to a significant extent.

These results are more modest and less significant, still consistent, with research studies associating the effect of political polarisation to a parallel increase in trade exposure. That can be explained by the fact that to this date, most of the literature has focused on a time span covering up to 2007 when import exposure from China to the Western countries grew massively as a result of China joining the World Trade Organization in 2001. As a result, the overall effect of trade exposure can be diluted by including the decade 2009-2019, where China already became a key player in the international trade arena. In addition, it is also critical to point out that this thesis included country-level data and that the results can differ by including data at a more disaggregate level, such as NUTS-2 regions (e.g., North-Holland). Still, the results provide some evidence of an increase in a moderate political turmoil lead by a parallel rise in trade exposure.

7. References

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Appendix

Table 1. Countries included in all estimations (EU15).

Austria	Germany	Netherlands
Belgium	Greece	Portugal
Denmark	Ireland	Spain
Finland	Italy	Sweden
France	Luxembourg	United Kingdom
Total:		15 countries

Table 2. Countries included in all estimations organised by regions.

Northern European	Central European	Southern European	
Denmark	Austria	France	
Finland	Belgium	Greece	
Ireland	Germany	Italy	
Sweden	Luxembourg	Portugal	
United Kingdom	Netherlands	Spain	
Total:			15 countries

Table 3. Countries that joined the EU in 2004 (EU10)

Cyprus	Latvia	Poland	
Czech Republic	Lithuania	Slovakia	
Estonia	Malta	Slovenia	
Hungary			
Total:			10 countries

Table 4. List of all industries included in the methodology by NACE 1.1 code and the industry name.

1	Agriculture, hunting and related service activities	
2	Forestry, logging and related service activities	
5	Fishing, fish farming and related service activities	
10	Mining of coal and lignite; extraction of peat	
13	Mining of metal ores	
14	Other mining and quarrying	
15	Manufacture of food products and beverages	
16	Manufacture of tobacco products	
17	Manufacture of textiles	
18	Manufacture of wearing apparel; dressing; dyeing of fur	
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	
20	Manufacture of wood and of products of wood and cork, except furniture	
21	Manufacture of pulp, paper and paper products	
22	Publishing, printing and reproduction of recorded media	
24	Manufacture of chemicals and chemical products	
25	Manufacture of rubber and plastic products	
26	Manufacture of other non-metallic mineral products	
27	Manufacture of basic metals	
28	Manufacture of fabricated metal products, except machinery and equipment	
29	Manufacture of machinery and equipment NEC.	
34	Manufacture of motor vehicles, trailers and semi-trailers	
35	Manufacture of other transport equipment	
36	Manufacture of furniture; manufacturing NEC.	
	Total:	23 industries

Table 5. List of all the political groups included in the methodology by year, acronym and name.

