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The Backlash of Globalization

Abstract

We review the literature on the globalization backlash, seen as the political shift of voters and parties in a protectionist and isolationist direction, with substantive implications on governments' leaning and enacted policies. Using newly assembled data for 23 advanced democracies, we document a protectionist and isolationist shift in electorates, legislatures, and executives from the mid-1990s onwards. This is associated with a noticeable protectionist shift in trade policy – although with some notable nuances– especially since the financial crisis of 2008. We discuss the economics of the backlash. From a theoretical perspective, we highlight how the backlash may arise within standard trade models when taking into account the 'social footprint' of globalization. Then, we review the empirical literature on the drivers of the backlash. Two main messages emerge from our analysis: (1) globalization is a significant driver of the backlash, by means of the distributional consequences entailed by rising trade exposure; yet (2) the backlash is only partly determined by trade. Technological change, crisis-driven fiscal austerity, immigration, and cultural concerns are found to play an important role in creating politically consequential cleavages. Looking ahead, we discuss possible future developments, with specific focus on the issue of social mobility.

JEL-Codes: F100.

Keywords: globalization, social footprint, backlash.

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1 Introduction

"I walked down a long service road into the remains of an abandoned lace factory. The road was pocked with holes filled with fetid water. [...] The derelict complex, 288,000 square feet, consisted of two huge brick buildings connected by overhead, enclosed walkways. The towering walls of the two buildings, with the service road running between them, were covered with ivy. The windowpanes were emply or had frames jagged with shards of glass. [...] The wreckage of industrial America lay before me [...]. The Scranton Lace Company was America. [...] The factory [...] was once among the biggest producers of Nottingham lace in the world. [...] But the company gave more than a wage to the thousands of men and women who worked here. It gave the dignity, purpose, pride, a sense of place, hope, and self-esteem. All that was gone. [...] replaced in Scranton and across America by desperation, poverty, drift, a loss of identity, and a deep and crippling despair. Another age. Another time. Another country." (Hedges, 2018, pp.1-2). The factory also generated tax revenues for the local authorities to support the supply of public goods, from education and medicine to law and order. With deindustrialization the community of Scranton, Pennsylvania, where President Joe Biden was born in 1942, went spiralling down with population dropping from its peak above 140,000 inhabitants, just before Biden was born, to its current low plateu short of 80,000 inhabitants.

How could all that happen? Nowadays the world top players in the lace market are in Mexico (Panggio), Turkey (Antik Dantel, Tugcu Home, Acar Brode, Gülhan Brode Tekstil, Motif Dantel), India (Romy Lace, Jai Durga and Co.), Portugal (Arma-Da Laces, Cotex Laces), and China (Hua Cheng Industrial Group).[1] It is a short step to entertain the possibility that globalization is the 'source of all evil', not only for Scranton but also for many other places of western industrialized countries that have followed similar downward spirals. It is another short step further to conclude that people's acceptance of such possibility as more than a possibility lies behind the so-called 'globalization backlash'. That is, the political shift of voters and parties in a protectionist and isolationist direction, with substantive implications on governments' leaning and enacted policies. Are these two short steps warranted?

We begin this chapter by describing the globalization backlash. Specifically, using newly assembled data for 23 advanced democracies, we document a protectionist and isolationist shift in electorates, legislatures, and executives from the mid-1990s onwards. This political phenomenon is part of the broader populist wave (reviewed by Guriev and

[1] https://www.marketreportsworld.com/

Papaioannou 2021), and is associated with a noticeable protectionist shift in trade policy –although with some notable nuances– especially since the financial crisis of 2008. As evident cases in point, we discuss, among others, Brexit, the US-China trade war, and the stall of the WTO dispute settlement system. Interestingly, we show that the globalization backlash is not necessarily associated with a generalized worsening of people's attitudes towards trade, for which survey evidence is mixed. On the one hand, large minorities, and in some cases strong majorities of respondents in recent years believe that they do not personally benefit from trade (e.g., 39% in the US and 60% in Italy). On the other hand, we do not observe a declining trend over time when considering individuals' appreciation of trade as beneficial from a country-level perspective.

What do we know about the causes and the mechanisms underlying the globalization backlash? In the second part of the chapter we discuss the existing literature on these issues, drawing both from international economics and from political science. A main goal of our contribution is understanding to what extent the globalization backlash has been driven by globalization itself. To this goal, from a theoretical perspective, we first discuss how the backlash may arise within standard trade models when taking into account the 'social footprint' of globalization, in terms of trade-induced inequality and foregone positive externalities from 'strategic industries.' We then discuss the empirical studies that have investigated the link between trade exposure and voting. We conclude that the globalization backlash is (at least partly) endogenous to globalization. In particular, the distributional consequences of globalization have contributed to the creation of widening cleavages across social groups and regions. These dynamics have resulted in political disappointment with mainstream parties and candidates, leading to higher support for anti-establishment and anti-globalization forces. There is ample evidence of this pattern both in the US and in the European Union.

Yet, globalization is not the only driver of the backlash. For instance, trade exposure is found to raise support for protectionist and isolationist parties on the right of the political spectrum, but it does not explain the surge of left-wing anti-globalization parties, which have gained momentum especially in Europe, and especially since the financial and sovereign-debt crisis. Such left-wing backlash seems to be rather driven by exposure to fiscal austerity induced by the crisis. Moreover, technological change too seems to play an important role in driving the backlash. In particular, exposure to robotization is found to breed support for right-wing protectionist and isolationist forces. Trade and automation thus emerge as two facets of structural economic change inducing very similar political consequences. Immigration has also been found to play an interesting

role in the same direction, both as a catalyst of trade-driven economic distress, and as a determinant of isolationist reactions on its own. Overall, borrowing from the medical literature, we may describe this multi-causal nature of the phenomenon through the concept of 'comorbidity', by which different factors compound to generate the globalization backlash.

Anti-globalization forces enjoy an anti-incumbent advantage over mainstream parties, and are able to cast in their political bundles generalized promises of protection that are attractive to a wide range of economic losers. Indeed, as pointed out above, their success is not necessarily paralleled by rising anti-globalization attitudes. Losers might not be able to identify exactly the causes of their economic distress (if identifiable at all in a precise way even by economists), and feel close to generic anti-establishment appeals to take-back-control of their countries, ensuring national self-sufficiency and security. They are also attracted by the authoritarian and nativist undertones –typical of nationalist parties– that resonate with a well-documented psychological shift in people's attitudes driven by economic distress and a perceived decline in status. As a matter of fact, one main way in which economic shocks translate into voting behavior is by changing people's attitudes and opinions. In this respect, economic and cultural factors are closely intertwined drivers of the globalization backlash.

We provide an extensive discussion of how different economic and cultural factors may interact, and a systematic overview of the possible mechanisms through which they may influence voting behavior and lead to globalization backlash. Crucially, these mechanisms go beyond the intuitive, yet oversimplified, interpretation by which voters can correctly identify trade as the cause of perceived economic distress, and therefore choose to support protectionist and isolationist parties in response. Such a restrictive view of voting does not account for the complexities of party policy platforms, nor for the richness of the social and psychological dynamics behind vote choices. Moreover, it is highly (possibly unrealistically) demanding in terms of voters' awareness. Overall, globalization is at stake for reasons that are not just directly related to trade. Its future depends on how successful society will be at making not only globalization, but structural change in general, more politically sustainable, by making them more inclusive.

The chapter is organized as follows. In Section 2 we document the globalization backlash in terms of voting behavior, policy influence, and people's attitudes. In Section 3 we discuss the economic effects of globalization in light of the existing economics literature, and develop the implications of standard trade models for the globalization backlash. Section 4 discusses the connection between the economic effects of globaliza-

tion and its backlash, as well as the role of other economic and cultural factors. In Section 5 we reflect on possible future developments, broadening the picture to consider the link between trade and social mobility, and briefly discussing the possible implications of the COVID-19 pandemic. Finally, Section 6 concludes.

2 Documenting the globalization backlash

In this section, we present a novel body of descriptive evidence on the globalization backlash. We characterize the backlash along three key dimensions: (1) voting behavior; (2) policy influence, evaluated both in terms of the composition of legislatures and executives, and in terms of direct trade policy developments; and (3) individual citizens' attitudes. Our analysis focuses on the period 1980-2019, and covers 23 industrialized, advanced democracies. These span Europe, North America, and Asia.[2]

2.1 Voting behavior

We begin by documenting the globalization backlash in terms of voting behavior. In particular, we provide evidence on the evolution of electorates' ideological leaning with respect to globalization over the past 40 years. This analysis relies on two ingredients: (1) the vote share of each party in each national election; and (2) an ideology score reflecting the positioning of each party (in each election) along the isolationist vs. globalist spectrum. For both pieces of information we rely on data from the Manifesto Project (Volkens et al., 2020). This source is widely used in the literature to characterize party platforms, as it provides human-coded counts of the statements made by parties in their electoral programs on a comprehensive range of issues, including international trade and multilateralism.

Specifically, in line with earlier work by Burgoon (2009) and Colantone and Stanig (2018a, 2019), we measure parties' positioning on globalization through the *Net Autarky Score*. This is computed for each party p, in country c and year of election t, according to the method proposed by Lowe et al. (2011):

$$\text{NetAutarkyScore}_{pct} = \log(.5 + z^{+}_{pct}) - \log(.5 + z^{-}_{pct}), \tag{1}$$

[2]Sample countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States.

where z^{+}_{pct} is the number of claims in the party manifesto in a protectionist/isolationist direction, and $z^{-}_{\ell ct}$ is the number of claims in the opposite direction.[3] Higher scores thus denote more protectionist and isolationist positions. Importantly, the net autarky score takes into account not only parties' stances on narrow trade policy issues such as tariffs and export subsidies, but also their broader views on sovereignty, multilateral relations, and the role of international organizations such as the WTO and the European Union. This richer characterization allows us to explore more thoroughly different important facets of the globalization backlash. This involves not only the success of plain protectionist platforms but also, in more general terms, stronger emphasis on national self-sufficiency and security, paralleled by growing skepticism with regard to supranational institutions and multilateral cooperation.

We combine the net autarky scores and the party vote shares in order to compute nation-specific summaries reflecting the political orientation of each country in each election. Specifically, we compute the electorate center of gravity (COG) as the average of the policy positions of the parties competing in the election, weighted by their vote shares. This is obtained as in Colantone and Stanig (2018a) according to the following formula:

$$COG_{ct} = \frac{\sum_{p=1}^{n} w_{pct} * \text{NetAutarkyScore}_{pct}}{\sum_{p=1}^{n} w_{pct}}, \tag{2}$$

[3] Specifically, z^{+}_{lct} contains the number of claims coded in categories: *406 - Protectionism Positive*, including favorable mentions of extending or maintaining the protection of internal markets, by the manifesto or other countries, through measures that may include tariffs, quota restrictions, export subsidies; *109 - Internationalism Negative*, including negative references to international co-operation, favorable mentions of national independence and sovereignty with regard to the manifesto country's foreign policy, isolation and/or unilateralism as opposed to internationalism; and *110 - European Community/Union Negative*, including negative references to the European Community/Union, such as opposition to specific European policies which are preferred by European authorities, or opposition to the net-contribution of the manifesto country to the EU budget.
z^{-}_{lct} refers to codes: *407 - Protectionism Negative*, including support for the concept of free trade and open markets, calls for abolishing all means of market protection, in the manifesto or any other country; *107 - Internationalism Positive*, including the need for international co-operation and co-operation with specific countries, and references to the need for aid to developing countries, need for world planning of resources, support for global governance, need for international courts, support for UN or other international organizations; and *108 - European Community/Union Positive*, including favorable mentions of European Community/Union in general, such as references to the desirability of the manifesto country joining (or remaining a member), desirability of expanding the European Community/Union, desirability of increasing the ECs/EUs competences; desirability of expanding the competences of the European Parliament.

where p indexes parties, c countries, and t election years. The $\mathrm{NetAutarkyScore}_{pct}$ is the ideology score of party p based on its manifesto of year t, and w_{pct} is its vote share at the national level for the election of the legislative lower house. The normalization at the denominator is needed as ideology scores are not available for some minor parties. Reassuringly, though, excluded parties account on average for only about 3.5 percent of total votes cast.[4]

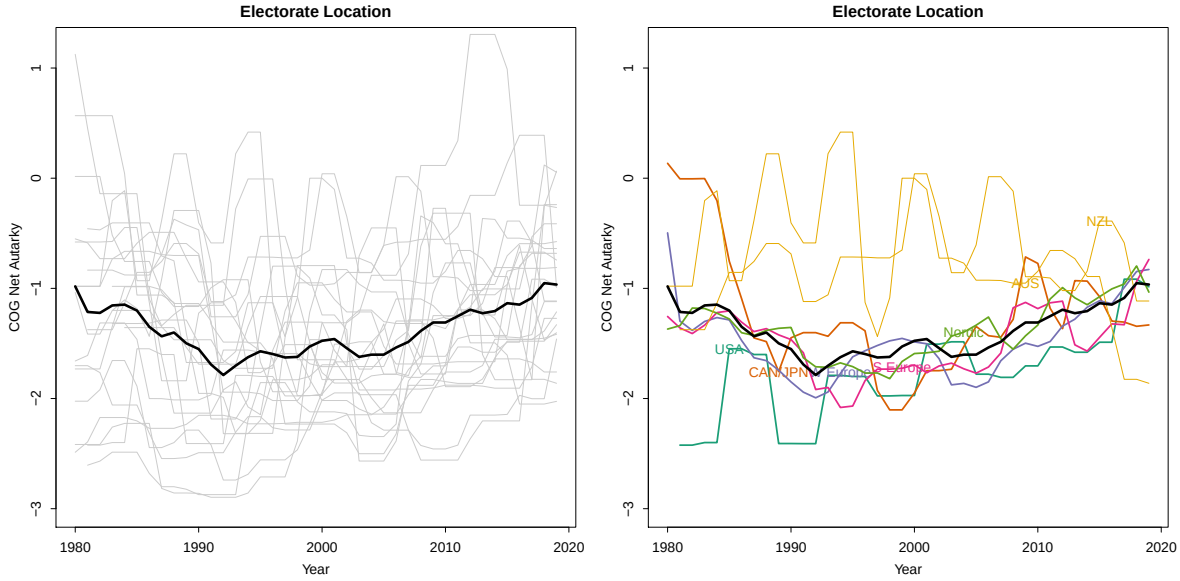
Figure 1 shows the evolution of electorate location from 1980 until 2019. In the left panel, the light grey lines refer to each single country, while the black line is the year-specific average across countries. In the right panel, along with the cross-country average, we highlight specific countries, such as the US, or groups of countries, such as southern, western, and northern Europe.

When considering the average across countries, there is a visible decline in net autarky from the beginning of the 1980s until the early 1990s. This globalist wave is then followed by an isolationist shift in electorate location from the mid-1990s onwards. This evidence suggests that the globalization backlash in terms of voting behavior is not just a recent phenomenon, but has been mounting over the past three decades. In addition, the right panel shows how similar patterns emerge when considering different countries and groups of countries. The only relevant exceptions are Australia and New Zealand, whose historically higher levels of net autarky scores have been actually declining, on average, over the same period. Arguably, this may be related to the fact that these economies are strong in commodities' exports. They have thus mostly benefited from the sharp growth of China (and other emerging economies) through what has been called the "commodity super cycle" of the 2000s, while at the same time the US and Europe were severely hit by the China shock in manufacturing.

As complementary evidence, Figure 2 shows how the anti-globalization shift in electorate location has also been accompanied by a rise in polarization from the early 2000s onwards, with a sharp increase especially around the financial crisis and in subsequent years. This is particularly visible, for instance, in the US. Polarization is measured as proposed by Esteban and Ray (1994), according to the following formula: $\sum_j \sum_l w_j^{1+\alpha} w_l |x_j - x_l|$, where j and l index parties, w_j and w_l are their vote shares, x_j and x_l are their net au-

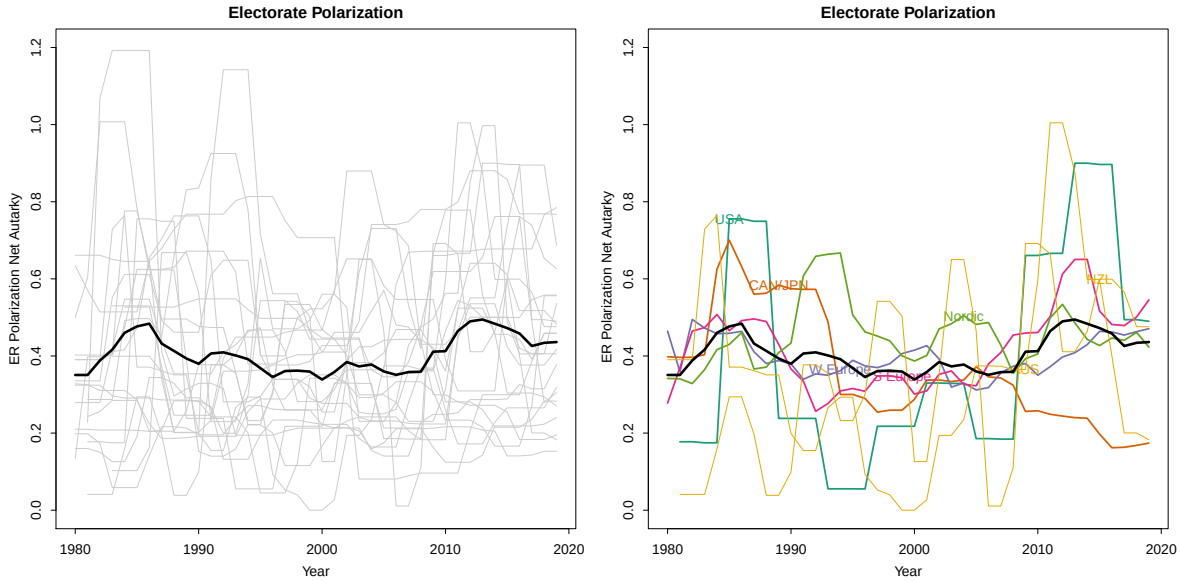
[4] All the evidence presented in this section remains substantially unchanged when using the median voter score as a summary instead of the center of gravity. As explained in Colantone and Stanig (2018a), the median voter score is the ideological position of the (weighted) median party in the country. In practice, parties are sorted from least- to most-protectionist/isolationist, and the cumulative vote share is calculated. The median voter score is the ideology of the party at which cumulative vote share reaches 50%.

Figure 1: Electorate Location



Source: Authors' elaboration based on Manifesto Project data (Volkens et al. 2020).
Note: Both panels report figures referring to the electorate center of gravity in terms of net autarky scores. In the left panel, the light grey lines refer to each single sample country; the black line is the cross-country average. In the right panel, we display separately specific countries and groups of countries in different colors; the black line is the cross-country average.

Figure 2: Electorate Polarization



Source: Authors' elaboration based on Manifesto Project data (Volkens et al. 2020).
Note: Both panels report figures referring to electorate polarization in terms of net autarky scores. In the left panel, the light grey lines refer to each single sample country; the black line is the cross-country average. In the right panel, we display separately specific countries and groups of countries in different colors; the black line is the cross-country average.

tarky scores, and $\alpha = 0.5$. Rising polarization is a dangerous development as it raises the risk of social conflict. As explained by Esteban and Ray (1994), conflict might be driven more by the existence of homogenous groups that are "distant" from each other, rather than simply by the spread of a given trait (e.g., ideological positions).

To characterize further the anti-globalization shift in electorate location presented in Figure 5, with the exception of Australia and New Zealand, we next ask what type of parties are driving it. Is the backlash driven by increasing support for left-wing protectionist parties? Or rather by right-wing nationalists? Or by a combination of both? We address these questions in Figures 3 and 4.

Figure 3 displays the location of all parties according to their policy platforms in a two-dimensional ideological space. This is an extension to more countries and years of a similar analysis conducted in Colantone and Stanig (2018a, 2019), always based on Manifesto Project data. Each point in the graph corresponds to one party observed in one election between 1980 and 2019. The size of each symbol is proportional to (log) national vote share. The variable on the vertical axis is the net autarky score, computed as described in Equation (1). The variable on the horizontal axis is a classical index of left-right economic ideology concerning domestic issues. It is computed through the same formula as for net autarky, but employing in this case the number of statements in the manifesto that are in favor or against redistribution and the welfare state, trade unions, Keynesian demand management policies, and regulation of economic activity. Higher scores denote more conservative positions, located on the right side of the figure. The dashed lines split the graph into four quadrants, based on the (country-specific) median positions on the two policy dimensions. For instance, parties in the upper quadrants are characterized by more protectionist and isolationist platforms compared to the median within their country.

Triangles refer to Christian-democratic parties, typically found on the economic center-right. Squares are socialist and green parties, usually found on the economic left, as are communist parties, identified by asterisks. Hollow dots are liberal and conservative parties, typically found on the economic right. The allocation of parties to these different political families is based on the taxonomy provided by the Manifesto Project. Finally, solid diamonds denote radical-right parties, identified as in Colantone and Stanig (2018a, 2019) based on the conventional wisdom in the political science literature. In general, parties that are classified as radical-right tend to display three characteristics: (1) radicalism, meant as a criticism of the established order and institutional checks and balances; (2) exclusionary nationalism and nativism; and (3) populism, expressed as a

rejection of pluralism and elitism (Golder 2016).[5]

The main message emerging from Figure 3 is that relatively anti-globalization parties –located in the upper quadrants– can lean both to the left and to the right of center when it comes to domestic economic policy. The combination of a laissez-faire approach on domestic issues with protectionism and isolationism in international affairs is actually quite common. This type of policy platforms has been characterized as "economic nationalism" (Colantone and Stanig, 2018a, 2019) and it is typical (though not exclusive) of radical-right parties, most of which are indeed located in the upper-right quadrant of the graph.