Year	Acronym	Name
1999	EPP-ED	Group of the European People's Party (Christian Democrats) and European Democrats
1999	UEN	Union for Europe of the Nations Group
1999	TDI	Technical Group of Independent Members - mixed group
1999	EDD	Group for a Europe of Democracies and Diversities
1999	PSE	Group of the Party of European Socialists
1999	ELDR	Group of the European Liberal, Democrat and Reform Party
1999	Verts/ALE	Group of the Greens/European Free Alliance
1999	GUE/NGL	Confederal Group of the European United Left/Nordic Green Left
2004	UEN	Union for Europe of the Nations Group
2004	IND/DEM	Independence/Democracy Group
2004	EPP-ED	Group of the European People's Party (Christian Democrats) and European Democrats
2004	PSE	Socialist Group in the European Parliament
2004	ALDE	Group of the Alliance of Liberals and Democrats for Europe
2004	Verts/ALE	Group of the Greens/European Free Alliance
2004	GUE/NGL	Confederal Group of the European United Left - Nordic Green Left
2009	ECR	European Conservatives and Reformists Group
2009	EFD	Europe of freedom and democracy Group
2009	EPP	Group of the European People's Party (Christian Democrats)
2009	S&D	Group of the Progressive Alliance of Socialists and Democrats in the European Parliament
2009	ALDE	Group of the Alliance of Liberals and Democrats for Europe
2009	Greens/EFA	Group of the Greens/European Free Alliance
2009	GUE/NGL	Confederal Group of the European United Left - Nordic Green Left
2014	ECR	European Conservatives and Reformists Group
2014	EFDD	Europe of Freedom and Direct Democracy Group
2014	EPP	Group of the European People's Party (Christian Democrats)
2014	S&D	Group of the Progressive Alliance of Socialists and Democrats in the European Parliament
2014	ALDE	Group of the Alliance of Liberals and Democrats for Europe
2014	GUE/NGL	Confederal Group of the European United Left - Nordic Green Left
2014	Greens/EFA	Group of the Greens/European Free Alliance
2019	ECR	European Conservatives and Reformists Group
2019	ID	Identity and Democracy
2019	EPP	Group of the European People's Party (Christian Democrats)
2019	S&D	Group of the Progressive Alliance of Socialists and Democrats in the European Parliament
2019	Renew Europe	Renew Europe group
2019	GUE/NGL	Confederal Group of the European United Left - Nordic Green Left
2019	Greens/EFA	Group of the Greens/European Free Alliance

Table 6. Statistics of trade exposure (T) and instrument (Z) for EU-15 countries for the period 1999-2019.

	Trade Exposure (T)			Trade Exposure Instrument (Z)		
	Imports	Exports	Net Exposure	Imports	Exports	Net Exposure
Mean	.1630	.3065	-.2084	.1308	.2890	-.1582
Std.dev	.1606	.3740	.4205	.1316	.5006	.4179
Min	.0037	.0024	-2.356	-.0358	-.0286	-2.609
Max	.6410	1.8896	.4428	.4304	3.039	.0311
N	60	60	60	60	60	60

Table 7. Statistics of political results for the EU-15 countries for 1999-2019.

	EPPSD	ALDE	Far Right-wing	Far Leftwing	Extreme Right (ID)	Extreme Left (GUE)	EPP	SD
Mean	-.0423	.0100	.0085	.0143	-.0043	.0071	-.0234	-.0190
Std.dev	.1266	.0845	.1353	.0865	.1304	.0616	.0952	.0934
Min	-.4220	-.2424	-.5479	-.1967	-.5227	-.1133	-.3590	-.2030
Max	.2650	.2564	.3868	.2803	.2555	.2803	.1848	.1731
N	60	60	60	60	60	60	60	60

Table 8. Statistics of trade exposure (T) and instrument (Z) for EU-25 countries for the period 2004-2019.

	Trade Exposure			Trade Exposure		
	Imports	Exports	Net Exposure	Imports	Exports	Net Exposure
Mean	.1418	.5165	.1673	.0701	.1333	-.0631
Std.dev	.1647	.7715	.6334	.0673	.1197	.0657
Min	-.0247	.0024	-.4422	-.0364	-.0364	-.3514
Max	.8250	3.417	5.028	.2403	.5115	.0310
N	75	75	75	75	75	75

Table 9. Statistics of political results for the EU-25 countries for 2004-2019.

	EPPSD	ALDE	Right-wing	Leftwing	Extreme Right (ID)	Extreme Left (GUE)	EPP	SD
Mean	-.0454	.0049	.0171	.0162	-.0144	.0036	-.0325	-.0129
Std.dev	.1420	.1000	.1381	.0837	.1157	.0567	.1286	.1157
Min	-.4220	-.3718	-.5479	-.1666	-.5227	-.125	-.4924	-.3333
Max	.2756	.2564	.3868	.2803	.2555	.2803	.2424	.3333
N	75	75	75	75	75	75	75	75

Table 10. Main regression: the effect of trade exposure on voting results for the EU-15 countries (1999-2019).

Effect of trade on voting outcomes EU15 – all industries						
IV	Import Exposure		Export Exposure		Net Exposure	
	(1)	(2)	(1)	(2)	(1)	(2)
Δ vote share EPP, SD	0.164*	-0.194	0.089**	0.021	-0.060**	-0.026
	(0.076)	(0.362)	(0.016)	(0.735)	(0.041)	(0.486)
Δ vote share ALDE	0.021	0.032	-0.007	-0.019	0.014	0.013
	(0.685)	(0.729)	(0.771)	(0.650)	(0.581)	(0.579)
Δ vote share Far Left	-0.107	0.016	-0.065	-0.042	0.045	0.021
	(0.110)	(0.903)	(0.497)	(0.497)	(0.166)	(0.525)
Δ vote share Far-Right	-0.076	.2160	-0.037	-0.048	0.018	0.011
	(0.458)	(0.142)	(0.423)	(0.814)	(0.657)	(0.814)
Country fe	Yes	Yes	Yes	Yes	Yes	Yes
Country and time fe	No	Yes	No	Yes	No	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Observations	60	60	60	60	60	60

Notes: dependent variables are each political group change in voting share from 1999-2019. Explanatory variables are the total sum of import exposure, export exposure and net exposure of the EU-15 countries with China by industry weighted by the initial year industry employment in the country. The instrument is the trade exposure of the US with China weighted by the initial year of industry employment. The first column includes country fixed-effects, and the second column includes the interaction between country and time fixed-effects. Heteroskedasticity-robust standard errors. Standard errors in parentheses. *p<0.1, *p<0.05***p<0.01. Data source: Voting results: European Parliament; trade flows: COMEX STAT (2020); employment: Eurostat and ILO.

Table 11.Regression results for the EU-15 countries (1999-2019): split mainstream, extreme right and extreme left.

Effect of trade on voting outcomes EU15 – all industries						
IV	Import Exposure		Export Exposure		Net Exposure	
	(1)	(2)	(1)	(2)	(1)	(2)
Δ voteshare EPP	.1568*	.2660	0.049***	0.049	-0.015**	-0.011
	(0.054)	(0.174)	(0.012)	(0.150)	(0.297)	(0.713)
Δ vote share SD	0.007	-0.460***	-0.039	0.028	-0.044	-0.015
	(0.931)	(0.009)	(0.209)	(0.642)	(0.118)	(0.694)
Δ vote share Extreme Left	-0.039	0.043	0.001	0.026	-0.017	-0.019
	(0.418)	(0.648)	(0.938)	(0.474)	(0.138)	(0.230)
Δ vote share Extreme Right	0.130	0.182	0.0156	-0.044	0.004	0.028
	(0.216)	(0.211)	(0.720)	(0.367)	(0.875)	(0.814)
Country fe	Yes	Yes	Yes	Yes	Yes	Yes
Country and time fe	No	Yes	No	Yes	No	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Observations	60	60	60	60	60	60

Notes: dependent variables are each political group change in voting share from 1999-2019. Explanatory variables are the total sum of import exposure, export exposure and net exposure of the EU-15 countries with China by industry (all industries) weighted by the initial year of industry employment in the country. The instrument is the trade exposure of the US with China weighted by the initial year of industry employment. The first column includes country fixed-effects, and the second column includes the interaction between country and time fixed-effects. Heteroskedasticity-robust standard errors. Standard errors in parentheses. *p<0.1, *p<0.05***p<0.01. Data source: Voting results: European Parliament; trade flows: COMEX STAT (2020); employment: Eurostat and ILO.

Table 12. Regression results for the EU-25 countries (2004-2019) including split mainstream, extreme right and extreme left.