In Figure 4, we document the evolution of support for different party groups over time. Specifically, we compute the cumulative vote share of parties belonging to each quadrant of Figure 3, and report the 5-year rolling average for each group across countries. By so doing, in each year we take into account on average one election per each sample country, thus minimizing the time variation due to compositional effects (as countries do not hold elections every year). The lines in the graph show cumulative vote shares for the four party groups, in this bottom-up order: economic nationalists (upper-right quadrant), isolationist left (upper-left quadrant), pro-trade left (bottom-left quadrant), and pro-trade right (bottom-right quadrant). To illustrate, the black line displays the vote share for economic nationalist parties; the distance between the black line and the yellow line is the vote share for the isolationist left, and so on up until reaching 100 percent of votes cast.

Consistent with the evidence in Figure 5, the globalization backlash is pretty evident from the early 1990s onwards. The combined vote share for right- and left-wing isolationists almost doubles, rising from around 30 to about 60 percent. Such a surge is primarily driven by right-wing parties until the financial crisis. Later, we observe a significant increase in support for the isolationist left, with the most prominent examples coming from southern Europe: Podemos in Spain, Syriza in Greece, and the Five Star Movement in Italy. Nevertheless, economic nationalist parties keep performing very well even after the crisis. Interestingly, some radical-right parties actually move to the

[5]The full list of radical-right parties includes: the BZÖ, FPÖ and the Team Frank Stronach in Austria; the Vlaams Blok and the Vlaams Belang in Belgium; the People's Party in Denmark; the True Finns in Finland; the Front National in France; Golden Dawn and LAOS in Greece; the Alternative for Germany in Germany; the Brothers of Italy and Northern League in Italy; the PVV, the List Fortuyn and Forum for Democracy in the Netherlands; the Progress Party in Norway; Vox in Spain; the Sweden Democrats in Sweden; the AN/NA, the Swiss Democrats, the Swiss People's Party, and the Freedom Party of Switzerland in Switzerland; and the UKIP in the United Kingdom.

left of center on domestic economic policy, and thus to the upper-left quadrant in Figure 5. Their vote shares are captured by the distance between the black line and the dashed grey line. Such a shift of the radical right has been studied in recent political science literature (Lefkofridi and Michel 2017; Hall and Evans 2019; Rovny and Polk 2020). It involves not only northern European parties such as the True Finns in Finland, but also southern European forces such as Lega in Italy. To varying degrees, these parties start supporting redistribution policies and a more generous welfare state, even though with exclusive access to natives.

Taking stock of the evidence, there has been a significant globalization backlash in voting behavior from the early 1990s onwards. This appears clearly in terms of electorate center of gravity, and it is also associated with a rise in polarization after the year 2000, especially in the US. The backlash takes the form of increasing support for both left- and right-wing protectionist and isolationist parties. While support for right-wing economic nationalists starts rising already in the 1990s, the isolationist left takes off mainly from the financial crisis onwards.

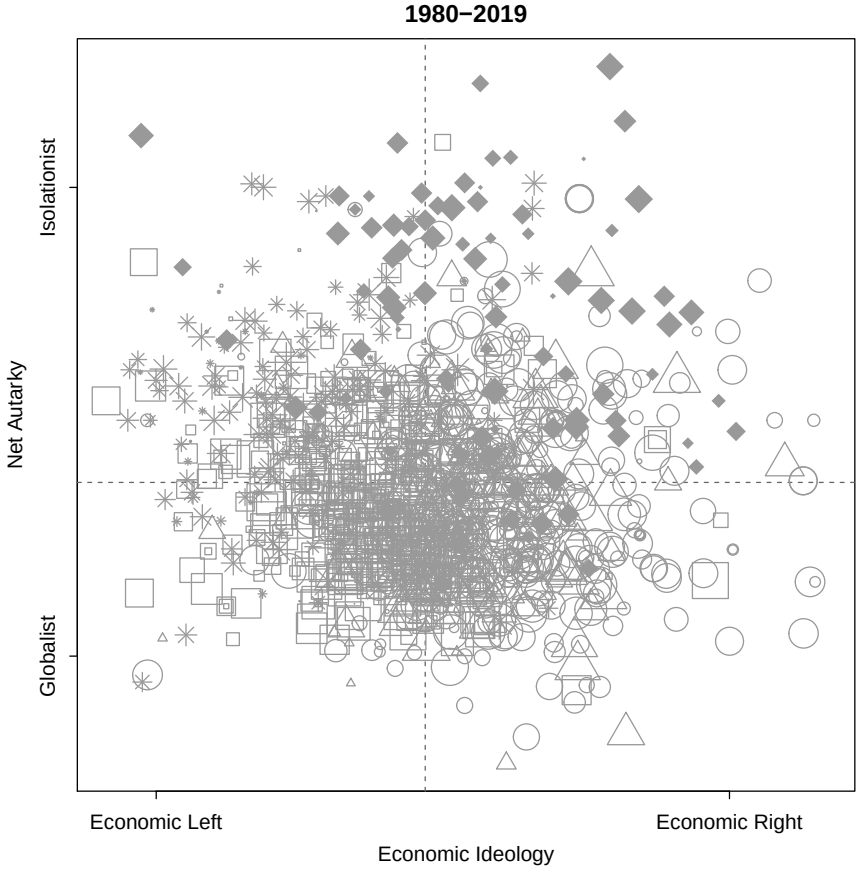
2.2 Policy influence

2.2.1 Legislatures and executives

We now evaluate to what extent the protectionist and isolationist shift in voting has been consequential for the composition of legislatures and executives. We regard this as a key aspect of the globalization backlash, as it relates to the translation of voting behavior into policy outcomes, which is far from obvious. To the extent that electoral systems depart from perfect proportionality, the shift in electorate location documented above would not induce automatically an analogous shift in the composition of legislatures. In the limit, in a fully majoritarian context, one could easily imagine a situation in which anti-globalization parties significantly increase their vote shares without gaining seats in the legislature. A shift in the composition of executives is even less likely to obtain, also in the presence of a growing legislative representation of isolationist parties, since these may still remain out of the government.

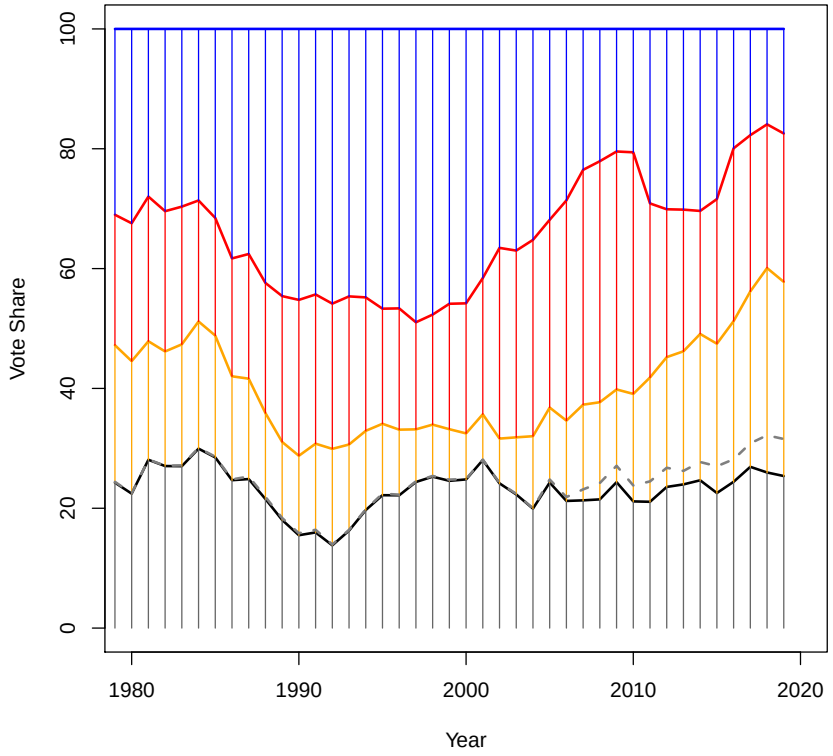
We start by considering the composition of legislatures, focusing on the lower house of each country. Figure 5 reports the dynamics of legislature location in terms of net autarky. As for the electorate location, we focus on the center of gravity. That is, we compute the weighted average of net autarky scores for all parties represented in the

Figure 3: Party Groups



Source: Authors' elaboration based on Manifesto Project data (Volkens et al. 2020).
Note: Each data point is one party in one election between 1980 and 2019, in 21 countries (all but Australia and New Zealand). Triangles refer to Christian-democratic parties; squares are socialist and green parties; asterisks are communist parties; hollow dots are liberal and conservative parties; solid diamonds are radical-right parties. The size of each symbol is proportional to (log) national vote share.

Figure 4: Electoral Dynamics by Party Groups



Source: Authors' elaboration based on Manifesto Project data (Volkens et al. 2020).
Note: The figure displays the cumulative vote share of economic nationalists (black line), plus the isolationist left (yellow line), plus the pro-trade left (red line), plus the pro-trade right (blue line). The dashed grey line refers to radical-right parties located to the left of the median in terms of economic ideology. The lines display five-year moving averages of vote shares by ideological group in all countries covered by the analysis.

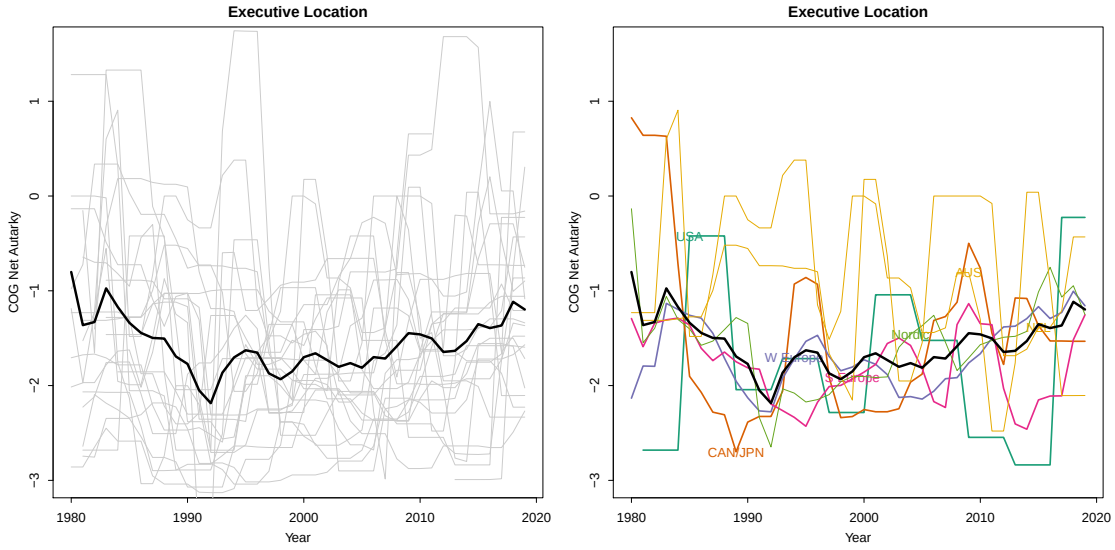
Figure 5: Legislature Location

Source: Authors' elaboration based on data from Manifesto Project (Volkens et al. 2020) and ParlGov (Döring and Manov 2020).
Note: Both panels report figures referring to legislature center of gravity in terms of net autarky scores. In the left panel, the light grey lines refer to each single sample country; the black line is the cross-country average. In the right panel, we display separately specific countries and groups of countries in different colors; the black line is the cross-country average.

legislature, using as weights their seat shares. In practice, we use the same formula as in Equation (2), but considering only parties with at least one seat in the legislative lower house, and using seat shares rather than vote shares as weights. Data on seat shares are from ParlGov (Döring and Manov 2020). The evidence on legislature location is very similar to that obtained on electorate location, in Figure 1. This suggests that the anti-globalization shift in voting has indeed translated into a parallel shift of legislatures' composition.

Figure 6 presents a similar analysis on executive location in terms of net autarky. In the case of single-party executives, the location of the executive is simply the net autarky score of the ruling party. To compute the ideological location of executives backed by a coalition of parties, we calculate the weighted average of the net autarky scores of all the coalition partners, where weights are the shares of the legislative majority seats that each coalition partner commands, so that larger coalition parties are weighted more than smaller ones. This is the center of gravity of the executive. The protectionist and isolationist move from the 1990s onwards is evident also in this case. Overall, the globalization backlash in voting behavior seems to have been consequential not only in terms of legislative representation, but also in terms of government positioning.

Figure 6: Executive Location



Source: Authors' elaboration based on data from Manifesto Project (Volkens et al. 2020) and ParlGov (Döring and Manov 2020).
Note: Both panels report figures referring to executive center of gravity in terms of net autarky scores. In the left panel, the light grey lines refer to each single sample country; the black line is the cross-country average. In the right panel, we display separately specific countries and groups of countries in different colors; the black line is the cross-country average.

2.2.2 Trade policy

To what extent the described political developments have been associated with a protectionist shift in trade policy? In other words, is the globalization backlash also detectable directly in terms of trade policy developments? This needs not be an automatic consequence of the protectionist shift in legislatures' and executives' leaning. For instance, in the European Union trade policy is set at the EU level, therefore individual national governments have limited influence, as decisions are taken jointly by 27 countries (plus the EU Parliament) without unanimity requirements.[6] More generally, the WTO operates under the principle of consensus with tariff bindings. Changing the bindings, according to the rules, requires negotiations with the trading partners. All this might create in principle a sort of inertia in trade policy, whereby a policy shift is more likely to obtain in terms of failures to make further advances in trade liberalization, rather than in terms of significant steps back. This notwithstanding, in recent years we have actually observed both kinds of patterns.

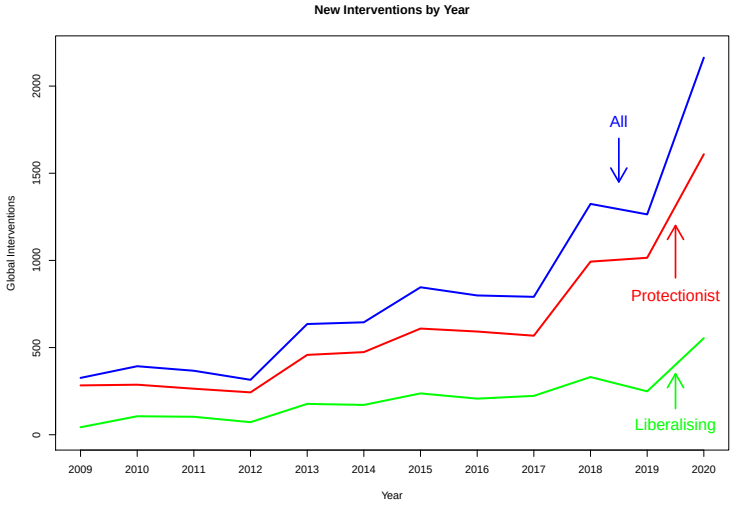
[6]The approval of all countries is only needed for the so-called 'mixed agreements', covering not only trade matters –for which the EU has exclusive competence– but also issues entering policy areas of member states' competence (e.g., taxation).

There are several recent cases in point depicting a shift away from trade liberalization policies. A first one is Brexit: the withdrawal of the United Kingdom from the EU in 2020, following the referendum of 2016. Brexit was portrayed by many of its proponents as a way to foster the global projection of the UK, which could be finally free to set its own trade policy without the constraints posed by EU membership. These theoretical benefits may possibly materialize in the future. For the time being, though, Brexit has just been the first step back in European economic integration since the 1950s, and a major economic shock whose consequences are still unfolding. A second case in point is the trade war initiated by the US President Trump against China in 2018. This has seen the average tariff on US imports from China rise from 3.1%, in January 2018, to a peak of 21%, in September 2019. In parallel, China retaliated raising average tariffs on US imports from 8% to about 21% (Bown 2021). While no further escalation has been observed since March 2020, there was no de-escalation either, despite the control of the US presidency changing hands from the Republican Trump to the Democrat Biden in January 2021. This might point to a protectionist shift in US politics that is more general than one could have possibly thought.

The American shift has also been related to the failure of the Transatlantic Trade and Investment Partnership (TTIP) and the Trans-Pacific Partnership (TPP). The TTIP was a proposed trade agreement between the European Union and the United States. It could have been the largest bilateral trade initiative ever negotiated, and a model for future global agreements. Its negotiations were launched in 2013 and terminated without success at the end of 2016. The TPP trade agreement would have included 12 countries on both sides of the Pacific region, including the US, Mexico, Canada, Australia, New Zealand, and Japan. The agreement was signed in 2016, but it never entered into force as President Trump withdrew the US participation in 2017. Trump was also determinant in blocking the appointment of judges to the WTO Appellate Body. This has normally seven members and needs at least three in order to operate, and has de facto stopped being active since December 2019, due to the expiration of appointed judges' terms. The stall in the dispute settlement system of the WTO has added to the longer-run stall in multilateral negotiations within the Doha Development Round, which started in 2001 and is still open.

Looking beyond these evident cases in point, Figure 7 shows how protectionist trade policy interventions have been growing faster than liberalizing ones after the financial crisis of 2008. The figure is based on data from the Global Trade Alert, which provides a systematic coverage of state acts in several trade-related domains, including both tariff

Figure 7: Rise in protectionist measures since the financial crisis



Source: Authors' elaboration based on Global Trade Alert data.
Note: The green line displays liberalizing interventions, the red line protectionist interventions, the blue line is the sum of all interventions.

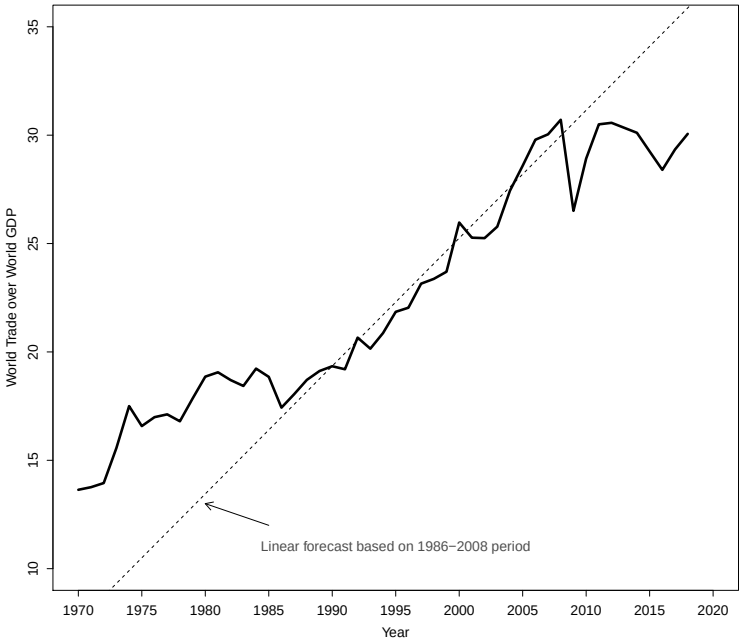
and non-tariff barriers, as well as subsidies, FDI measures, local content provisions, and government procurement (see Evenett and Fritz 2017 for more details). The protectionist shift is arguably one of the factors behind the post-crisis 'slowbalization' pattern, that is, the slowdown in the growth of the world trade-to-GDP ratio compared to the previous decades, as characterized by Antràs (2020) and depicted in Figure 8.

Yet, besides such dynamics, more trade-friendly developments can also be observed. Figure 9 shows how the number of active regional trade agreements (RTAs), and especially free trade areas (FTAs), has kept growing even after the financial crisis, both for our sample of 23 advanced democracies (left panel) and globally (right panel). While the proliferation of FTAs may be partly related to the stall of multilateral negotiations within the WTO, it remains a signal of continuing interest in stronger trade ties. Digging deeper into these patterns, though, Figure 10 shows that bilateral RTAs have been growing faster than plurilateral ones, which involve more than two partners. This might be read as another signal of growing difficulties in finalizing broader trade deals.[7]

Figure 11 shows the evolution of tariffs from the mid-1990s onwards. The left panel considers the sample of 23 advanced democracies, while the right panel displays global

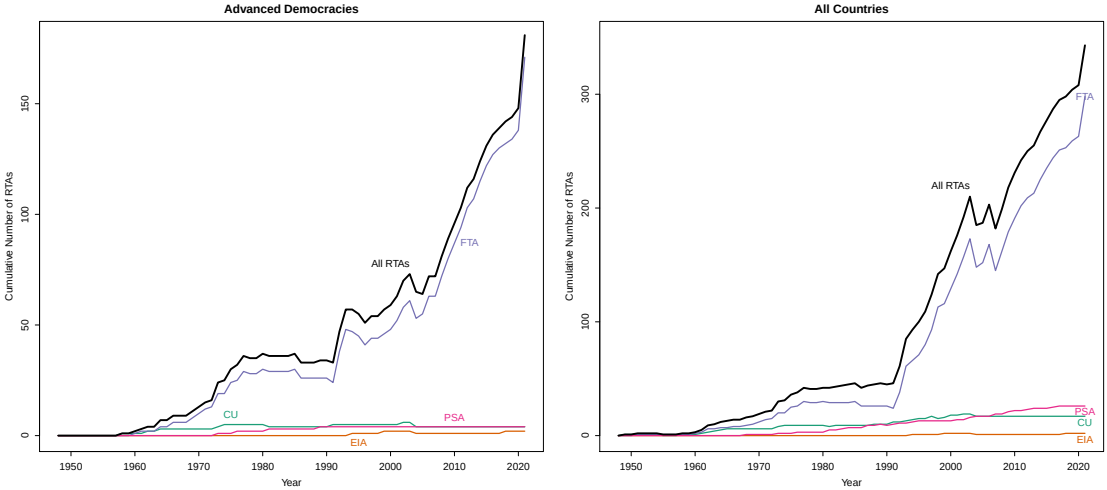
[7]See Rodrik (2018) and Blanga-Gubbay et al. (2021) for discussion and evidence on how free trade deals might be largely influenced by the interests of relatively few very large firms, which end up reaping the largest gains from trade. See also Maggi and Ossa (2021) for a discussion of the additional complexities entailed by deep vs. shallow integration agreements, and their potential political implications.