Effect of trade on voting outcomes EU25 – all industries						
IV	Import Exposure		Export Exposure		Net Exposure	
	(1)	(2)	(1)	(2)	(1)	(2)
Δ vote share EPP, SD	0.243**	.341**	0.041**	0.039*	0.030**	0.024
	(0.015)	(0.03)	(0.032)	(0.089)	(0.066)	(0.205)
Δ vote share ALDE	-0.055	0.039	-0.046*	-0.040	-0.016**	-0.010
	(0.299)	(0.689)	(0.052)	(0.116)	(0.039)	(0.415)
Δ vote share Far Left	0.055	0.020	-0.007	-0.020	0.045	0.000
	(0.419)	(0.809)	(0.571)	(0.265)	(0.166)	(0.944)
Δ voteshare Far-Right	-0.084	-0.104	-0.030	-0.041	0.005	0.000
	(0.497)	(0.537)	(0.254)	(0.219)	(0.482)	(0.962)
Δ vote share EPP	0.050	0.003	0.010	0.002	0.008	0.004
	(0.749)	(0.990)	(0.750)	(0.936)	(0.491)	(0.816)
Δ vote share SD	0.192	0.338**	0.030	0.037	0.023	0.020
	(0.130)	(0.053)	(0.336)	(0.254)	(0.355)	(0.426)
Δ vote share Extreme Left	0.028	0.064	-0.010	-0.015	0.010	0.012
	(0.503)	(0.162)	(0.484)	(0.470)	(0.348)	(0.277)
Δ vote share Extreme Right	-0.060	-0.064	-0.001	-0.006	-0.023	-0.023
	(0.630)	(0.721)	(0.968)	(0.826)	(0.122)	(0.237)
Country fe	Yes	Yes	Yes	Yes	Yes	Yes
Country and time fe	No	Yes	No	Yes	No	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Observations	75	75	75	75	75	75

Notes: dependent variables are each political group change in voting share from 1999-2019. Explanatory variables are the total sum of import exposure, export exposure and net exposure of the EU-25 countries with China by industry (all industries) weighted by the initial year of industry employment in the country. The instrument is the trade exposure of the US with China weighted by the initial year of industry employment. The first column includes country fixed-effects, and the second column includes the interaction between country and time fixed-effects. Heteroskedasticity-robust standard errors. Standard errors in parentheses. *p<0.1, *p<0.05***p<0.01. Data source: Voting results: European Parliament; trade flows: COMEX STAT (2020); Employment: Eurostat and ILO.

Table 13. Regression results for the EU-15 countries (2004-2019) including only manufacturing industries: split mainstream, extreme right and extreme left.

Effect of trade on voting outcomes EU15 – manufacturing industries						
IV	Import Exposure		Export Exposure		Net Exposure	
	(1)	(2)	(1)	(2)	(1)	(2)
Δ vote share EPP, SD	0.007***	0.006	0.021*	0.011	0.003	-0.007
	(0.01)	(0.256)	(0.096)	(0.228)	(0.795)	(0.483)
Δ vote share ALDE	-0.005***	0.008	-0.008***	-0.010	0.007	0.008
	(0.000)	(0.167)	(0.056)	(0.118)	(0.106)	(0.167)
Δ vote share Far Left	-0.002	-0.002	-0.011	-0.005	-0.087	-0.001
	(0.419)	(0.490)	(0.497)	(0.254)	(0.166)	(0.860)
Δ voteshare Far-Right	-0.001	0.002	-0.062	0.002	-0.004	-0.005
	(0.544)	(0.650)	(0.507)	(0.866)	(0.657)	(0.454)
Δ vote share EPP	0.578*	-0.001	-0.505*	0.000	-0.510*	-0.011
	(0.08)	(0.821)	(0.095)	(0.936)	(0.069)	(0.713)
Δ vote share SD	0.005***	0.006*	0.014*	0.011	-0.000	-0.011
	(0.001)	(0.061)	(0.075)	(0.172)	(0.995)	(0.152)
Δ vote share Extreme Left	-0.000	0.017	0.001	0.004	0.002	0.011
	(0.542)	(0.224)	(0.938)	(0.207)	(0.826)	(0.453)
Δ voteshare Extreme Right	-0.003	-0.003	0.002	-0.005	0.015	0.009
	(0.276)	(0.403)	(0.860)	(0.560)	(0.116)	(0.372)
Country fe	Yes	Yes	Yes	Yes	Yes	Yes
Country and time fe	No	Yes	No	Yes	No	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Observations	60	60	60	60	60	60