Figure 8: World trade over world GDP



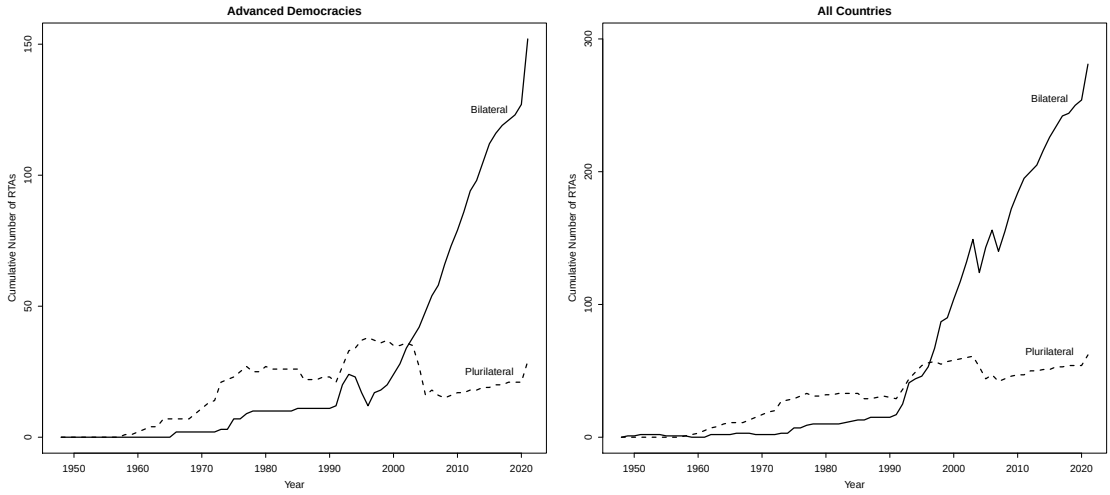
Source: Authors' elaboration based on Antràs (2020) data.
Note: The solid line displays the ratio of world trade over world GDP. The dashed line is the linear fit based on the 1986-2008 period.

Figure 9: Regional trade agreements



Source: Authors' elaboration based on WTO data.
Note: The figure displays the number of Regional Trade Agreements (RTAs) in force over time by type of agreement. The classification is provided by the WTO. FTA stands for Free Trade Agreement; CU for Customs Union; EIA for Economic Integration Agreement; PSA for Partial Scope Agreement. If an agreement is classified as both an EIA and another type of agreement it is counted only in the latter type. The left panel considers only RTAs involving at least one country belonging to the sample of 23 advanced democracies; the right panel displays world-level figures.

Figure 10: Regional trade agreements - bilateral vs. plurilateral



Source: Authors' elaboration based on WTO data.
Note: The figure displays the number of bilateral (solid line) and plurilateral (dashed line) Regional Trade Agreements (RTAs) in force over time. The left panel considers only RTAs involving at least one country belonging to the sample of 23 advanced democracies; the right panel displays world-level figures.

figures. Data are sourced from the World Integrated Trade Solutions (WITS) database of the World Bank, and refer to effectively applied tariffs. These are either MFN tariffs or applied preferential rates. There is a clear downward trend in average tariffs, both simple and trade-weighted. This is detectable both for manufacturing and for agricultural products, and continues also after the financial crisis.[8] Yet, these figures do not capture temporary protectionist measures, which we retrieved separately from the Temporary Trade Barriers Database by Bown (2016). Figures 12 and 13 report the evolution of, respectively, active anti-dumping and countervailing duties measures by year. Over time, both types of measures have been increasingly activated, both within the sample of advanced democracies (left panels) and in general (right panels). A peak is observed in correspondence of China's accession to the WTO, in 2001, and there is an upward trend from the financial crisis onwards.[9] Moreover, Figure 14 shows that the average ad-valorem rates of active measures have also grown significantly over time, thus entailing stronger protectionist effects.[10]

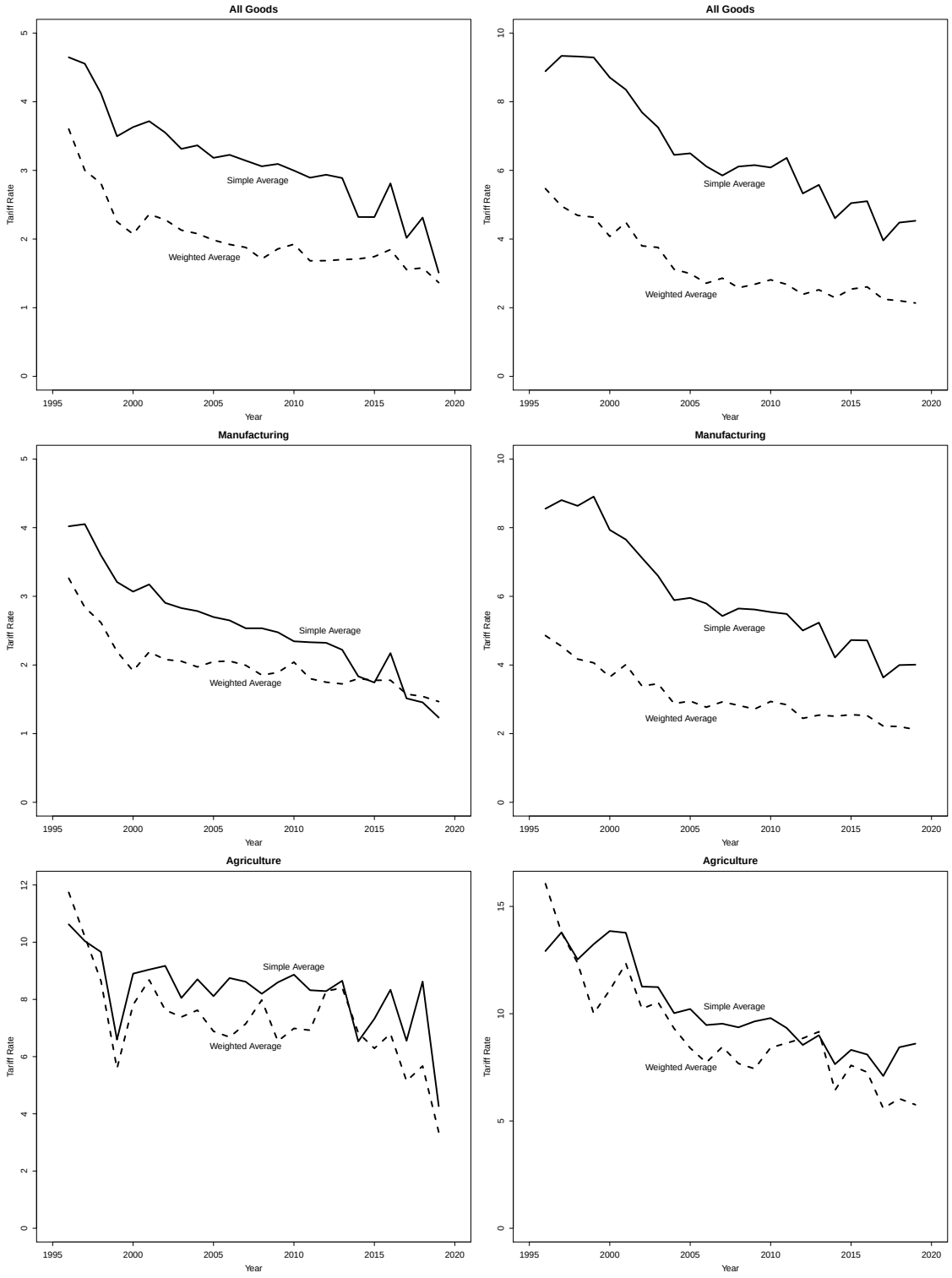
Taking stock of the evidence, several elements contribute to portray a noticeable protectionist shift in trade policy –although with some notable nuances– especially since

[8] Similar patterns are obtained when considering also ad-valorem equivalents of duties that are not ad-valorem.

[9] A similar tendency is observed also for safeguard measures at the global level.

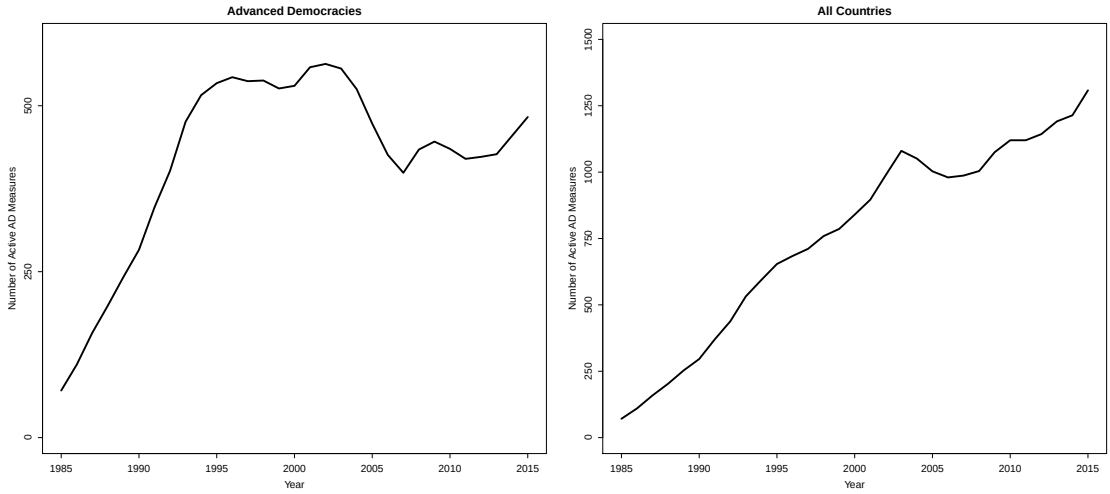
[10] Data in Figure 14 refer to the sample of 23 advanced democracies. Similar evidence is obtained when considering all countries.

Figure 11: Tariffs



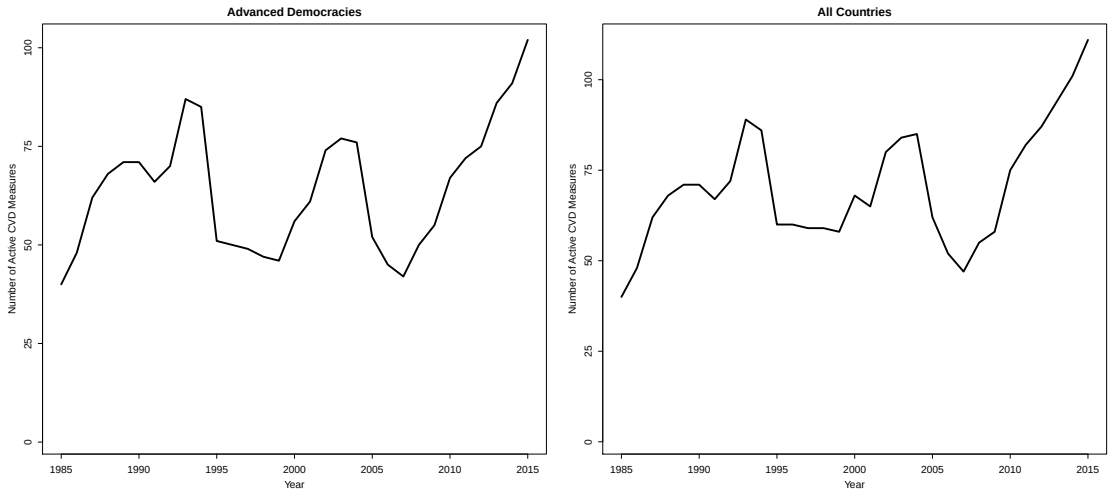
Source: Authors' elaboration based on WITS data.
Note: The figure displays simple and trade-weighted average tariffs for manufacturing, agriculture, and all goods. The left panel considers only the sample of 23 advanced democracies; the right panel displays world-level figures.

Figure 12: Anti-dumping



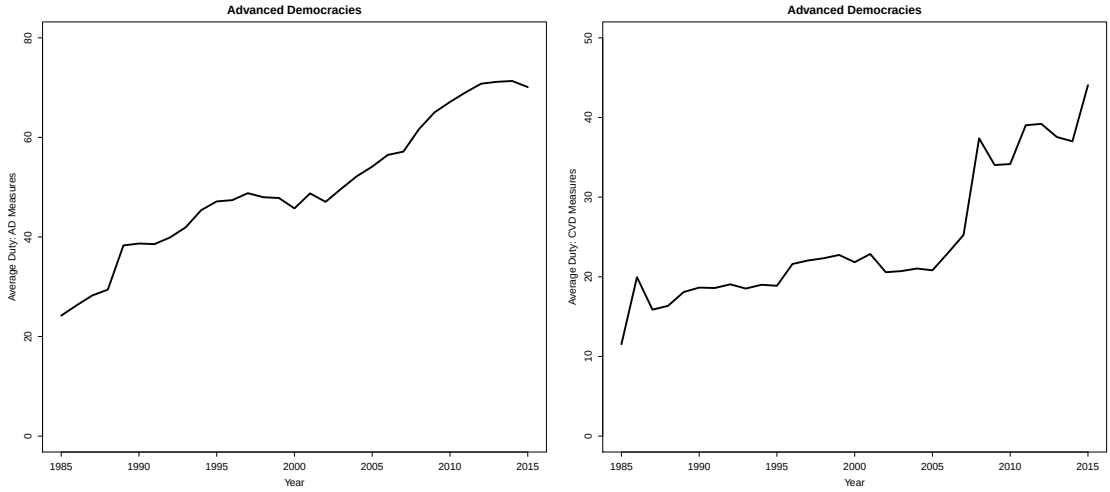
Source: Authors' elaboration based on data from the Temporary Trade Barriers Database (Bown 2016).
Note: The figure displays the number of active anti-dumping measures over time. The left panel considers only the sample of 23 advanced democracies; the right panel considers all countries in the database.

Figure 13: Countervailing duties



Source: Authors' elaboration based on data from the Temporary Trade Barriers Database (Bown 2016).
Note: The figure displays the number of active countervailing duties measures over time. The left panel considers only the sample of 23 advanced democracies; the right panel considers all countries in the database.

Figure 14: Temporary measures - protection rates



Source: Authors' elaboration based on data from the Temporary Trade Barriers Database (Bown 2016).
Note: The figure displays the average ad-valorem rate of antidumping (left panel) and countervailing duties (right panel) measures in force over time. The figure considers only the sample of 23 advanced democracies.

the financial crisis. This is consistent with the political developments described above.

2.3 Attitudes

To conclude this section, we ask whether the globalization backlash in voting reflects a general shift in individual attitudes against globalization. Perhaps contrary to what one may think at first glance, this is not something that should be taken for granted. A canonical understanding in political science is that vote choice involves a comparison of comprehensive policy bundles proposed by competing parties, with weights assigned to different elements of the bundles varying across voters. Party platforms include stances on trade policy and internationalism along with several other issues, such as taxation, welfare policy, immigration, gay rights, gender equality, and cultural identity. Voters may then choose to support an anti-globalization party for reasons that have little to do, for instance, with their attitudes towards trade. Hence, at the aggregate level, there could be an increase in support for protectionist and isolationist parties even in the absence of a generalized tilt of public opinion against globalization. This is actually what seems to have happened in recent years.

Available data on individual attitudes do not have the same wide coverage as election data. Thus, it is unfortunately impossible to perform a systematic analysis of attitudes over the same group of countries covered in the electoral analysis, and over a similarly

long time span. As a fair second best, we rely on the Global Attitudes and Trends Survey released by the Pew Research Center. This provides consistent cross-country data over the period 2002-2018 for a subset of seven relevant countries in our sample: Canada, France, Germany, Italy, Japan, United Kingdom, and the United States. Specifically, we rely on the following survey question: "*What do you think about the growing trade and business ties between (survey country) and other countries - do you think it is a very good thing, somewhat good, somewhat bad or a very bad thing for our country?*". The four possible answers are coded from 1 (very bad) to 4 (very good); higher values thus correspond to more positive views about globalization.

The left panel of Figure 15 displays the average score across individual respondents for each country (colored lines), as well as the cross country average (black thick line). There is no clearly detectable trend, except for some cyclical variation. This is pretty evident in the US, where support for trade reaches its lowest over the financial crisis, and picks up afterwards. In sharp contrast with the protectionist shift in voting of recent years, support for trade seems to grow everywhere after 2014. The only exception is Germany, where average trade support displays a slight decline, while still remaining among the highest in the sample. What seems to grow over time, in parallel with the protectionist shift in voting, is the variance in trade support across individuals. This is reported in the right panel of Figure 15. The upward trend is particularly visible until 2008, as trade support was declining, especially in the US. In general, there is a negative correlation between trade support and its standard deviation. That is, variation in support for trade tends to grow when average trade support decreases. This finding is consistent with the rise in polarization documented in Figure 2, and might be politically consequential especially if associated with the creation of vocal anti-globalization minorities (Bouton et al. 2021).

Eurobarometer data allow us to provide additional evidence on EU countries. An interesting survey item refers to the impact of trade perceived by the single respondents, rather than to the country-level implications of trade. Specifically, in 2019 the following question was asked: "*Nowadays, international trade has an important place in the EU: this means that goods and services from outside are imported into the EU, while goods and services are exported around the world. Could you tell me whether you are currently benefiting from international trade or not?*" Large minorities, and in some cases strong majorities, answered negatively. In particular, more than a third of respondents answered "no" in Austria, Belgium, Greece, France, Italy, and Spain. The highest share of negative answers obtained in Italy: a striking 60%. Using a similar survey question in the

same year, Stantcheva (2020) finds that 39% of US respondents felt that trade had made them worse off. These are far from negligible figures. Eurobarometer also asked respondents whether they agreed with the fact that "*the EU should increase duties on imported goods so as to protect EU industry and jobs*." This position was supported by 42% of respondents in Spain, around a third of respondents in France, Greece, and Portugal, and around a quarter of respondents in Austria, Ireland, and Italy. If we consider, in addition to unilateral tariffs, also the option of retaliatory import tariffs in response to increases in tariffs abroad, more than 50% of respondents in all western EU countries would agree with their imposition, with peaks of 69% and 73% in France and Spain, respectively.

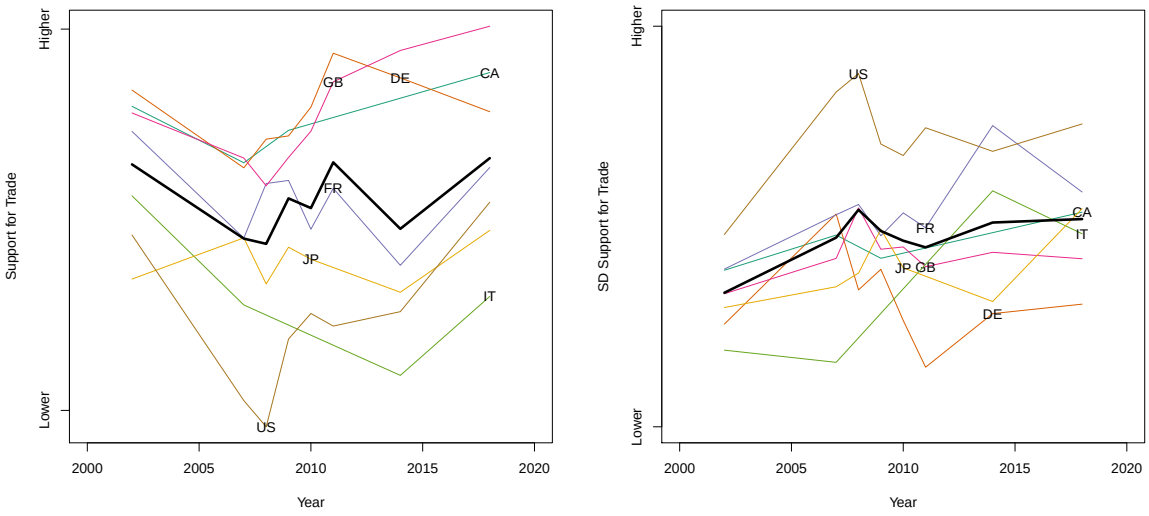
Overall, even though these recent opinions concerning the personal impact of trade and the desirability of protectionism seem to depict a less trade-friendly scenario, the nuanced evidence just reviewed suggests that the increasing support for protectionist and isolationist parties needs not reflect necessarily a generalized worsening in people's attitudes towards trade. The same conclusion, based on a different set of countries, is also reached in a recent review paper on the globalization backlash by Walter (2021).[11] This apparent paradox may be partly explained by the limitations of data on trade attitudes. At the same time, it is fully consistent with: (1) the comorbidity view of the globalization backlash, by which different sources of economic distress contribute to push voters in a protectionist direction; and (2) the political science consensus on the multi-dimensionality of vote choice, by which voters may support protectionist parties also in virtue of other components of their policy bundles. In Section 4.2, we provide a detailed discussion of the mechanisms through which the distributional effects of trade may translate into voting behavior. Crucially, these do not hinge necessarily on the assumption that people recognize trade exposure as the cause of perceived economic distress, and thus change their attitudes on trade and start voting more for protectionist parties. This is only one of the possible channels, and perhaps not even the most relevant in practice.