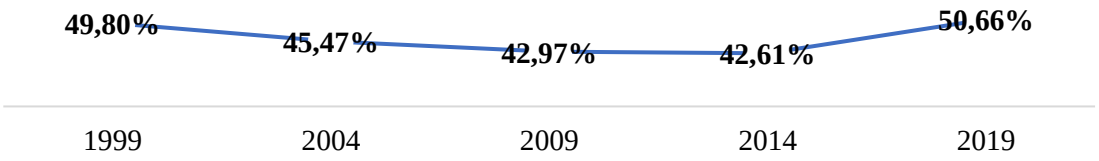
Notes: dependent variables are each political group change in voting share from 1999-2019. Explanatory variables are the total sum of import exposure, export exposure and net exposure of the EU-25 countries with China by industry (all industries) weighted by the initial year of industry employment in the country. The instrument is the trade exposure of the US with China weighted by the initial year of industry employment. The first column includes country fixed-effects, and the second column includes the interaction between country and time fixed-effects. Heteroskedasticity-robust standard errors. Standard errors in parentheses. *p<0.1, *p<0.05***p<0.01. Data source: Voting results: European Parliament; trade flows: COMEX STAT (2020); Employment: Eurostat and ILO.

Table 14. First stage regression results for all industries in the EU-15 countries (1999-2019).

Effect of trade on voting outcomes EU15 – all industries			
OLS	Import Exposure	Export Exposure	Net Exposure
Import Exposure US	0.970***		
	(0.000)		
Export Exposure US		0.3672**	
		(0.013)	
Net Exposure US			0.298**
			(0.019)
Wald chi2	74.50	7.65	
Import Exposure NO	0.508***		
	(0.000)		
Export Exposure NO		0.034	
		(0.436)	
Net Exposure NO			
Wald chi2	94.34	0.61	
Import Exposure SW	0.724***		
	(0.000)		
Export Exposure SW		0.016	
		(0.397)	
Net Exposure SW			
Wald chi2	31.13	0.72	
Constant	Yes	Yes	Yes
Observations	60	60	60