To provide some complementary evidence on attitudes, we use individual-level data from the European Values Study (EVS) and the World Value Survey (WVS). These cover a larger subset of our initial sample, over a longer time span.[12] First, we focus on attitudes towards immigration. Specifically, we consider the following survey item, appear-

[11] See also Davenport et al. (2021) for additional analyses based on Pew data.

[12] Covered countries are: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Spain, Switzerland, United Kingdom, United States.

Figure 15: Trade Attitudes

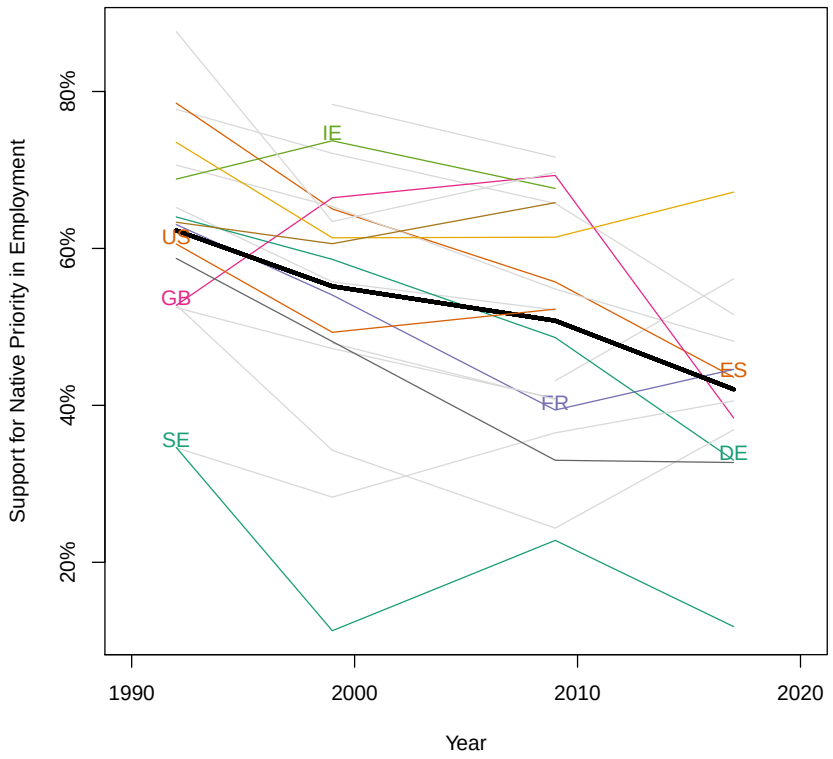


Source: Authors' elaboration based on data from Pew Research Center - Global Attitudes and Trends Survey.
Note: The left panel reports in different colors the country-specific average of individual answers to the Pew trade question, ranging from 1 (very bad) to 4 (very good); the black thick line is the cross-country average. The right panel reports in different colors the country-specific standard deviation of individual answers to the Pew trade question; the black thick line is the cross-country average of standard deviations.

ing both in EVS and WVS for different countries: "*Since jobs are scarce, priority should be given to (survey country) citizens.*" We construct a dummy equal to 1 if the respondent declares to "agree" with this statement, while "neither agree nor disagree" and "disagree" are coded as 0. Figure 16 then reports the share of respondents who agree with granting priority to natives in the labor market. The black thick line is the cross-country average, while the other lines refer to single countries, some of which are highlighted in different colors. In general, there is not an upward trend in nativism. If anything, the cross-country average is actually declining. Hence, with the same caveats as above, the anti-globalization shift in voting does not seem to be paralleled by worsening attitudes about immigration, at least not in terms of labor market openness.

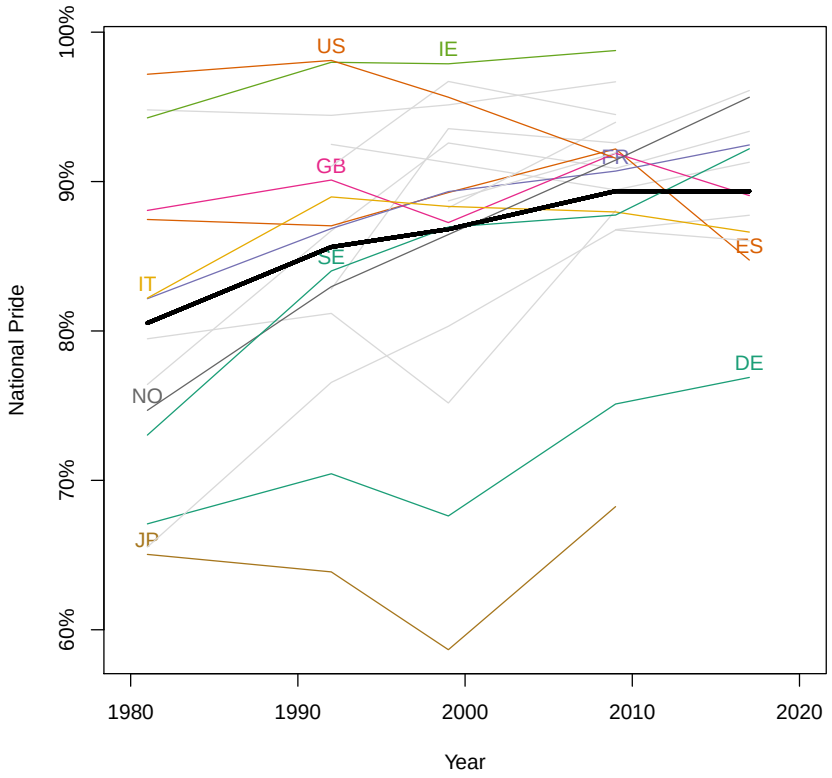
Finally, we consider national pride, focusing on the following survey item: "*How proud are you to be a (survey country) citizen?*" We construct a dummy equal to 1 if the respondent declares to be "quite proud" or "very proud", while "not very proud" and "not at all proud" are coded as 0. Figure 17 then reports the share of respondents who are either quite proud or very proud of their national citizenship. As before, the black thick line is the cross-country average, while the other lines refer to single countries. National pride seems to have increased in most countries since the 1980s.

Figure 16: Immigration Attitudes



Source: Authors' elaboration based on data from the European Values Study (EVS) and the World Value Survey (WVS).
Note: The figure reports in different colors the country-specific share of respondents who agree with the statement that, since jobs are scarce, natives should be given priority in the labor market. The black thick line is the cross-country average.

Figure 17: National Pride



Source: Authors' elaboration based on data from the European Values Study (EVS) and the World Value Survey (WVS).
Note: The figure reports in different colors the country-specific share of respondents who declare to be quite proud or very proud to be citizens of their country. The black thick line is the cross-country average.

Overall, this evidence suggests that, if anything, the increasing support for protectionist and isolationist parties is related to a rise in nationalist sentiments, rather than to a general worsening of attitudes towards trade and immigrants. We elaborate further on these issues in the next section.

3 Economics of the backlash

Do economic models imply that globalization inherently fosters domestic developments that may eventually lead to a backlash? This is the question that we address in this section. From an economic point of view, globalization consists in the global blurring of national borders due to freer mobility of goods, services, people and capital resulting in the rise of the value of international transactions relative to national GDP. This is not an exclusive feature of recent times. In fact, the history of international relations in the last two hundred years can be partitioned according to "two waves of globalization" (Baldwin and Martin 1999). The first went from the mid-XIX century to the eve of World War I. The second began to rise just after World War II, and it is still in progress. While globalization involves goods, services, people and capital, we focus here only on international trade in goods. This allows us to rely for our discussion on models that are generally accepted and widely used also for quantitative trade analysis. Due to space constraints, if we addressed also issues related to the mobility of services, people and capital, we would be able to do so only in passing, with little benefit for the interested reader, who can nonetheless find detailed analyses of some of them in other chapters of the handbook.

3.1 Free trade and its critics

In Chapter 26 of Volume 3 of this handbook, entitled "International trade theory: The evidence", Leamer and Levinsohn (1995) state that "though obviously important and theoretically robust, the existence of gains from exchange is fundamentally a premise of economics, not a testable implication of a particular model" (p.1344). This statement, issued during the second wave of globalization, echoes what Jevons (1883) had written more than a century before during the first wave: "freedom of trade may be regarded as a fundamental axiom of political economy" (p.181).

That there are gains from trade is the central tenet of normative trade theory. It is

based on a general revealed preferences argument (Dixit and Norman 1986). Intuitively, trade adds new opportunities without removing old opportunities. If people do not like these new opportunities, they can still rely on the old ones as these are still available. Hence, free trade cannot make them worse off. In the worst case scenario, people are left indifferent between autarky and free trade. More generally, the canonical propositions on the gains from trade are that: (a) free trade is better than autarky; (b) restricted trade (i.e., trade restricted by trade barriers) is better than autarky; (c) for a small country (i.e., a country too small to influence world prices) free trade is better than restricted trade. For these propositions to hold, both the old and the new opportunities have to be affordable to all citizens. Unless these have the same preferences and incomes, universal affordability generally requires some form of national income redistribution, which may be hard to implement in practice. Hence, a first caveat to the unanimous desirability of trade liberalization is that redistribution must be feasible. Otherwise, even though the country as a whole is better off, some of its citizens may 'win' while others may 'lose'.

Beyond the feasibility of income redistribution, a second caveat to the desirability of free trade comes from the fact that the foregoing propositions are based on a number of restrictive assumptions, notably: no scale economies, no market power, no externalities, and frictionless factor markets ensuring full employment thanks to flexible prices. The canonical case for the gains from trade thus fails when at least one of these assumptions is violated: the country is a large enough buyer or seller in international markets to manipulate its terms of trade through its market power (Torrens 1844); some industries face dynamic increasing returns to scale ('learning by doing') that cripple their international competitiveness while in their infancy (Mill 1872), or display static increasing returns to scale that remove firms' individual incentives to challenge foreign incumbents (Graham 1923); frictional adjustment costs prevent the reallocation of factors (typically labor) from less to more productive industries, thus generating permanent gaps in factor prices and unemployment (Manoilescu 1931); firms have market power –which must be the case if there are increasing returns to scale at firm level– so that trade distorting policies can be used strategically to boost their profitability vis-à-vis foreign competitors (Brander and Spencer 1981). All these violations justify the use of trade distorting policies as long as foreign countries do not retaliate and the government has enough information to avoid misfiring or being misled by special interests. However, with the exception of terms of trade manipulations, in all the other scenarios distorting trade is at best a second-best option to be exercised only if more effective targeted policies are not feasible.

The theoretical and empirical relevance of all those scenarios has been repeatedly scrutinized and generally dismissed throughout the years, allowing the doctrine of free trade to endure "against the tide of abundant criticisms" (Irwin 1998a). Most recently, interest has focused on the implications of deviations from the canonical assumptions combined with new developments, such as the rise of offshoring and cross-border production networks (Johnson and Noguera 2017). The phenomenon of Global Value Chains, reviewed in the handbook chapter by Antràs and Chor (2021), is often considered the most salient feature of the international division of labor during the second wave of globalization with respect to the first (Baldwin 2016). The terms of trade argument has been analyzed as a foundation of unilateral and multilateral trade policies with perfect and imperfect competition by, among others, Ossa (2011), Bagwell and Staiger (2011, 2012), Irwin and O'Rourke (2013), Bagwell and Staiger (2015), Blanchard et al. (2016), Baqaee and Farhi (2019), Nocco et al. (2019), Bagwell and Lee (2020), and Costinot et al. (2020). The infant industry argument by Head (1994), Irwin (1998b), Melitz (2005), Harris et al. (2015), and Juhász (2018). Scale economies at the industry level by Grossman and Rossi-Hansberg (2012) and Bartelme et al. (2019). Frictional adjustment costs by Hanson (2007), Topalova (2010), Hakobyan and McLaren (2016), and Dix-Carneiro and Kovak (2017). Strategic trade policy by Bagwell and Staiger (2001) and Grossman and Helpman (2020). Overall, the general conclusion drawn by Taussig (1905) in the heydays of the first wave of globalization still stands: "The essence of the doctrine of free trade is that *prima facie* international trade brings a gain and that restrictions on it presumably bring a loss. Departures from this principle, though by no means impossible of justification, need to prove their case; and if made in view of the pressure of opposing principles, they are a matter for regret. In this sense, the doctrine of free trade, however widely rejected in the word of politics, holds its own in the sphere of intellect" (p.65). This explains why also current academic debates on the gains from trade tend to focus more on their actual size than on their existence (Arkolakis et al. 2012; Melitz and Redding 2015).

Be as it may, two arguments against free trade have proved harder than others to dismiss also by academics. These are related to the effects of trade liberalization on the evolution of inequality and 'strategic industries' in the presence of adjustment costs and externalities. As such arguments are better suited than others to help understand the backlash of globalization, we devote specific attention to them. In particular, in what follows we discuss how the backlash may arise within standard trade models when taking into account the 'social footprint' of globalization in terms of trade-induced inequality and foregone positive externalities from 'strategic industries.'

3.2 Adjustment costs and income inequality

A widely shared concern about trade liberalization is that it generates 'winners' and 'losers' (Pavcnik 2017; Helpman 2018). This concern is often voiced through some adaptation of Mainolescu's (1931) original idea that, by preventing the reallocation of factors, adjustment costs in general, and labor market frictions in particular, may create cleavages among social groups and regions. The standard argument relies on variations of a simple exercise that considers short- and long-run responses to trade liberalization within the conceptual framework of the 'factor proportions' Heckscher-Ohlin model (Mussa 1974). The difference between the short-run and the long-run scenarios is determined by sluggish adjustment due to obstacles to the reallocation of factors across sectors. In particular, in the simple exercise a subset of factors cannot move from shrinking to expanding sectors in the short run, whence the alternative name of 'specific factor' Ricardo-Viner model also used for the short-run version of the 'factor proportions' Heckscher-Ohlin model.

Consider a national economy and two sectors, labelled 1 and 2, supplying two goods, also labelled 1 and 2. Both goods are normal final goods. Preferences are homothetic and identical across consumers. In the short run, there is a mobile factor, labor, and two sector-specific types of capital: K_1 specific to sector 1, and K_2 specific to sector 2. In the long run, however, the distinction between the two types of capital vanishes as they become perfectly substitutable and freely mobile between sectors. The production functions of the two sectors exhibit constant returns to scale and are such that sector 1 is relatively capital intensive while sector 2 is relatively labor intensive. All markets are perfectly competitive. Starting from autarky, trade liberalization is modelled as the possibility of exchanging the two goods in international markets at relative prices different from the autarkic ones. These international markets are large enough to determine the prices of the two goods independently from the internal developments of the national economy, which is thus a 'small open economy' vis-à-vis the rest of the world.

For concreteness, examine the case in which, after trade liberalization, the price p_1 of good 1 is higher in the international market than it used to be in the autarkic market, whereas the price p_2 of good 2 is unchanged. In this case, the small open economy has a comparative advantage in supplying good 1, trade liberalization raises the relative price p_1/p_2 at which the small open economy trades above the autarkic one, and thus sector 1 expands to the detriment of sector 2.

In the short run, as the two types of capital are sector-specific factors, sector 1's ex-

pansion is determined by the reallocation of labor, which is attracted to sector 1 by its ability to pay a higher wage than sector 2 thanks to higher p_1. As labor moves, however, decreasing marginal returns erode this ability until wages are eventually equalized between the two sectors, at a higher level than the autarkic one. The increase in the wage w, however, is smaller than the increase in p_1. Hence, in the short-run equilibrium the increase in p_1 raises w/p_2 but decreases w/p_1. Moreover, as K_1 is combined with more labor, its marginal productivity rises, which raises its real return. Vice versa, as K_2 is combined with less labor, its marginal productivity falls reducing its real return. As a result, in the short run trade liberalization creates 'winners' and 'losers'. The owners of capital specific to the expanding export sector unambigously gain in both nominal and real terms. The owners of capital specific to the shrinking import competing sector unambiguously lose in both nominal and real terms. Workers gain in nominal terms, and also in real terms if the weight of the export good in the consumption basket is small enough.

Things turn out to be quite different in the long run, when the distinction between the two types of capital vanishes, due to their perfect mobility and substitutability between sectors. Who wins and who loses is now determined by the celebrated Stolper-Samuelson theorem, according to which the factor used relatively intensively in the expanding export sector gains, in both nominal and real terms, whereas the factor used relatively intensively in the shrinking import competing sector loses, in both nominal and real terms. As good 1 is capital-intensive relative to good 2, the increase in p_1 associated with trade liberalization raises the real return to capital and reduces the real wage. Hence, also in the long run trade liberalization creates 'winners' and 'losers', but their identity is not necessarily the same as in the short run. In particular, while the owners of capital initially employed in the expanding export sector win in both the short and the long run, the owners of capital initially employed in the shrinking import competing sector lose in the short run but win in the long run. In contrast, if the weight of the export good in the consumption basket is small enough, workers win in the short run but lose in the long run.

In this exercise, which follows the original setup of Mussa (1974), capital is the factor facing adjustment costs in the short run while labor's reallocation is frictionless. An alternative compelling arrangement would feature workers facing adjustment costs, due to sector-specific skills, and capital more easily reallocated between sectors. In this alternative arrangement, workers initially employed in the shrinking import competing sector would lose both in the short run, due to their specificity, and in the long run, due

to the relative capital intensity of the expanding export sector.

To summarize, the general message of the Ricardo-Viner and Heckscher-Ohlin models is that: (i) the owners of factors specific to shrinking import competing activities lose from trade liberalization in the short run; (ii) the owners of factors used relatively intensively in shrinking import competing activities lose from trade liberalization in the long run; (iii) the owners of factors that are not specific in the short run, but are used intensively in shrinking import competing sectors may enjoy short run gains but also long run losses. This reversal may cause their backlash against globalization as time passes and adjustment is complete, to the extent that vote choices reflect individual economic outcomes. Along the same line, a backlash may also come from the owners of factors that, while being specific to shrinking import competing activities in the short run, are used relatively intensively in expanding export activities in the long run. This happens whenever the transition from the short to the long runs takes too much time. Clearly, according to these models, trade liberalization will always be opposed by the owners of factors who lose both in the short- and in the long-run.

Empirical evidence reported in several recent papers highlights the importance of adjustment costs due to labor market frictions in moulding the distributional consequences of trade liberalization that may explain the parallel rise of protectionist responses and political polarization in western democracies (Artuç et al. 2010; Autor et al. 2013; Dix-Carneiro 2014), especially when economic adjustment is slower than potential political change (Blanchard and Willman 2018). From the perspective of the globalization backlash, of specific relevance are the studies of the impact of trade on the rise of within-country income inequality, observed in most western democracies since the 1990s. These studies look at how globalization affects income inequality through the rematching patterns between workers with heterogenenous skills and firms with heterogeneous occupations and technologies (Burstein et al. 2019; Caliendo et al. 2019; Lee 2020). Several studies also stress the regional dimension of within-country inequality as long as obstacles to the geographical mobility of workers compound their difficult mobility from sectors that shrink to sectors that expand as trade barriers fall (Hanson 2007; Topalova 2010; Hakobyan and McLaren 2016; Dix-Carneiro and Kovak 2017).

As the trajectory of Scranton shows, those who can they leave the areas where shrinking sectors are concentrated, those who cannot they are left behind with dwindling wages, reduced employment opportunities, and an ailing community. This is all the more likely for sectors in which increasing returns to scale generate agglomeration externalities (Fujta et al. 1999; Baldwin et al. 2003; Ottaviano and Thisse 2004). In fact,

agglomeration implies that 'winners' and 'losers' tend to be geographically segregated, which can make things a lot worse in terms of fairness. Supporting evidence is provided by Autor et al. (2013), who examine the impact of the rise of China around the turning of the new millennium on the labor market performance of US commuting zones. Their findings show that areas initially specialized in manufacturing sectors more exposed to Chinese import competition suffered more in terms of shrinking manufacturing employment, labor force participation and unemployment, with little response in terms of wages, population and employment in other sectors. Without labor market frictions and obstacles to mobility, one would expect also wages and population to fall and employment in other sectors to rise as workers leave the declining sectors in search of better opportunities elsewhere. Adjustment in local labor markets is remarkably slow, with adverse effects remaining elevated for at least a full decade after initial impact of the 'China shock'. Similar though weaker results have been found by Dauth et al. (2014) with respect to import competition from China and Eastern Europe.

The handbook chapter by Redding (2021) provides an extensive overview of the literature on the economic consequences of globalization identified through surging import competition from China, and we will come back to their political implications in Section 4. For now it suffices to note that the adverse impacts of the China shock have been found to go beyond the labor market, for instance affecting the marital status and the household structure of local young male adults (Autor et al. 2019) as well as their mortality due to 'deaths of despair' associated with drugs or alcohol abuse (Adda and Fawaz 2020; Pierce and Schott 2020) –which grimly resonates with our initial quote. No matter whether within or beyond the labor market, by creating and widening cleavages between 'winners' and 'losers' across social groups and regions, globalization may leave a toxic 'social footprint'. Redistribution could compensate in principle, but it almost never actually does (Feler and Senses 2017).

3.3 Externalities and industrial policy

The protectionist shift in trade policy documented in Section 3 belongs to a wider recent drive towards increasing market intervention by governments in western industrialized economies (Bartelme et al. 2019). Remarkable examples include the Biden administration's plan for a new US industrial policy and the new European industrial strategy of the EU, both launched during the COVID-19 crisis. In the words of the US National Economic Council Director Brian Deese (Atlantic Council 2021): "Strategic public in-

vestment to shelter and grow champion industries is a reality of the twenty-first century economy."

3.3.1 Strategic industries

A 'strategic industry' is an industry considered to be very important for a country's economy, security, and well-being in general. With respect to the debate on free trade, we can think of a strategic industry as an industry that generates positive economy-wide externalities in production or consumption. Introducing such an industry in otherwise standard trade models can help shed additional light on the economic origins of the backlash of globalization. In this regard, to better direct the analysis, it is useful to neutralize the inequality issues discussed in the previous section by moving from the Heckscher-Ohlin setup with two factors and distributive trade effects to a Ricardian setup with only one factor and no distributive trade effects. This move allows us to leverage the most popular trade models currently used to assess the gains from trade (Costinot and Rodríguez-Clare 2014).

In recent years, the measurement of the benefits from trade liberalization has been revived by the sufficient statistics approach of Arkolakis et al. (2012), who have shown how this approach can be consistently applied to the most popular trade models: Armington (1969), Krugman (1980), Eaton and Kortum (2002), and Melitz (2003). These models belong to a common family that, for lack of a better name, can be called 'new quantitative trade models' (NQTMs). All models in this family share *four primitive assumptions*: (a) Dixit-Stiglitz preferences; (b) one factor of production; (c) linear cost functions; (d) perfect or monopolistic competition. They also share *three common macro-level restrictions*: (A) trade is balanced; (B) aggregate profits are a constant share of aggregate revenues; (C) the import demand system exhibits constant elasticity of substitution (CES). Once calibrated, different versions and combinations of these models have been used to structurally quantify the general equilibrium effects of both factual and counterfactual trade-related shocks, for which standard econometric approaches are of limited use. Examples include the estimation of the trade and welfare effects of NAFTA (Caliendo and Parro 2015), Brexit (Dhingra et al. 2017) and the China shock (Caliendo et al. 2019). An overview of this approach to trade policy analysis can be found in the handbook chapter by Caliendo and Parro (2021).

These quantitative applications are based on model versions with several locations

and several sectors connected by networks of input-output relations.[13] Their richness, however, obfuscates some fundamental properties of NQTMs. Moreover, the emphasis of Arkolakis et al. (2012) on whether 'new' models with monopolistic competition (Krugman 1980; Melitz 2003) generate the same 'old' gains as models with perfect competition (Armington 1969; Eaton and Kortum 2002) has sidelined the fact that the two types of models may sometimes lead to very different conclusions. A striking example is the unnoticed large negative correlation of welfare changes between market structures across countries implied by the results in Costinot and Rodríguez-Clare (2014; Table 4.1) for a counterfactual uniform worldwide 40% tariff. Given that understanding the reason behind such a puzzling pattern may be important for the assessment of trade gains and pains, it is useful to strip the NQTMs down to the bare bones so that one can get as far as possible without recurring to numerical analysis. The resulting workhorse models show that different market structures indeed have very different implications for the pain-gain trade-off.

Specifically, consider a simplified setup with two countries (called home H and foreign F), two sectors, and labor as the only factor of production (with countries' endowments L_H and L_F). The two sectors are designed so that, in terms of national welfare, the international distribution of production is important in respect of a sector but irrelevant in respect of the other. The first sector is the 'strategic industry' and is brought to the forefront. Its key features are that its products are horizontally differentiated, their international exchange faces trade frictions, and, crucially, their production generates positive economy-wide externalities. These may include technological spillovers that promote national productivity, such as those originating from hi-tech industries, but also consumption amenities that foster national well-being, such as those originating from green industries or industries that contribute to national security. Consumption amenities may also include cultural amenities associated with workers' identity as well as their perceived "dignity, purpose, pride, [...] sense of place, hope, and self-esteem" highlighted in the initial quote. Differently, the second sector supplies a homogeneous good with no international trade frictions and no externalities. Being kept in the background, it is called 'outside industry'. Moreover, whereas the strategic industry may be either perfectly competitive under constant returns to scale (as in Armington 1969, and Eaton and Kortum 2002) or monopolistically competitive under increasing returns to scale at the firm level (as in Krugman 1980, and Melitz 2003), the outside industry al-

[13] See the handbook chapter by Antràs and Chor (2021) for a discussion of further developments in production network modeling.

ways features perfect competition and constant returns. Free trade in the homogeneous outside good ensures international wage equalization as long as the good is produced in both countries.

In the consumption amenities interpretation of the simplified setup, the two industries supply final products and preferences are captured by a Cobb-Douglas utility function, with externalities operating as a utility shifter. In the technological spillovers interpretation, the two industries supply intermediate products that are assembled into a non-traded homogeneous final product through a Cobb-Douglas production fuction, with externalities operating as a productivity shifter. In both interpretations the Cobb-Douglas functions are homogeneous of degree one, with $\alpha \in (0,1)$ denoting either the expenditure share of the strategic industry, in the case of consumption amenities, or that industry's cost share, in the case of technological spillovers. To streamline the presentation, as the two interpretations are formally isomorphic (Ethier 1982), we focus henceforth on consumption amenities, with the understanding that equivalent results apply also to technological spillovers.

The workhorse models can be used to identify the gains and pains from trade, and to study in detail how these evolve with import penetration. Following Arkolakis et al. (2012), define a country's 'gains from trade' as the loss in indirect utility that would occur if the country went from the factual current situation to a counterfactual autarkic situation in the absence of externalities. This exercise is performed by evaluating a country's indirect utility V without externalities at current trade freeness ($\phi > 0$) and autarkic trade freeness ($\phi' = 0$), with trade freeness ranging from zero in autarky to one with free trade. For perfect competition (PC) and monopolistic competition (MC), respectively, the gains from trade of country H amount to

$$GFT_H^{PC}(\phi) = \frac{V_H^{PC}(\phi)}{V_H^{PC}(0)} = \left(1 + \frac{\phi}{a}\right)^{\frac{\alpha}{\varepsilon}} \tag{3}$$

and

$$GFT_H^{MC}(\phi) = \frac{V_H^{MC}(\phi)}{V_H^{MC}(0)} = \left(1 + \phi\frac{a-\phi}{1-a\phi}\right)^{\frac{\alpha}{\varepsilon}}, \tag{4}$$

with $(1-a\phi)/(a-\phi) > 0$ as long as the necessary condition for incomplete specialization is met. In these expressions the parameters have the following interpretation: α is the expenditure share of the strategic industry, ε is its trade elasticity, and a measures country H's comparative advantage in that industry. Trade freeness is defined as $\phi = \tau^{-\varepsilon}$, where $\tau > 1$ is an iceberg trade friction hampering the international exchange of

strategic products: τ units have to be shipped for one unit to reach destination. As both (3) and (4) are larger than one, without externalities trade improves indirect utility relative to autarky independently of market structure, and the improvement is an increasing function of trade freeness (provided specialization is incomplete with monopolistic competition). However, the gains from trade are larger when, in the strategic industry, the country has a comparative disadvantage ($a < 1$) under perfect competition, and a comparative advantage ($a > 1$) under monopolistic competition, whence the source of the negative correlation of welfare changes between market structures across countries in Costinot and Rodríguez-Clare (2014; Table 4.1).[14] Moreover, while with perfect competition the gains from trade are a concave increasing function of trade freeness, with monopolistic competition they are either a concave function of freeness, if $a < 1$ holds, or a convex increasing function of freeness, if $a > 1$ holds, as long as specialization is incomplete. Without comparative advantage ($a = 1$) the two market structures deliver the same gains from trade.

How are the gains from trade related to import penetration? Import penetration in the strategic industry means that country H's import expenditure share in that industry rises, or equivalently its domestic expenditure share falls. When the latter is considered relative to autarky, with perfect competition import penetration cannot damage the national economy given that, as ϕ rises, the increase in the gains from trade is proportionate to the decrease in the domestic expenditure share. This is due to the fact that, consistent with Arkolakis et al. (2012), without externalities the international distribution of employment in the strategic industry is immaterial for indirect utility beyond its effect through the domestic expenditure share.

Things turn out to be quite different with monopolistic competition because, consistent again with Arkolakis et al. (2012), even without externalities employment in the strategic industry does matter for indirect utility beyond its effect through the domestic expenditure share. Strategic employment is determined by sectoral specialization driven by the interaction of comparative advantages and market sizes as the strategic industry tends to concentrate in the country with a comparative advantage in that industry and with a larger domestic market as implied by a larger workforce ('home market effect').[15] The domestic expenditure share still falls (eventually going to zero) as ϕ

[14] Costinot and Rodríguez-Clare (2014; Table 4.1) normalize the labor endowments of all countries to one so that there are no market size differences.

[15] With perfect competition a 'reverse' home market effect arises as the differentiated industry tends to concentrate in the smaller market.

rises as long as country H has a comparative disadvantage in the strategic industry and this disadvantage is not more than offset by a parallel market size advantage, or country H has a market size disadvantage and this disadvantage is not more than offset by a parallel comparative advantage in the stategic industry. Otherwise, if country H has a net advantage in the strategic industry, the domestic expenditure share initially falls as ϕ rises from its autarkic zero value; however, as ϕ keeps rising, magnification of the country's net advantage makes the domestic expenditure share rise again until it gets back to one with complete specialization. Accordingly, the increasing monotonic relation between trade liberalization and import penetration holds only if country H has a net disadvantage in the strategic industry. When this holds, gradually raising ϕ leads to more import penetration, and without externalities this comes together with higher indirect utility. In contrast, if country H has a net advantage in the strategic industry, the increasing monotonic relation between trade liberalization and import penetration breaks down, and the same happens also to the increasing monotonic relation between import penetration and indirect utility.

The workhorse models imply that, without externalities, import penetration in the strategic industry cannot be detrimental to a country's indirect utility independently from market structure. This simply confirms the results in Arkolakis et al. (2012). Things may look quite different in the presence of externalities.

Given that the externalities from the strategic industry are economy-wide, they affect national welfare but do not interfere with comparative advantage nor with the home market effect. This implies that the indirect utility with externalities equals the indirect utility without externalities times the utility shifter associated with consumption externalities. Let us focus on a situation in which import penetration in the strategic industry is associated with a loss of employment in that industry with respect to autaky so that in country H the industry declines. This is the case with both market structures as long as country H has a comparative disadvantage in the strategic industry and such disadvantage is not more than offset by a market size advantage, or country H has a market size disadvantage and such disadvantage is not more than offset by a comparative advantage in the strategic industry. Define the 'pains from trade' as the welfare loss from weaker externalities due to reduced employment in the strategic industry with respect to autarky:[16]

$$PFT_H(\phi) = \left(\frac{L_H^d(0)}{L_H^d(\phi)}\right)^{\gamma} > 1,$$

[16]In the workhorse models the size of the strategic industry is proportional to its employment.

where $L_H^d(\phi)$ is country H's employment in the strategic industry for trade freeness $\phi > 0$, $L_H^d(0)$ is its autarkic level for $\phi = 0$, and $\gamma > 0$ is the elasticity of indirect utility with respect to the size of the strategic industry.[17] This determines the rate at which the decline of the strategic industry translates into social damage. In other words, in the presence of externalities, globalization leaves a 'social footprint' with 'depth' regulated by γ: the pain associated with a given reduction of employment in the strategic industry is more severe for larger γ.

The pains from trade evaluate to

$$PFT_H^{PC}(\phi) = \left(GFT_H^{PC}(\phi)\right)^{\gamma\frac{\varepsilon}{\alpha}} \left(1 + \frac{a+\phi}{1+a\phi}\frac{L_F}{L_H}\right)^{-\gamma} \tag{5}$$

with perfect competition and

$$PFT_H^{MC}(\phi) = \left(GFT_H(\phi)\right)^{-\frac{\varepsilon}{\alpha}\gamma} \left(1 - \phi\frac{L_F(1-a\phi) - \phi L_H(a-\phi)}{L_H(1-\phi^2)(a-\phi)}\right)^{-\gamma} \tag{6}$$

with monopolistic competition, where in (6) the ratio within parentheses is positive as long as specialization is incomplete. Hence, the pains to be suffered in order to enjoy any given gains are a decreasing function of trade freeness with perfect competition, and an increasing function of trade freeness with monopolistic competition as long as specialization is incomplete.

3.3.2 Backlash dynamics

The workhorse models with externalities can be used to discuss the backlash of globalization as follows. Consider the problem of country H's benevolent government optimally choosing its future trade liberalization time path weighting the gains and pains from globalization from some initial, historically inherited, degree of trade freeness. For simplicity, country F's government is assumed to be passive despite trade liberalization being bilateral; moreover, there is no intertemporal trade. Specifically, starting from its historically inherited initial value $\phi_t \in [0,1]$, country H's government chooses the evolution of trade freeness $\{\phi_s\}_{s=t,\ldots,T}$ that maximizes the present discounted value of national welfare, defined as

$$\int_t^\infty \left(W_H(\phi_s) - \frac{\eta}{2}\left(\dot{\phi}_s\right)^2\right) e^{-\rho(s-t)} ds, \tag{7}$$

[17] In the case of technological spillovers, γ corresponds to the elasticity of total input productivity in final production with respect to the strategic industry's size.

where $\rho \in (0,\infty)$ is the social rate of time preference and $W_H(\phi_s) = \ln\left(GFT_H\left(\phi_s\right)/PFT_H\left(\phi_s\right)\right)$ is instantaneous national welfare measured as the indirect utility in the presence of externalities under the two alternative market structures obtained from (3), (4), (5) and (6), with

$$\begin{aligned} W_H^{PC}\left(\phi_s\right) &= \left(\frac{\alpha}{\varepsilon}-\gamma\right)\ln\left(1+\frac{\phi_s}{a}\right)+\gamma\ln\left(1+\frac{a+\phi_s}{1+a\phi_s}\frac{L_F}{L_H}\right), \qquad (8)\\ W_H^{MC}\left(\phi_s\right) &= \left(\frac{\alpha}{\varepsilon}+\gamma\right)\ln\left(1+\phi\frac{a-\phi_s}{1-a\phi_s}\right)+\gamma\ln\left(1-\phi_s\frac{\left(1-a\phi_s\right)\frac{L_F}{L_H}-\phi_s\left(a-\phi_s\right)}{\left(1-\phi_s^2\right)\left(a-\phi_s\right)}\right). \end{aligned}$$

The problem of maximizing (7) is defined by the trade-off between the gains and pains from trade, as well as by a quadratic cost $\eta\left(\dot{\phi}_s\right)^2/2$ of adjusting the trade-supporting physical and institutional infrastructure with adjustment cost parameter $\eta > 0$. Its solution through standard optimal control methods with state variable ϕ_s and control variable $u_s = \dot{\phi}_s$ shows that, even though there are always gains from trade, free trade is not the necessary outcome of national welfare maximization by a benevolent goverment. It is still true that, if the globalization footprint is shallow (i.e. externalities are weak), the benevolent government leads the country towards free trade whatever the social rate of time preference and the cost of infrastructural adjustment. As $W_H'(\phi_s) > 0$ holds for all $\phi_s \in [0,1]$, there is no interior steady state and the benevolent government targets free trade as a corner outcome. However, if the globalization footprint is deep enough (i.e. externalities are strong enough), things change substantially. As there is a (unique) value $\phi^* \in (0,1)$ such that $W_H'(\phi^*) = 0$, an interior steady state exists associated with that value of trade freeness.

With perfect competition, the interior steady state is unstable ($W_H'(\phi^*) > 0$) and the benevolent government never targets it unless the historically inherited trade freeness ϕ_t is exactly equal to ϕ^*. For all other initial values $\phi_t \in [0,1]$, if the social rate of time preference and the adjustment cost are high, the government's choice targets free trade if $\phi_t > \phi^*$ and autarky if $\phi_t < \phi^*$. This may happen even when the targeted outcome entails lower instantaneous welfare than the alternative outcome. Accordingly, high social rate of time preference and adjustment cost can trap the country in autarky or in free trade because in this case future payoffs from reversing to the alternative outcome do not matter that much. The deeper (shallower) the globalization footprint - i.e., the larger (smaller) γ -, the larger (smaller) the set of initial values of trade freeness that lead to autarky (free trade) and the higher the likelihood that autarky (free trade) maximizes

steady state instantaneous welfare. In contrast, if the social rate of time preference and the adjustment cost are low, there exists an interval of trade freeness values $[\phi_{low}, \phi_{high}]$ including ϕ^* such that the benevolent government is not constrained by history unless the country is already close enough to autarky $\phi_t < \phi_{low}$ or free trade $\phi_t < \phi_{high}$. Within that interval the government can avoid an outcome entailing lower instantaneous welfare than the alternative outcome. The deeper (shallower) the globalization footprint, the larger (smaller) the set of initial values of trade freeness $\phi_t < \phi_{low}$ ($\phi_t > \phi_{high}$) that lead to autarky (free trade) and the higher the likelihood that autarky (free trade) maximizes steady state welfare. The lower the social rate of time preference and the infrastructural adjustment cost, the larger the set of initial values $[\phi_{low}, \phi_{high}]$ for which history is not a constraint. Differently, with monopolistic competition, the interior steady state is stable ($W'_H(\phi^*) < 0$) and the benevolent government targets the restricted degree of trade freeness $\phi^* \in (0, 1)$ whatever its initial level ϕ_t may be. The deeper (shallower) the globalization footprint, the more (less) restricted is the targeted degree of trade freeness. There are no traps in this case.

Against this backdrop, we can now discuss what the workhorse models entail in terms of the backlash of globalization. We have defined this backlash as a political shift of voters and parties in an autarkic and isolationist direction, with substantive implications on governments' leaning and enacted policies. Within the framework of the workhorse models, the backlash corresponds, in reduced form, to a push towards the reduction of the historically inherited degree of trade freeness. This happens whenever history positions ϕ_t below ϕ^* with perfect competition, or above ϕ^* with monopolistic competition. In the former case the benevolent government would target autarky; in the latter case the benevolent government would move towards the optimal, lower degree of trade freeness.

The backlash could also arise if trade policy decisions are made not by a benevolent government, but by a politically biased government, based on an 'unfair' aggregation of people's different views on the globalization footprint (Grossman and Helpman 2001). To illustrate, assume individuals have different attitudes towards globalization due to different perceived γ, deriving, for example, from divergent assessments of well-being due the uneven distribution of the material and psychosocial components of the pains from trade (Grossman and Helpman 2018). With perfect competition, individuals with high perceived γ may prefer autarky to free trade whereas the reverse may hold for individuals with low perceived γ. With monopolistic competition, the former may prefer a lower degree of trade freeness than the latter. Let $g = 1, .., G$ index the different attitudes

towards trade present in the population, and use δ^g, with $\sum_{g=1}^{G} \delta^g = 1$, to denote the share of population with $\gamma^g > 0$. Giving proportionate weights to all attitudes, the benevolent government would rely on the average perceived $\gamma = \sum_{g=1}^{G} \delta^g \gamma^g$ for its evaluation of the globalization footprint, and behave as just discussed. By contrast, a politically biased government would evaluate the globalization footprint using $\gamma^\pi = \sum_{g=1}^{G} \pi^g \gamma^g$, where π^g, with $\sum_{g=1}^{G} \pi^g = 1$, is the political weight of γ^g. As long as π^g differs from δ^g and thus $\gamma^\pi \neq \gamma$ holds, an 'unfair' aggregation of attitudes determines the policy outcome. In particular, the government exhibits political bias in favor of globalization for $\gamma^\pi < \gamma$. In this case the backlash may arise if γ^π increases, because the political weight of individuals with higher γ^g increases. Whether or not $\gamma^\pi < \gamma$ holds depends on multiple sources of variation: attitudes towards globalization (γ^c), their political representation (π^c), the gap between attitudes' political representation and their popularity (δ^c), the correlations among all these features. In particular, $\gamma^\pi < \gamma$ may hold in the case of few (small δ^c) underrepresented (small π^c) big losers (large γ^c), or many (large δ^c) underrepresented (small π^c) small losers (small γ^c).

Overall, fundamental economic forces at work in generally accepted trade models can lead to the backlash whenever globalization leaves a 'social footprint.' This can happen no matter whether the government is benevolent or politically biased, and it is all the more likely the deeper the social footprint is.

3.3.3 A quantitative example

To go beyond workhorse models that are very stylized by design, for proof of concept Figures 18 and 19 illustrate simulated results from the calibrated models in Costinot and Rodríguez-Clare (2014) for a simple multilateral trade liberalization counterfactual. Differently from the workhorse models, the calibrated models feature several sectors and countries, also allowing for a worldwide network of exchanges and global patterns of comparative advantages. Moreover, wages can diverge across countries as there is no outside good. The illustrated results are based on the same parametrizations as in Figure 4.1 of Costinot and Rodríguez-Clare (2014), in which market size is normalized to one in all countries and there is no trade in intermediates.