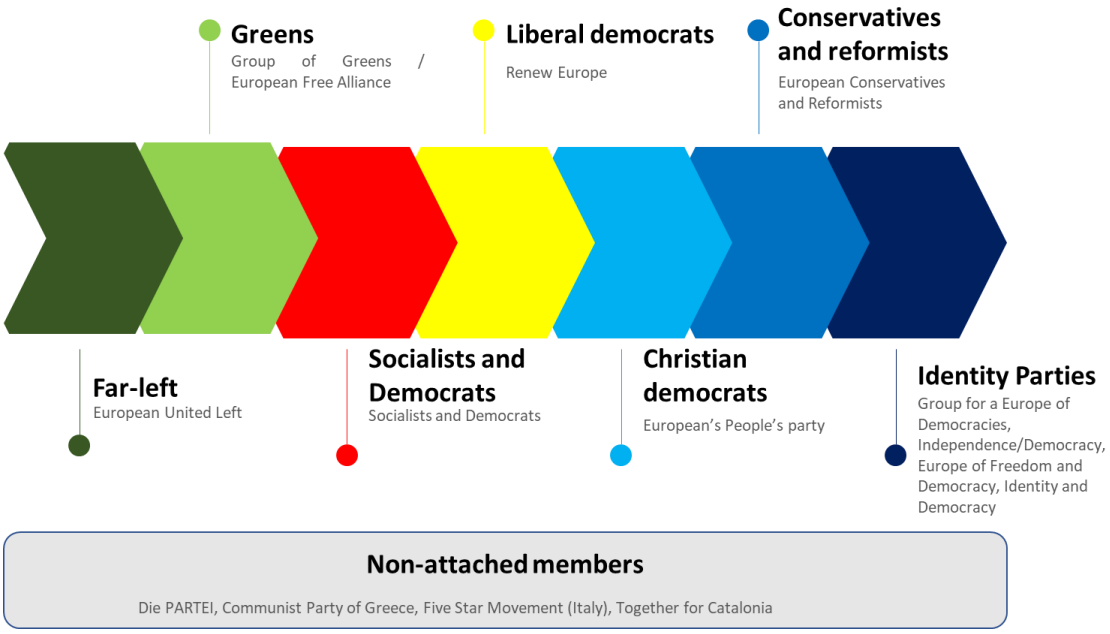
Notes: dependent variables are the total sum of EU's import, export and net trade exposure with China weighted by the initial share of employment in sector s. Explanatory variables are the total sum of import exposure, export exposure and net exposure of the US, Norway and Switzerland, with China by industry weighted by the initial year of industry employment in the selected country. Heteroskedasticity-robust standard errors. Standard errors in parentheses. *p<0.1, *p<0.05***p<0.01. Data source: trade flows: COMEX STAT (2020); employment: Eurostat and ILO.

Figure 1. Turnout European Parliament Elections 1999-2019.



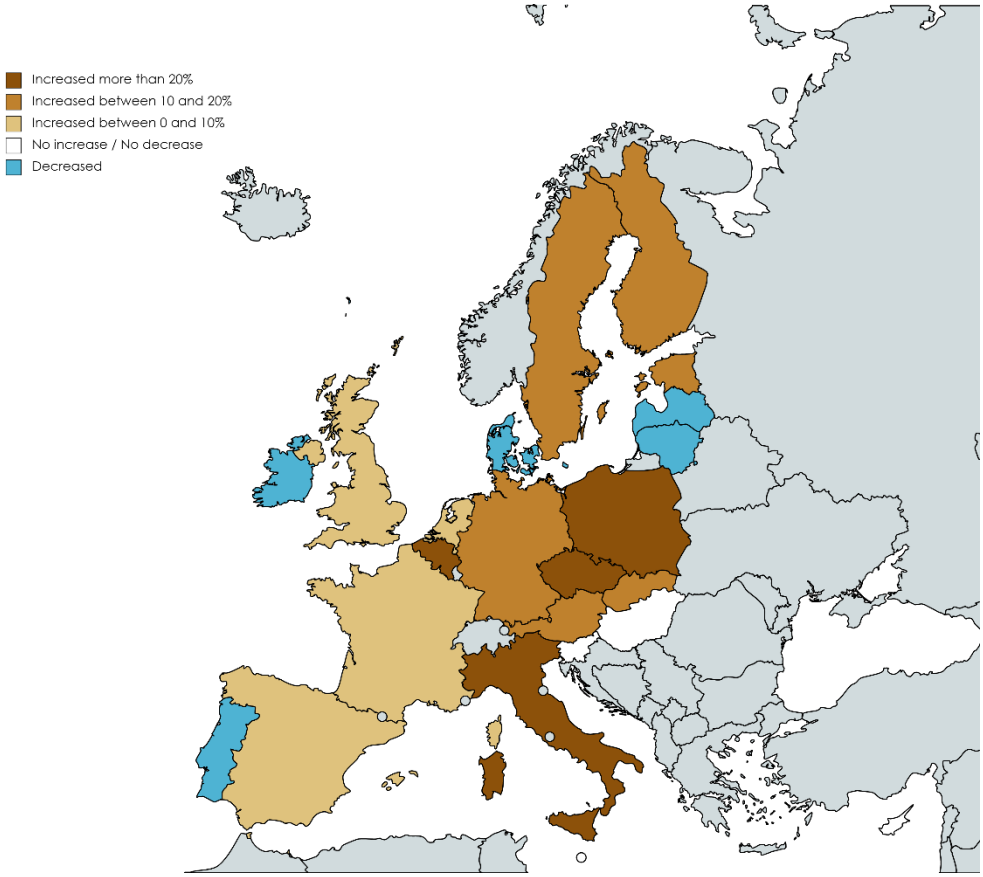
Data source: European Parliament.