The different panels of Figure 18 provide a key to the interpretation of the actual results in Figure 19 simulated for the G7 countries plus China. Both figures show the relation between what we may call the 'pain gain elasticity' (PGE) on the vertical axis and decreasing ad-valorem tariff levels on the horizontal axis. This elasticity is defined as the

percentage reallocation (relative to autarky) needed to obtain a one percent gain from trade (relative to autarky): $PGE_H(\phi) = \gamma^{-1} d\ln(PFT_H(\phi))/d\ln(GFT_H(\phi))$.[18] Given instantaneous welfare $W_H(\phi) = \ln(GFT_H(\phi)/PFT_H(\phi))$, we have $W'_H(\phi) = 0$ if and only if $PGE_H(\phi) = \gamma^{-1}$. This implies that an interior steady state value of trade freeness ϕ^* satisfies $PGE_H(\phi^*) = \gamma^{-1}$, and it maximizes (minimizes) steady state welfare if $PGE'_H(\phi^*) > 0$ ($PGE'_H(\phi^*) < 0$).

Accordingly, panel (a) of Figure 18 describes a situation where there exists a unique interior steady state freeness $\phi^*_{\max}$, which maximizes steady state welfare. Vice versa, panel (c) describes a situation where there exists a unique interior steady state freeness $\phi^*_{\min}$, which minimizes steady state welfare and is dominated by free trade ($\phi = 1$). In panel (b) both restricted freeness $\phi^*_{\max}$ and free trade ($\phi = 1$) maximize welfare locally whereas restricted freeness $\phi^*_{\min} \in (\phi^*_{\max}, 1)$ minimizes it. Vice versa, in panel (d) both autarky ($\phi = 0$) and restricted freeness $\phi^*_{\max}$ maximize welfare locally whereas restricted freeness $\phi^*_{\min} \in (0, 1\phi^*_{\max})$ minimizes it. By comparing the taxonomy in Figure 18 with the simulated PGE's in Figure 19, we see that China is compatible with panel (a), Canada and the United States are broadly compatible with panel (b), Italy and Japan with panel (c), France, Germany and the United Kingdom with panel (d).

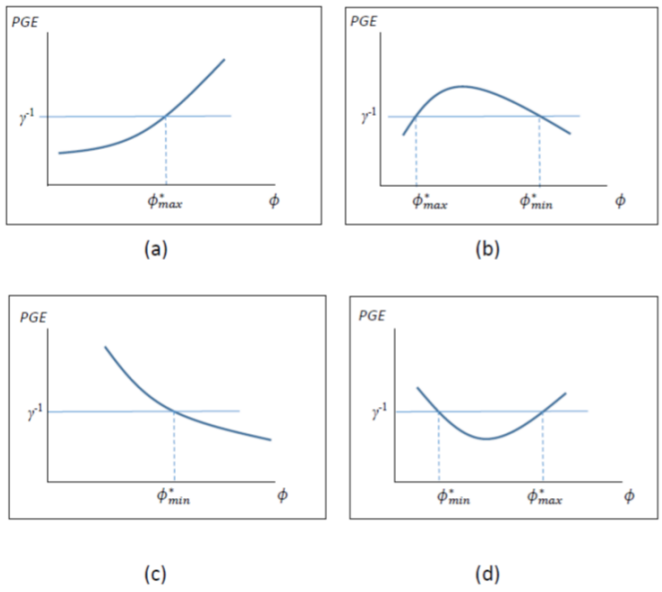
This quantitive exercise is clearly tentative and incomplete. In particular, it crucially lacks an estimated value for γ. This value may be hard to obtain, and how to pin it down depends on the interpretation of the externalities at work. However, in the case of technological spillovers, a promising line of research might be to extend the estimation strategy developed by Bartelme et al. (2019) from intra-sectoral to inter-sectoral spillovers so as to obtain the building blocks for the computation of the economy-wide 'scale elasticities' of different sectors.

4 Drivers of the globalization backlash

What are the drivers of the globalization backlash? A large literature has developed in recent years around this broad research question, investigating both economic factors

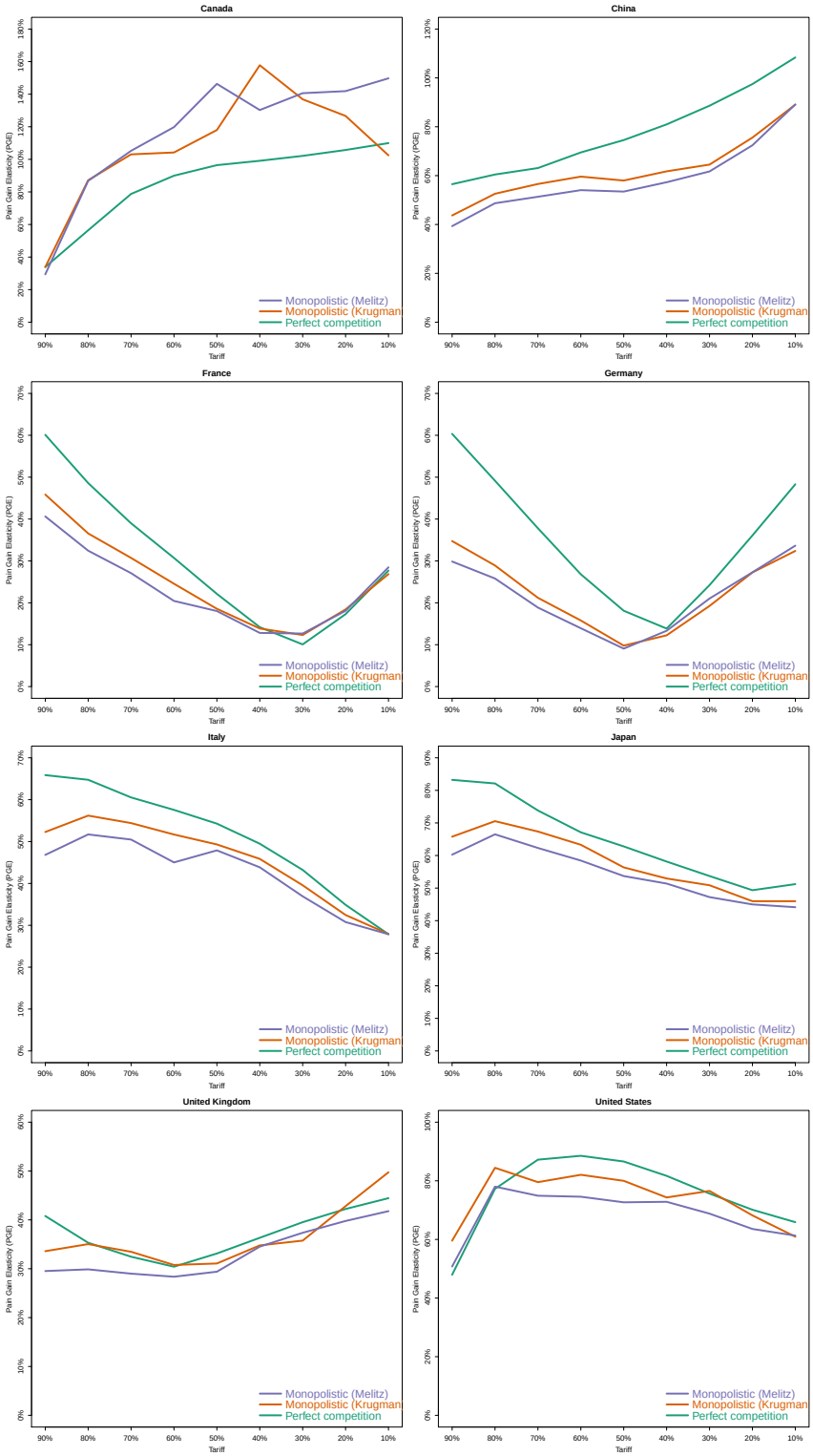
[18] For each country the labor reallocations used to evaluate the pains from trade are computed as the sum across sectors of all the positive values of the difference between sectoral employment for a given degree of trade freeness and sectoral employment in autarky. Due to full employment, that sum is also equal to the sum of the absolute values of all the negative differences between sectoral employment for a given degree of trade freeness and sectoral employment in autarky. Hence, the sum gives the total number of workers separated from their autarkic jobs. As total employment is normalized to 1, the labor reallocations are expressed as percentage changes.

Figure 18: Optimal steady state trade freeness with globalization footprint: taxonomy



Note: The variable on the horizontal axis (ϕ) is trade freeness. The variable on the vertical axis (PGE) is the pain gain elasticity.

Figure 19: Optimal steady state trade freeness with globalization footprint: simulations



Note: The variable on the horizontal axis is the tariff rate. The variable on the vertical axis is the pain gain elasticity.

and more "cultural" determinants. In this section, we provide a systematic account of this literature, along with some novel empirical evidence.

4.1 The economic effects of globalization and its backlash

First and foremost, we assess to what extent the backlash is endogenous to globalization itself. The theoretical analysis of Section 3 has shown how the backlash may arise within the workhorse models of trade when taking into account the social footprint of globalization, in terms of trade-induced inequality and foregone positive externalities from strategic industries. Here we review the empirical evidence on the effects of trade on political outcomes. Consistent with the theoretical analysis, studies in this area of research have mostly focused on import competition, and particularly on the China shock, as introduced by Autor et al. (2013). A large literature, surveyed by Redding (2021), has investigated the economic consequences of surging import competition from China. The main insight is that regions that have been more exposed to this trade shock, owing to their ex-ante industry specialization, have been witnessing worse economic outcomes along several dimensions. These encompass higher unemployment, lower labor force participation, increased use of disability and other transfer benefits, as well as reduced wages. Negative implications are particularly severe for workers who are directly exposed due to their initial industry of employment, as they experience higher job churning and even permanent losses in lifetime income. In general, as emphasized by Autor et al. (2016), Colantone and Stanig (2018b), and Broz et al. (2021) regional effects too tend to be long lasting, inducing trajectories of economic decline spanning at least one decade after the shock commences. The question is then whether such phenomenon –which started in the early 1990s and progressed until the financial crisis– has played a role for the anti-globalization backlash.

4.1.1 Evidence from the US

We start by reviewing the study by Autor et al. (2020) on the United States. This investigates the impact of differential exposure to the China shock across geographic units over a number of outcomes. These include both different forms of political expression and actual electoral outcomes from congressional and presidential elections, over the period 2000-2016. Like other contributions in this literature, this empirical study rests on the idea that, while the welfare-enhancing effects of trade are widespread, the trade-

induced adjustment costs are well-delineated and concentrated, both demographically and geographically. This makes them particularly visible and recognizable, and thus potentially salient and consequential for politics.

Exposure to the China shock is measured at the level of Commuting Zones (CZs), through the following formula:

$$\Delta IP^{cu}_{j\tau} = \sum_{k} \frac{L_{jkt}}{L_{jt}} \Delta IP^{cu}_{k\tau}, \tag{9}$$

where j indexes commuting zones, k industries, and τ is the period of time over which the shock is assessed. $\Delta IP^{cu}_{k\tau}$ is the country-level figure of Chinese import growth for industry k over period τ, divided by initial absorption (i.e., US shipments plus net imports) in the base year 1991. In the baseline analysis, the reference period τ is 2000-2010. The shock at the commuting-zone level is backed out as a weighted summation of the country-industry changes in imports, with weights given by the share of each industry in the total employment of each commuting zone: L_{jkt}/L_{jt}. Shares are measured prior to the outcome period, in the year 2000. Intuitively, commuting zones that host relatively more manufacturing employment ex-ante are more exposed to the shock. Yet, this is not the only source of variation. For given employment share in manufacturing, stronger shocks are attributed to areas originally more specialized in industries where imports from China have grown more in subsequent years.

Endogeneity issues may stem, for instance, from the correlation of US imports from China with industry-specific import-demand shocks, which may confound the identification of the causal effect of the supply shock component of rising Chinese imports. To deal with this issue, the authors employ the following instrumental variable:

$$\Delta IP^{co}_{j\tau} = \sum_{k} \frac{L_{jkt-10}}{L_{jt-10}} \Delta IP^{co}_{k\tau}. \tag{10}$$

$\Delta IP^{co}_{k\tau}$ is the growth in Chinese imports in eight other developed countries.[19] This is meant to capture the growth in US imports from China that is due to plausibly exogenous changes in supply conditions in China, rather than to potentially endogenous domestic factors in the US. The intuition is that supply-side improvements in China would lead to rising exports not only towards the US but also towards other developed countries. In addition, the employment shares (L_{jkt-10}/L_{jt-10}) are lagged by ten years, to deal with the fact that the figures in 2000 may have already been contaminated by the China

[19] These are: Australia, Denmark, Finland, Germany, Japan, New Zealand, Spain, and Switzerland.

shock starting in the beginning of the 1990s. We refer to the handbook chapter by Redding (2021) for a comprehensive discussion of the potential issues concerning this IV strategy, and for a broader critical review of the methodological approach to the China shock. Here, we proceed by reviewing the econometric analysis on political outcomes.

The main estimating equation for the analysis of congressional and presidential elections is as follows:

$$\Delta Y_{cdj\tau} = \gamma + \beta_1 \Delta IP^{cu}_{j\tau} + X'_{cdj\tau}\beta_2 + e_{cdj\tau}. \tag{11}$$

$\Delta Y_{cdj\tau}$ is the change in the outcome of interest (e.g., vote share for the Republican party) in the county-by-congressional-district cell cd, located in commuting zone τ. This is regressed on the import shock over period τ computed at the CZ level: $\Delta IP^{cu}_{j\tau}$. It is important to notice that congressional districts do not correspond to CZs, which are aggregations of counties. In fact, congressional districts may span multiple counties and CZs. The authors thus employ as units of analysis county-by-congressional-district cells. Each cell is attributed the trade shock corresponding to its unique CZ and the voting outcome corresponding to its unique district, and gets a regression weight equal to its share of the voting-age population in the district.[20] $X_{cdj\tau}$ is a vector of regional controls that includes both CZ- and county-specific variables.[21]

Larger increases in trade exposure are found to induce: (1) an increase in the intensity of electoral campaigns, as proxied by higher donors' contributions and higher voter turnout; and (2) a modest decrease in the Republican two-party vote share.[22] The latter result is consistent with earlier findings by Che et al. (2016), pointing to electoral gains for the Democratic party in counties more exposed to Chinese imports. Yet, this overall finding masks important heterogeneity. Autor et al. (2020) show that the trade shock induced a consequential increase in support for the Republican party in the sub-set of competitive districts that were not firmly controlled by one party. Overall, this led to a higher probability of electing Republican legislators –often with narrow margins– start-

[20] In addition, the authors have to deal with the issue of redistricting, that is, changes in district boundaries over time, especially after 2010. We refer to Autor et al. (2020) for a detailed explanation of how this issue is addressed through crosswalks and variables' adjustments.

[21] CZ-specific controls are: Census-division dummies, share of manufacturing employment, the offshorability index and the routine-task-intensity index (Autor and Dorn 2013) evaluated over employment figures in the year 2000, plus the two-party vote share of the Republican nominee in the 1996 and 2000 presidential elections. County-specific controls are: population shares for nine age and four racial groups, plus shares of the population that are female, college-educated, foreign-born, and Hispanic.

[22] The Republican two-party vote share is the ratio of Republican votes over the sum of Democratic and Republican votes.

ing from the 2010 mid-term elections, which brought many Tea Party Republicans into Congress.

This rightward shift was entirely driven by majority-White non-Hispanic congressional districts, and entailed the election of more conservative, rather than moderate, Republican representatives, mostly at the expenses of moderate Democrats. This is inferred by analyzing the ideology scores of donors for each candidate in the electoral campaigns using campaign finance scores (Bonica, 2013). In parallel, in locations with a majority non-White and Hispanic electorate, there was a tilt away from Democratic moderate candidates in favor of more left-leaning candidates. Overall, the shift to the right in Congress composition was thus also accompanied by rising polarization of representatives.

The analysis of presidential elections is conducted by Autor et al. (2020) at the county level, with the trade shock computed over the period 2000-2008. Other than that, the specification is the same as for the congressional elections. The dependent variable is the change in the Republican two-party vote share between 2000 and the years of the subsequent elections. Counties that had been more exposed to rising import competition from China are found to support systematically more the Republican party both in 2008 and in 2016, compared to their Republican vote share in 2000. Interestingly, such a shift in voting is also accompanied by an increase in the market share of the right-leaning Fox News channel.

In an Online Appendix (Autor et al. 2017), the authors provide more detailed evidence on the election of Trump in 2016. In this case, the trade shock is computed between 2002 and 2014. The magnitude of the effect of import competition is not trivial. In particular, in a counterfactual exercise on closely contested states, they conclude that the Democratic candidate would have won the states of Michigan and Wisconsin in case of a 25% smaller trade shock, and additionally the state of Pennsylvania had the trade shock been 50% smaller than observed. In the latter scenario, the Democratic candidate Clinton would have won the presidency.

Connecting the rightward shift in voting documented by Autor et al. (2020) to the globalization backlash, it is important to notice that shifting to the right in the US context entails shifting in a protectionist and isolationist direction. In fact, the Republican manifestos in presidential elections always display higher net autarky scores (as defined in Equation (1)) compared to Democrats in the 2000s. This was particularly evident in the 2016 campaign, with the race between the vehemently protectionist Donald Trump and the more globalist Hillary Clinton. Trump actually campaigned on a nationalist and

isolationist platform very similar, under many respects, to those of the European radical right (Lührmann et al. 2020).

By and large, the main message emerging from Autor et al. (2020) is that the political backlash against globalization in the US can be –at least to a partial, though clearly detectable extent– attributable to globalization itself, in the form of rising trade exposure. Additional evidence on the political consequentiality of trade shocks in the US has also been provided by Margalit (2011) and Jensen et al. (2017), in terms of anti-incumbent voting in presidential elections. A more recent stream of studies is investigating the political connotations and consequences of the trade escalation provoked by President Trump during his mandate. Margalit and Kim (2021) show that the Chinese government targeted its tariff retaliation systematically on US export goods whose production is more concentrated in counties supporting the Republican party, especially if located in closely contested congressional districts. This strategy seems to have been successful, as targeted areas were more likely to turn against Republican candidates. Similar evidence of politically-targeted retaliation, extended also to the EU, is provided by Fetzer and Schwarz (2021). Overall, Blanchard et al. (2019) estimates that the trade war can account for 5 out of the 40 House seats lost by Republicans in the 2018 elections.

4.1.2 Evidence from Europe

Colantone and Stanig (2018a) investigate the political effects of globalization in Europe, leveraging exposure to Chinese imports. Their analysis covers 76 legislative elections in 15 industrialized countries of western Europe, spanning the period 1988-2007.[23] The authors employ data on election results at the district level, collected from official sources, as well as data on individual-level vote, obtained from the European Social Survey (ESS). Exposure to Chinese imports is computed at the NUTS-2 regional level. NUTS-2 regions have a population ranging between 800,000 and 3 million, and constitute administrative units that either correspond to electoral districts, or include more of them with no cross-regional overlaps.[24]

Regional exposure to the trade shock is computed in a similar way as in the paper by Autor et al. (2020). There is only one difference compared to Equation (9): the industry-specific import shocks ($\Delta IP_{k\tau}$) are normalized by the pre-sample total number of work-

[23] Sample countries are: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

[24] The analysis covers 198 regions in total. 16 of them are located in Germany and correspond to NUTS-1 administrative units, which are more aggregated. This is due to data limitations.

ers within each country-industry, rather than by initial absorption. This approach follows closely Autor et al. (2013). All employment figures are measured pre-sample at the beginning of China's surge: between the end of the 1980s and the beginning of the 1990s, depending on the country.

The baseline instrumental variable approach is akin to the one of Autor et al. (2020). Specifically, in order to identify the supply shock component of rising import competition, Colantone and Stanig (2018a) instrument the growth in imports from China in each European country using Chinese imports' growth in the US. However, in a number of robustness checks, the authors also deal with the potential threats to identification entailed by this approach, as due especially to potential demand and technology shocks correlated across countries. In particular, results are robust to excluding several industries for which such shocks may have played a stronger role (e.g., computers, textiles, construction materials). They are also robust to replacing Chinese imports in the US with Chinese imports in a group of high-income countries whose business cycle is less correlated with that of European countries.[25] Finally, Colantone and Stanig (2018a) also propose a novel instrument, based on regional effective exchange rates. This relies on the computation of exchange rate variations at the country-industry level, which are then regionalized through the pre-sample employment share of each industry in each region. If anything, using this instrument leads to even stronger results.

In the district-level analysis, the baseline estimating equation is as follows:

$$\text{Electoral Outcome}_{cdt} = \alpha_{ct} + \beta_1 \text{Import Shock}_{cr(d)t} + \varepsilon_{cdt}, \tag{12}$$

where c indexes countries, d districts, t election years, and ε_{cdt} is an error term. The growth in imports from China is computed for each region r over two years prior to each election. The function $r()$ maps each district d to its NUTS-2 region r. $\text{Electoral Outcome}_{cdt}$ is one of the different summaries employed by the authors to characterize the election results of each district. These are described below. Finally, α_{ct} denotes country-year fixed effects, which are equivalent to election fixed effects. Their inclusion allows to control for any factors that affect symmetrically all the districts of a country at the time of a given election. These include, for instance, the overall economic performance of the country, the national political climate, as well as time-varying institutional factors such as election laws. The effects of the import shock are thus identified only out of variations across regions within the same country and year.

[25] The group includes Australia, Canada, Japan, and New Zealand.

One of the dependent variables considered by Colantone and Stanig (2018a) is the district-level center of gravity (i.e., electorate location) in terms of net autarky. This is computed based on the same party scores defined in Equation (1) of the previous section, measured at the national level through Manifesto Project data (MP, Volkens et al. 2020). The district-level center of gravity is then obtained as in Equation (2), using as weights the vote shares of each party in each district.[26] Higher exposure to Chinese imports is found to tilt the electorate location of districts in a protectionist and isolationist direction. This finding points to a direct and explicit link between import competition and the globalization backlash.

In addition to that, the authors provide a more comprehensive characterization of the political implications of the China shock along different dimensions. A main point made in the paper is that the trade shock tilts voters not only in a protectionist and isolationist direction, but also in a nationalist, conservative, and radical-right direction. In other words, the trade-induced globalization backlash has a strong right-wing connotation. To make this point, Colantone and Stanig (2018a) consider a host of additional dependent variables.

A first set of regressions employs alternative summaries of the ideological leaning of districts, as inferred from election outcomes. These include the center of gravity in terms of the following scores: (1) nationalism; (2) nationalist autarchy; (3) economic conservatism; and (4) economic nationalism. All scores are based on MP data, and computed through the same district-level formula as for net autarky. What changes across scores is the type of manifesto statements that are considered. Specifically, the nationalism score is based on claims in favor or against the national way of life, traditional morality, law and order, and multiculturalism. Higher values denote more nationalist positions. Nationalist autarchy combines all items used for net autarky and nationalism scores, while also including claims about human rights, democracy, and constitutionalism (Burgoon 2009). Economic conservatism is the index of left-right economic ideology concerning domestic issues considered on the horizontal axis of Figure 3. Finally, economic nationalism combines all items used to calculate the net autarky and the economic conservatism scores. Larger values then reflect both stronger support for protectionism and isolationism, and stronger support for conservative economic stances on domestic issues. Higher exposure to the trade shock is found to have positive, significant, and quantitatively meaningful effects on all these variables. Interestingly, the

[26] All the results in the paper are robust to using the district-level median voter scores.

nationalist trait of the trade-induced political shift is consistent with the contemporaneous surge of nationalist attitudes at the individual level documented in the previous section. Importantly, the district-level findings are also confirmed by the individual-level analysis, where individual vote choices are regressed on the China shock in the region of residence.

In a second set of regressions, the authors employ as dependent variables the combined vote shares for different families of parties. First, they consider the overall vote share obtained by radical-right parties in each district. These are identified based on the conventional wisdom in the political science literature, as discussed in the previous section (full list in Footnote 5). An increase in trade exposure by one standard deviation leads, ceteris paribus, to higher support for radical-right parties by around 1.7 percentage points. This is quite sizeable, considering that the average radical-right vote share in the sample is 5%, with a standard deviation of 7%.

Then, the analysis employs four party groups identified based on economic conservatism and net autarky scores. These are the same groups considered in Figure 4, based on the quadrants of Figure 3: economic nationalists (upper-right quadrant), isolationist left (upper-left quadrant), pro-trade left (bottom-left quadrant), and pro-trade right (bottom-right quadrant). Table 1 reports the results on these party groups from Colantone and Stanig (2018a). The import shock has a positive and significant effect on support for the economic nationalists, that is, the protectionist right group to which most radical-right parties belong. There is also a negative and significant effect on support for the pro-trade left, while no significant effects are detected neither for the isolationist left nor for the pro-trade right. These results suggest that, in response to the import shock, the electorate tends to abandon mainstream social-democratic parties and favor parties that propose economic nationalist platforms.

Overall, the findings by Colantone and Stanig (2018a) show that the globalization backlash induced by trade has a clear right-wing connotation. Evidence in the same direction has also been provided by several studies that have considered single European countries. In particular, notable examples of papers showing a link between trade exposure and support for radical-right parties are: Malgouyres (2014) on France, Caselli et al. (2019, 2021) on Italy, and Dippel et al. (2021) on Germany. This evidence on Europe is also akin to that provided by Autor et al. (2020) for the US.

Yet, in Figure 4 of the previous section we have shown that, in general, the increase in support for anti-globalization parties has been driven not only by right-wing parties but also by left-wing parties, especially in Europe, and especially from the financial crisis

Table 1: Party Groups

	(1)	(2)	(3)	(4)
Dep. Var.:	Economic Nationalists	Isolationist Left	Pro-trade Left	Pro-trade Right
Import Shock	0.278***	-0.052	-0.134**	-0.017
	[0.094]	[0.047]	[0.054]	[0.075]
Estimator	2SLS	2SLS	2SLS	2SLS
Country-Year Effects	yes	yes	yes	yes
Obs.	7,782	7,782	7,782	7,782
R2	0.77	0.72	0.88	0.90
First-stage results				
US imports from China	0.039***	0.039***	0.039***	0.039***
	[0.009]	[0.009]	[0.009]	[0.009]
Kleibergen-Paap F-Statistic	19.17	19.17	19.17	19.17

Standard errors clustered by region-year. *** p<0.01, ** p<0.05
Source: Adapted from Colantone and Stanig (2018a)

onwards. It could then be that Colantone and Stanig (2018a) and other European studies do not detect a positive effect of import competition on the isolationist left just because their analysis does not cover more recent years.

To address this concern, we replicate the cross-country analysis by Colantone and Stanig (2018a) on the time-span 2008-2019. The specification remains the same, but the China shock is now computed for each region over the pre-crisis period 1988-2007, as the average growth in Chinese imports over 5-year intervals. This approach is similar to that adopted by Autor et al. (2020), under the idea that the plausibly exogenous, supply-driven China shock unfolds between the end of the 1980s and the trade collapse of 2008-2009. Our novel results are reported in Table 2, and they are qualitatively consistent with the evidence discussed above for the earlier period. Overall, taking stock of the evidence, we can confidently conclude that trade exposure is a significant determinant of the right-wing globalization backlash, but it does not play a significant role for the success of protectionist and isolationist parties of the left.

4.1.3 Why not the left?

The finding that trade exposure does not increase support for left parties may seem puzzling. As discussed in Section 3, the theoretical intuition behind the trade-induced globalization backlash is that trade liberalization generates a social footprint, with concen-

Table 2: Party groups 2008-2019

	(1)	(2)	(3)	(4)
Dep. Var.:	Economic Nationalists	Isolationist Left	Pro-trade Left	Pro-trade Right
Import Shock pre-2008	0.090***	-0.031	-0.046**	0.007
	[0.023]	[0.027]	[0.019]	[0.024]
Estimator	2SLS	2SLS	2SLS	2SLS
Country-Year Effects	yes	yes	yes	yes
Obs.	5,849	5,849	5,849	5,849
R2	0.68	0.66	0.65	0.88
First-stage results				
US imports from China	0.029***	0.029***	0.029***	0.029***
	[0.003]	[0.003]	[0.003]	[0.003]
Kleibergen-Paap F-Statistic	76.12	76.12	76.12	76.12

Standard errors clustered by region-year. *** p<0.01, ** p<0.05

trated adjustment costs in specific social segments and regions. The backlash would then result from insufficient compensation and redistribution of welfare. In light of this, one could expect trade exposure to increase support for relatively pro-redistribution parties of the left. In particular, isolationist left parties could gain support through political platforms combining protectionism with promises of an empowered welfare state. This combination could be bundled with an anti-capitalist master narrative, centered on the interests of workers rather than on nationalism. Yet, there is no evidence of such a pattern in the data.

A number of factors may contribute to explaining this finding. First, empowering the welfare state would require higher taxes, thus discouraging support from the (declining) middle class, which accounts for a significant portion of the electorate in western democracies. Lower taxes have been identified as a main element of the winning formula of radical-right parties, allowing them to gain electoral support from the middle class as well as from the working class. The latter would instead be more attracted by the second key element of the winning formula –i.e., protectionism– while a nationalist narrative provides a unifying rhetoric bundling together such different constituencies (Kitschelt and McGann 1997).

Second, and more generally, in the decades after WWII, the prevailing paradigm in western democracies has been that of "embedded liberalism" (Ruggie 1982). This entailed a combination of trade liberalization and multilateralism, with policies aimed at

fostering domestic growth and social cohesion through the creation of a strong middle class. The idea underlying this implicit social contract was that liberal policies would bring welfare gains shared by a large fraction of society. In western Europe, for instance, this was realized especially through economic integration within the European Union, accompanied by the creation of strong national welfare systems, which would provide a buffer against uncertainty stemming from international shocks (Cameron 1978; Rodrik 1998). The credibility of such a paradigm has been declining from the 1990s onwards (Hays 2009). Stronger trade shocks, such as the one induced by China's rise, would have required even more redistribution and a stronger role of public policies. Yet, policy responses were not adequate, partly due to the process of globalization itself (Rodrik 1997). Indeed, this has led to missing tax revenues for governments due to profit shifting (Tørsløv et al. 2018), and to a general increase in the tax burden on relatively immobile middle income earners, while more mobile companies and top earners saw declines in tax rates (Egger et al. 2019). As summarized by Obstfeld (2020a), globalization may be subject to cycles as it inherently fosters domestic dynamics that eventually lead to backlash by expanding the need for nation-state action on the one hand, and simultaneously limiting the scope of that action on the other. In line with this view, the historical literature also suggests that the first globalization wave generated distributional implications that led to a nationalist backlash, ending with the start of World War I (Franzese 2019; James 2002).

Overall, the idea that globalization could work in the interest of all has been losing popularity especially since the financial crisis, and promises of effective redistribution have lost credibility. As noted by Frieden (2019), the failure of compensation has been compounded by a failure of representation, as common people perceived that their problems were not really acknowledged, let alone addressed by mainstream parties. As a matter of fact, anti-globalization parties of the radical-right benefited from an anti-incumbent advantage. Most of them never had government responsibilities before, so they could cast themselves as the true interpreters of the need for change, against the complicit mainstream forces on both sides of the political spectrum.

In addition to this, structural transformations of the economy, such as globalization and technological change, have been related to a declining role of labor unions. Unions have historically provided a connection between workers and parties of the left. Hence, their loss of relevance may also contribute to the lack of a detectable relation between trade exposure and support for left parties (Kitschelt 2012; Anelli et al. 2019).

Finally, as we discuss more extensively in the next section, there is evidence that ex-

posure to economic distress –including as stemming from globalization– tilts people's attitudes in an authoritarian and nativist direction. This naturally pushes voters closer to anti-globalization parties of the right, and away from left parties, which have historically championed the international solidarity of workers (Betz and Meret 2012). Recent theoretical research also shows that exposure to economic shocks that raise inequality may increase the salience of identitarian issues. This may dampen demand for redistribution and have direct effects on trade policy in a protectionist direction (Shayo 2009; Altomonte et al. 2019; Gennaioli and Tabellini 2019; Grossman and Helpman 2021).[27]

A question that remains unanswered, then, is what has driven the rising support for protectionist and isolationist parties of the left. As discussed earlier, these parties have been particularly successful in Europe, especially since the financial and sovereign debt crisis onwards. A number of contributions in the literature have identified fiscal austerity as a main driver for this political shift. The underlying idea is that voters have turned to challenger left parties that reject the mainstream consensus of austerity imposed by EU institutions, especially in the most crisis-plagued countries of southern Europe (Hernandez and Kriesi 2016; Hobolt and Tilley 2016; Hobolt and de Vries 2016; Foster and Frieden 2019; Hübscher et al. 2020).

Building on the received literature, which has a country-level focus, in Table 3 we provide some novel empirical evidence exploiting cross-regional variation in exposure to austerity. Specifically, we augment the regressions of Table 2 by including as an explanatory variable the pre-crisis share of regional employment in the public sector (measured in 2000).[28] The idea is that austerity measures would have stronger negative implications in regions whose economy originally relied more heavily on public spending. We find that the public sector share is positively and significantly related to support for the isolationist-left camp over 2008-2019. At the same time, the evidence on the import shock remains in line with Table 2. While purely suggestive, these findings provide further support for the idea of an austerity-related globalization backlash on the left. Yet, it is important to notice that austerity has been found to breed support for right-wing nationalist parties too. Notable studies in this direction are: Algan et al. (2017), Frieden and Walter (2017), Dal Bo et al. (2018), Fetzer (2019), Foster and Frieden (2019), Guiso et al. (2019), and Broz et al. (2021).

[27] See Panunzi et al. (2020) for related work based on risk attitudes.

[28] Data are drawn from Eurostat, and refer to employment in public administration, defence, education, health, and social security.

Table 3: Exposure to austerity - Elections 2008-2019

	(1)	(2)	(3)	(4)
Dep. Var.:	Economic Nationalists	Isolationist Left	Pro-Trade Left	Pro-trade Right
China Shock pre-2007	0.062**	0.000	-0.049**	0.002
	[0.026]	[0.028]	[0.022]	[0.023]
Public employment share 2000	-0.173	0.274**	-0.081	-0.037
	[0.153]	[0.133]	[0.112]	[0.088]
Estimator	2SLS	2SLS	2SLS	2SLS
Country Effects	yes	yes	yes	yes
Obs.	5,611	5,611	5,611	5,611
R2	0.69	0.66	0.65	0.89
First-stage results				
US imports from China	0.030***	0.030***	0.030***	0.030***
	[0.004]	[0.004]	[0.004]	[0.004]
Kleibergen-Paap F-Statistic	67.24	67.24	67.24	67.24

Standard errors clustered by region-year. *** p<0.01, ** p<0.05

4.2 Interpretation, Brexit, and the role of immigration

How shall we interpret the reviewed evidence on the link between globalization and voting? An intuitive, though oversimplified, interpretation would entail the following two logical steps: (1) voters can correctly identify trade exposure as the cause of their (and their community's) economic malaise; and thus (2) they choose to support protectionist and isolationist parties. Such an instrumental view of voting might miss important aspects of the globalization backlash. Indeed, it is highly (possibly unrealistically) demanding in terms of voters' awareness, and it does not account for the complexities of party policy platforms, nor for the richness of social and psychological dynamics underlying vote choices.

To provide a more comprehensive characterization of this political phenomenon, we start by building on a study by Colantone and Stanig (2018b), which investigates the role of the Chinese import shock in the Brexit referendum of 2016. Voters could choose whether they wanted the United Kingdom to "Remain" in the EU or "Leave" the EU. Following a similar methodology as in Colantone and Stanig (2018a), the study finds plausibly causal evidence of higher support for the Leave option in regions that were more exposed to Chinese imports. This result is summarized graphically in Figure 20. Importantly, trade exposure is measured between 1990 and 2007, thus stopping almost ten years before the referendum takes place. Over this period, the economic performance

of regions that were more affected by the trade shock is disappointing. In particular, their GDP per capita declines compared to the median region in the UK, suggesting the existence of trade-induced adjustment costs that persist in the medium term.

Chinese import competition can then be seen as a structural driver of divergence across regions (and social groups) in the UK. As such, the authors argue, it may have a causal impact on voting to the extent that support for the Leave option reflects the discontent of communities experiencing economic decline compared to richer areas of the country. In particular, the import shock may lead to higher support for Brexit through three main, nonmutually-exclusive mechanisms. These relate to three possible interpretations of Leave vote: (1) as a vote against incumbent political elites and the business establishment; (2) as a vote against international integration and in favor of national sovereignty; and (3) as a vote against immigration. This conceptual framework can be generalized to describe more broadly the way in which trade exposure translates into political outcomes. Moreover, it clarifies how the idea of comorbidity could work in this context. Multiple economic factors, along with trade, may contribute to the economic distress of the same regions and social groups, thus pushing further towards the same political shift. In view of the more general interest, we describe the three interpretations of Leave vote in what follows.

First, a vote in support of Brexit may be read as an anti-incumbent vote. Voters dissatisfied with the economic trajectory of their community took the opportunity of the referendum to send a signal to the elites, which were overwhelmingly in favor of the Remain option. In this reading, anti-incumbency applies not only to the current government, but also more broadly to the political and business establishment at large. Political science has abundantly documented how voters engage in retrospective voting, punishing and rewarding incumbents for past performance (Healy and Malhotra 2013). For instance, electorates tend to withdraw support from incumbent governments following economic downturns (Duch and Stevenson 2008). Importantly, the literature suggests that voters often engage in "blind retrospection" (Achen and Bartels 2016). In this view, anti-incumbent voting behavior does not require voters to be able to correctly identify the *causes* of their economic malaise: voters may punish incumbents without being able to evaluate their actual responsibilities, and, in the present case, irrespectively of whether Brexit might actually ameliorate their own economic fortunes. In this perspective, then, voters were simply disappointed because of persistent economic decline, and used the referendum to voice their discontent. This reasoning may be easily generalized to legislative elections, where trade exposure is found to increase support

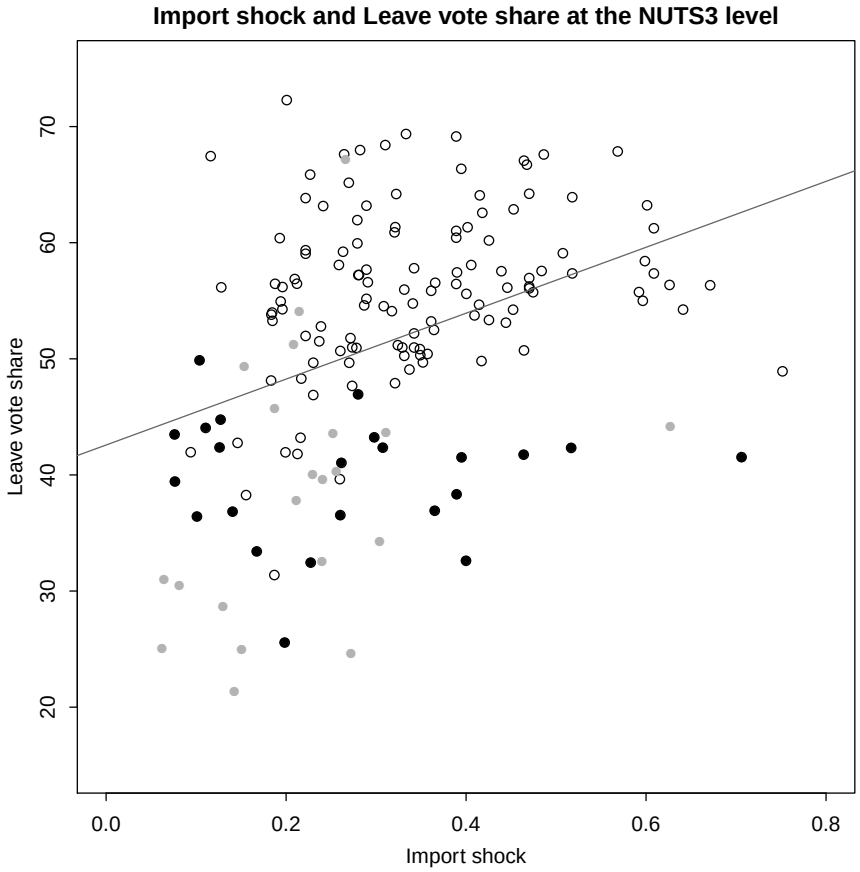
for anti-establishment parties and candidates of the radical right.

Second, support for Brexit may be interpreted as a vote against international integration and in favor of national sovereignty. This reading hinges on voters being more sophisticated than blind retrospection punishers. It relies on the idea that people identify globalization –even if just in very general terms– as a cause for their economic distress. As a matter of fact, being part of the EU was perceived by many as an obstacle to British economic independence and prosperity. Hence the desire to "take-back-control" of the country, as per the expression popularized by Leave campaigners. At a more general level, appeals to national sovereignty, security, and self-sufficiency are typical of economic nationalist parties. This isolationist rhetoric may also serve as an effective complement for protectionist stances in party manifestos, as trade policy tends to be a rather technical topic (e.g., Stantcheva 2020), while nationalist appeals are easier to grasp for voters. Overall, although with more general nuances, this second mechanism is the closest to the intuitive interpretation of the link between trade and voting described at the beginning of this section.

The third mechanism connecting trade exposure and support for Brexit is related to the interpretation of Leave vote as a vote against immigration. As a matter of fact, the Brexit campaign focused significantly on immigration issues, and many Leave voters pointed to dissatisfaction with immigration as a main reason for their vote choice (Ipsos MORI 2016; Lord Ashcroft 2016). Yet, Figure 21 shows that there is not a positive correlation between the share of foreign-born residents in a region and Leave support. Colantone and Stanig (2018b) reconcile these two –apparently contradictory– pieces of evidence by noticing that what is actually politically consequential is people's perception of immigration as a problem, rather than the sheer incidence of immigration in an area. In addition, they show that immigration attitudes are significantly worsened by exposure to the import shock, while they are not systematically related to the regional share of foreign-born residents (nor to their recent arrival rate). Hence, trade exposure may lead to higher support for Brexit by worsening immigration attitudes.