Figure 2. Political groups in the European Parliament.



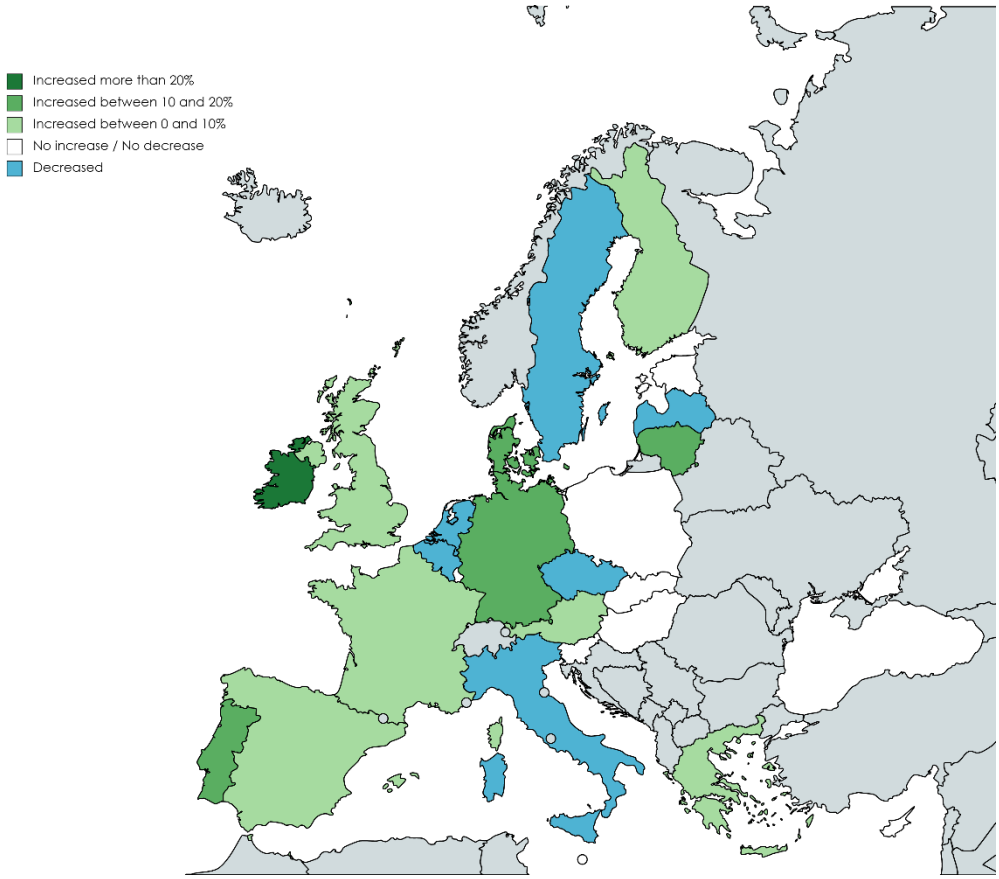
Data source: Compilation based on data from the European Parliament.

Figure 3. Voting far-right-wing support increase during the period 1999-2019 for EU-15 countries and 2004-2019 for the remaining EU-10.



Data source: Compilation based on data from the European Parliament.

Figure 4. Voting far left-wing support increase during the period 1999-2019 for EU-15 countries and 2004-2019 for the remaining EU-10.



Data source: Compilation based on data from the European Parliament.