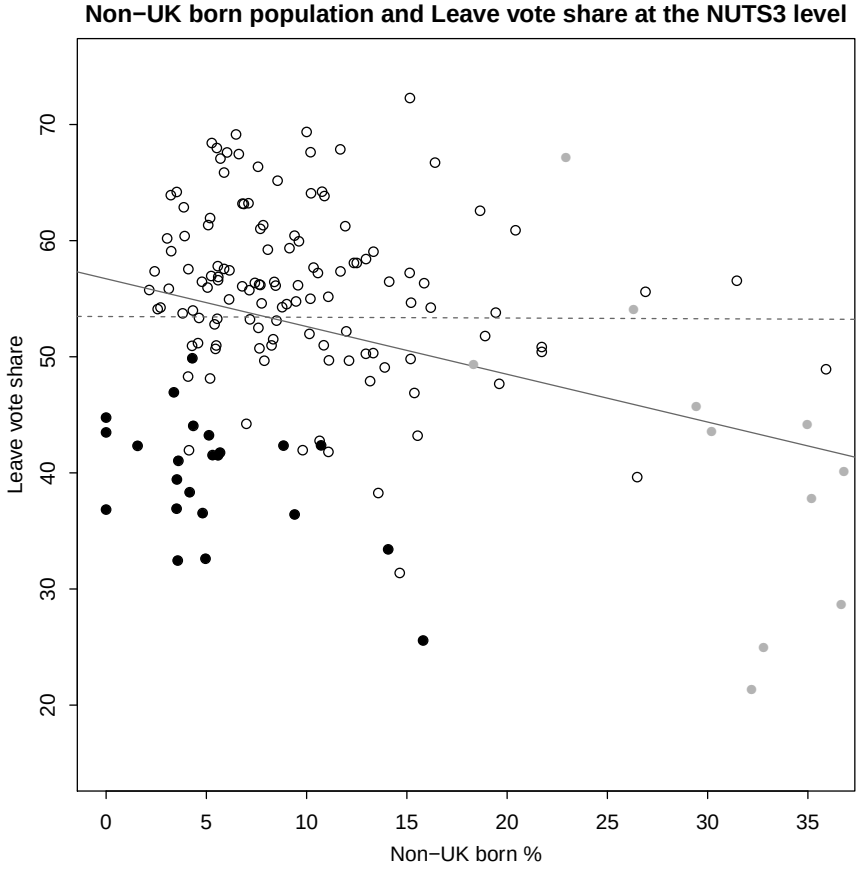
This may happen through at least three nonmutually-exclusive channels. First, trade-induced economic distress may determine a scarcity of jobs, and people may thus fear rising competition on the job market due to immigrants. Second, declining regions may witness higher reliance on public welfare services, leading to fears of congestion driven by immigrants (see, e.g., Alesina et al. 2018). Third, immigrants themselves may be blamed for the disappointing performance of the regional economy. Identifying the real causes of slow growth is difficult for researchers, let alone for voters. Instead, a

Figure 20: Trade exposure and Brexit



Source: Adapted from Colantone and Stanig (2018b).
Note: Black dots are NUTS3 regions of Scotland, grey dots are the NUTS3 of London, and the hollow dots are the remaining NUTS3 of England and Wales. The grey solid lines is the least-squares fit on the whole sample.

Figure 21: Immigration and Brexit



Source: Adapted from Colantone and Stanig (2018b).
Note: Black dots are NUTS3 regions of Scotland, grey dots are the NUTS3 of London, and the hollow dots are the remaining NUTS3 of England and Wales. The grey solid lines are least-squares fits on the whole sample, the dashed grey line is the least-squares fit excluding London.

scapegoating message pointing to immigration is much easier to convey for radical-right forces such as the U.K. Independence Party, which was the main proponent of Brexit.

This discussion about immigration can be generalized to legislative elections, where trade exposure has been found to increase support for economic nationalist and radical-right parties. Anti-immigration stances are an important component of their policy platforms, and have been identified as key determinants of their electoral success (Rydgren 2008). Changes in attitudes seem to be an important channel through which economic shocks translate into voting behavior. In particular, consistent with the right-wing connotation of the trade-induced globalization backlash, several other studies have shown how trade exposure tilts people's attitudes in a nativist and authoritarian direction. Notable contributions in this respect are: Ballard-Rosa et al. (2021a) and Cerrato et al.

(2018) on the US; Ballard-Rosa et al. (2021b) and Carreras et al. (2019) on the UK; Colantone and Stanig (2018c) across 15 countries of western Europe. Importantly, trade exposure seems to drive rising concerns with immigration not only with respect to its economic impact, but also as a threat to the national culture. This is in line with the view of globalization as a "package" involving at the same time material consequences and cultural shifts (Margalit 2012).[29]

A large literature has also investigated the direct effects of immigration on attitudes and voting (see Devillanova 2021 for a recent review). The main empirical challenge in these studies is the endogeneity of local immigration rates due to sorting. Following Altonji and Card (1991), some studies rely on shift-share instruments, by which the incidence of immigration in an area is instrumented based on the historical national composition of foreign-born residents, combined with subsequent growth in immigration from different origin countries (e.g., Barone et al. 2016; Tabellini 2020). Other papers exploit the availability and characteristics of living spaces as predictors of immigrants' settlement (e.g., Harmon 2017; Steinmayr 2016; Devillanova 2021). Hangartner et al. (2019) exploits distance from the coast of departure to instrument refugees' arrivals in Greek Aegean islands. Finally, Dustmann et al. (2019) leverages the quasi-random allocation of refugees across municipalities in Denmark. By and large, this literature finds evidence of positive effects of immigration (and refugees' arrivals) on support for right-wing, anti-immigration parties, which tend to be also protectionist. Exceptions are found (not always) for larger urban areas, suggesting the existence of a rural-urban divide in attitudes. Overall, immigration seems to be another factor contributing to the right-wing globalization backlash, either as a catalyst for the effects of trade, as discussed above, or independently.

4.3 Culture vs. the economy

The literature on the globalization backlash largely overlaps with the more general literature investigating the recent populist wave.[30] A prominent debate in this literature –which applies directly to the globalization backlash– concerns the drivers of the ob-

[29]The literature has debated whether immigration concerns are more economic or cultural in nature. Hainmueller and Hopkins (2014) provide a review of this debate. At the moment, cultural traits are more clearly discernible, while evidence on the economic concerns –as related to direct competition in the labor market– is weaker.

[30]We refer the reader to Guriev and Papaioannou (2021) for a thorough overview of the populism literature, which is outside the scope of this contribution.

served political shifts. Some contributions have emphasized economic factors such as globalization, austerity, and technological change, effectively summarized by the comprehensive concept of economic insecurity (e.g., Guiso et al. 2017). Other studies have put forward cultural drivers, such as nativism, racism, perception of status threat, and a general adversion to cosmopolitan values and social liberalism (e.g., Inglehart and Norris 2017; Mutz 2018).

Our view is that economic and cultural drivers should not be seen as mutually exclusive explanations for the globalization backlash. To the contrary, we should think of economic and cultural factors as complementary and interacting determinants of the backlash. For instance, in the previous section we have discussed how trade shocks may actually have an impact on individual cultural attitudes, as related to nativism and authoritarianism. As a result, the cultural shift is then at least partially endogenous to the trade shock.

This line of reasoning applies to economic shocks at a more general level, to the extent that their political effects tend to work through changes in attitudes. This broader point has been made by several contributions in the literature (e.g., Colantone and Stanig 2018c, 2019; Margalit 2019; Rodrik, 2021). We like to summarize it with a powerful quote by Franzese (2019, emphases in the original): "the question is ill-formed: it's not status threat *or* economic hardship, it's *and*, or even *because*."

From a theoretical perspective, Rodrik (2021) introduces a conceptual framework describing different causal links between globalization and political outcomes. He emphasizes how globalization can have an impact both on the demand-side and on the supply-side of politics. On the demand-side, globalization can have a direct effect on individual preferences for certain policies (e.g., protectionism), and an indirect effect on attitudes through changes in the perception of identity, and in the salience of cultural values. On the supply-side, globalization can affect the ideology of parties, and push them to increase the salience of cultural and identity issues for strategic reasons.

Overall, as emphasized by Colantone and Stanig (2018c), political outcomes reflecting cultural shifts in attitudes cannot be interpreted at face value as consequences of purely cultural concerns. They may actually constitute, at least partly, the cultural manifestation of economic grievances. Clearly, this type of considerations do not imply that cultural factors may not play their own direct and independent role. As Margalit (2019) suggests, we may even think of an influence of cultural factors on economic factors, whereby grievances about economic changes are partly driven by their cultural and social implications. In this vein, Gidron and Hall (2017, 2020) provide a fascinating con-

ceptualization of how cultural and economic factors interact in determining people's anxiety about their social status, which in turn is found to be a proximate cause of nativism and radical-right support.

Besides its conceptual relevance, this discussion has one important methodological implication. That is, empirical studies aimed at assessing the relative role of economic and cultural drivers for determining electoral outcomes should not include proxies for both drivers as explanatory variables in the same regression. This sort of "horse-race" approach would indeed be biased by the fact that individual attitudes are post-treatment with respect to economic shocks, and thus "bad controls", to use the terminology by Angrist and Pischke (2008). Several studies have nevertheless taken this type of approach, regressing voting outcomes over large sets of variables encompassing both cultural attitudes and measures of economic distress. Lack of significance of the economic indicators in these regressions is then taken as evidence that economic factors do not matter for voting.

An example of the complexity involved in adjudicating these questions is provided by the exchange between Morgan (2018) and Mutz (2018), regarding cultural and economic explanations for the victory of Donald Trump in the 2016 presidential race in the US. The main point is that even a partial dependence of cultural attitudes on economic factors may invalidate any strong conclusions taken from regressions that condition on both at the same time. Importantly, without strong additional assumptions, backing out the relative contributions of economic and cultural drivers of the globalization backlash, and inferring the causal structure of these processes, is not possible, especially from cross-sectional data. Panel data at the individual level, allowing to trace over long time periods exposure to economic shocks, changes in cultural attitudes, and voting behavior, might provide some inroads. Overall, disentangling the role of cultural vs. economic factors is definitely a promising area for future studies.

4.4 The role of technology

Two main messages have emerged thus far from our review of the literature: (1) trade exposure is a significant driver of the globalization backlash; yet (2) the backlash is only partly determined by trade. In particular, import competition is not a significant factor behind the success of left-wing protectionist parties, whose surge seems to be rather driven by exposure to austerity policies. In addition, even the right-wing globalization backlash seems to have multiple determinants besides trade exposure, including auster-

ity, immigration, and cultural shifts. Borrowing from the medical literature, we may describe this multi-causal nature of the phenomenon through the concept of comorbidity, by which different factors compound to generate the backlash. Within this framework, a prominent role is also played by technological change: a fundamental dimension of structural change in the economy, that may generate politically consequential social cleavages.

Technological change is akin to globalization in several respects. Chiefly, it brings aggregate welfare gains while creating winners and losers, at least in relative terms. A large literature has documented the distributional consequences of technological shifts. In recent years, the main focus has been on the IT revolution starting from the 1980s, and on the subsequent wave of automation based on robots (Autor 2015; Frey and Osborne 2017). First, the IT revolution, with the widespread adoption of computer-based technologies, has led to increasing polarization in the job market, with a relative increase in employment at the two tails of the skill and wage distribution, and a shrinkage of middle-skill and middle-income jobs. In fact, the latter tend to be more routine-intensive, and therefore more substitutable by computers. Overall, this process has led to a surge in educational premia and wage inequality both in the US and in Europe, and has significantly harmed the middle class.

This tendency has been reinforced by the more recent wave of technological change, which relies on machine learning and mobile robotics for the automation of a wider range of tasks, increasingly of the non-routine type. The available evidence, based on robot adoption data, suggests that automation has had important distributional consequences, favoring mostly high-skilled individuals (Chiacchio et al. 2018; Dauth et al. 2018; Graetz and Michaels 2018; Acemoglu and Restrepo 2020; Bonfiglioli et al. 2020). As in the case of trade exposure, adjustment costs are concentrated in ex-ante more vulnerable regions, owing to their historical industry specialization. Importantly, there is no evidence of further polarization, as the number of low-skill jobs is also negatively affected. This makes the position of losers potentially worse, as the reduction of job opportunities compounds the rising gap in wages.

Several papers have investigated the political implications of technological change, focusing mostly on exposure to robot adoption. From a methodological point of view, the main reference for cross-regional work is the paper by Acemoglu and Restrepo (2020). This develops a theoretical framework where robots can displace workers in supplying tasks to the local labor market, but also produce positive spillovers on local employment and wages through increased productivity. The overall local labor market effects of au-

tomation are thus determined by whether the displacement effect prevails on the positive spillover one. In reduced-form analysis, regional exposure to automation can be measured as a weighted summation of industry-level advances in robotics (i.e., changes in the number of operational robots per worker), where weights are given by the initial regional shares of employment in each industry. This approach is very similar to the one developed by Autor et al. (2013) to measure exposure to Chinese imports. In the same spirit –and with the same potential threats to identification– robot adoption in third countries can be used to instrument domestic robot adoption. The idea is that of capturing plausibly exogenous technological trends that are common across countries.

Based on this methodology, Frey et al. (2018) find that support for Donald Trump in the US presidential election of 2016 was stronger in local labor markets (CZs) that were more exposed to robot adoption between 2011 and 2015. In a counterfactual analysis, they show that Michigan, Pennsylvania, and Wisconsin would have swung in favor of the Democratic candidate Hillary Clinton if exposure to robots had not increased in the immediate years before the election. This would have switched the overall result of the election in favor of Democrats. Anelli et al. (2019) exploit the same methodology for studying the impact of automation on legislative elections in 14 countries of western Europe, between 1993 and 2016. They find that stronger exposure to robot adoption leads to higher support for nationalist and radical-right parties, at the expense of mainstream left and liberal right parties. Evidence pointing in the same direction has also been found in other studies: Dal Bó et al. (2018) on Sweden, Schöll and Kurer (2020) on Germany, Caselli et al. (2021) on Italy, and Milner (2021) across 15 European countries.[31]

Taking stock of the extant studies, the political effects of automation seem to be very similar to those of trade exposure, favoring protectionist and isolationist parties (and candidates) of the right. Overall, technological change thus emerges as another important driver of the globalization backlash. Yet, there are some notable differences between Chinese competition and robotization. Both shocks are stronger in areas characterized by larger historical shares of manufacturing employment. However, for given manufacturing share, exposure to each shock depends on industry specialization within manufacturing. For instance, automation plays a big role in automotive, an industry that has been little exposed to Chinese import competition, while the opposite applies to textiles. While exposure to Chinese imports has been found to induce persistent economic decline at the regional level, automation is actually driven by successful industries and

[31] See Gallego et al. (2021) for related evidence on the winners of digitalization in the UK.

companies. This may imply shorter-lived adjustment costs at the regional level, and the local creation of welfare that can be mobilized in principle to finance effective compensation policies for the losers.

This discussion highlights the importance of relying on individual-level analysis besides cross-regional analysis when studying the effects of automation. Especially in the medium run, the political implications of automation are likely to be more related to rising within-region inequalities than to cross-regional divergence. However, measuring the exposure of individuals to automation poses a serious empirical challenge. Some early contributions (reviewed by Gallego and Kurer 2021) have used the automatability of the current occupation, finding for instance that individuals employed in occupations at higher risk of automation are more likely to vote for radical-right parties. However, this approach is problematic to the extent that the current occupation of an individual may be already contaminated by earlier automation dynamics.

Anelli et al. (2019) propose a new methodology to deal with this issue. In their approach, the vulnerability of each individual to automation is obtained as the weighted average of the automatability score of each occupation, using as weights the probabilities of employment of each individual in each occupation. These probabilities are based on age, gender, education, and region of residence. Crucially, they are estimated using historical labor force data, thus reflecting the characteristics of the labor market prior to the automation shock. To obtain the individual exposure to automation at the time of a given election, the vulnerability score is interacted with the pace of robot adoption in the specific country (or region) and election year. Working on a sample of western European countries, Anelli et al (2019) find that higher robot exposure at the individual level pushes voters to support more nationalist and radical-right parties. It also leads to poorer perceived economic conditions and well-being, lower satisfaction with the government and democracy, and a reduction in political self-efficacy. These findings are suggestive of potential transmission channels connecting the automation shock to voting.

Future contributions may try to disentangle the relative role of automation and trade as drivers of the globalization backlash. The variation in the incidence of the two phenomena across industries, combined with differences in regional specialization, may provide room for this type of analysis, in the spirit of Autor and Dorn (2015). Anelli et al. (2019), Caselli et al. (2021), and Milner (2021) already discuss some evidence in that direction, whereby both trade and automation exposure at the regional level are found to be simultaneously significant in vote regressions, at least until the financial crisis. Yet,

disentangling the role of trade and technology more precisely might require more sophisticated and theory-based analyses. In fact, as highlighted by Bonfiglioli et al. (2021), trade and automation dynamics are closely intertwined, not only at the industry level but also at the firm level, where import and automation decisions are endogenously determined.

Automation and trade also show interesting interplays in public perceptions and attitudes. In this respect, Di Tella and Rodrik (2020) provide some intriguing results based on a large online survey of US residents. Respondents are asked their opinion with respect to the desirability and type of government intervention in a situation where a large number of jobs is at risk. Different groups receive different information concerning the cause of layoffs. Interestingly, respondents demand more protectionism not only when they are told that layoffs are due to outsourcing, but also when they are due to automation and demand shifts. These results suggest that protectionism is largely seen as an effective way of helping workers, not only when they are directly harmed by trade but also when they are threatened by different types of shocks. This is further evidence in line with the idea of comorbidity behind the globalization backlash.

In general, while technological advances and demand shifts may be perceived as unavoidable, opening to trade is instead seen as a free policy choice in the hands of political leaders. Trade policy may then be used as a general form of protection. In line with this reading, Di Tella and Rodrik (2020) also find that the elicited protectionist response is significantly higher when respondents know that layoffs are due to outsourcing directed to a low-income country (Cambodia) rather than to a high-income country (France). This finding may be interpreted in terms of cultural distance from the US, which is higher in the case of Cambodia. A related reading could be in terms of level playing field. Indeed, trade may be perceived as particularly unfair when it involves competition with countries that are not competing by the same standards. Donald Trump's narrative with respect to unfair competition from Mexico and China is a prominent example of the political salience of this type of issues.

5 Looking ahead

The reviewed evidence suggests that the globalization backlash has economic roots that are related not only to globalization itself, but rather to a more general phenomenon of deepening cleavages within society, as driven by structural transformations in the econ-

omy. In this respect, the future of globalization hinges on how successful society will be at making not just globalization, but structural change in general, more politically sustainable, by making it more inclusive.

While we have not excluded the role of cultural factors, it would be dangerous to dismiss the economic roots of the backlash. This could lead to the conclusion that nothing went wrong in the management of structural economic changes over the past decades, while there is ample evidence pointing in the opposite direction. While one should be very open about the social footprint of structural change, highlighting the distributional consequences of globalization, for instance, should not be considered as an endorsement of nationalism. On the contrary, nurturing a fruitful debate on how to reconcile economic liberalism with social cohesion may be the best way to reaffirm the value of open economies, of open and inclusive societies, and of the international liberal order.

The literature around these issues has been developing fast in recent years, as also testified by this contribution. Importantly, this research work has informed a lively policy debate. Prominent international institutions such as the European Commission, the IMF, the OECD, and the World Bank have launched initiatives and published reflection papers on, e.g., harnessing globalization (European Commission 2017). Attention paid by media and journalists has also been high (e.g., Sandbu 2020). Being reasonably optimistic, we may expect all this to lead to higher awareness on the part of leaders, and more effective policies in the coming years. For example, Rodrik and Sabel (2019) emphasize the importance of policies for the creation of "good jobs" fostering the middle class, including not only interventions on the pre-production (e.g., schooling) and post-production (e.g., taxes and transfers) stages of the economy, as per the traditional welfare-state model, but also on the production stage, chiefly through effective antitrust, innovation, and labor market policies (Ottaviano and Suverato 2021). At the international level, tackling offshore profit shifting and improving coordination in corporate taxation is key not only for financing ambitious policy interventions, but also for improving the acceptability of globalization for public opinion.

There are good reasons to expect positive developments also from the political system. In the US, Donald Trump failed to secure a second presidential mandate in 2020. In the UK, the implementation of Brexit has disappointed many former supporters of it. In general, as anti-establishment forces have gained power and influence, they started losing their anti-incumbent advantage and being held accountable for their own unmet goals and unfeasible proposals. For instance, once in power, the radical-right party Lega backtracked from its flagship proposal of taking Italy out of the Euro single currency

area. In parallel, the supply-side of politics is also undergoing a more general transformation, with the emergence of new political forces (e.g., President Macron's movement in France) and the restructuring of mainstream parties. This could help solve the failure of representation pointed out by Frieden (2019), through the offer of policy platforms in favor of inclusive globalization and technological change, so that the representation of losers is not left exclusively to anti-globalization and radical-right parties.

Yet, despite changes in political representation, the fundamental economic cleavage between sectors of society that are thriving in the globalized and tech-intensive economy, and those that have been losing ground, seems difficult to revert, and will likely shape political competition for long. In this respect, a study by Colantone et al. (2021) suggests that, besides having short- and medium-run consequences, trade exposure may also have longer-run implications by reducing social mobility. Specifically, Colantone et al. (2021) build on an earlier study by Chetty et al. (2014), which has documented large differences in the extent of intergenerational income mobility across commuting zones of the US. Chetty et al. (2014) exploit extensive data covering more than 40 million US residents born in 1980-1982. Their income is evaluated in the years 2011-2012, and related to the income of their parents back in 1996-2000. As a baseline result, the authors show evidence supporting the idea of the "Great Gatsby Curve" (Krueger 2012). That is, areas characterized by higher levels of inequality in parents' income display lower mobility of children. This entails, for instance, higher correlation between children's and parents' income ranking. Colantone et al. (2021) augment this analysis by including a measure of exposure to Chinese imports at the commuting-zone level. In line with their theoretical results, they find higher trade exposure to reduce social mobility, both in absolute and in relative terms, conditioning for the initial level of inequality.

These findings are consistent with the literature on import competition, which has found evidence of negative effects of trade exposure not only in terms of employment and earnings, but also in terms of broader outcomes such as local provision of public goods, crime, marriage, fertility, physical and mental health (see Autor et al. 2016, Colantone et al. 2019, and Redding 2021 for a review). In fact, as highlighted by Chetty et al. (2014) and Major and Machin (2018), social mobility is a comprehensive outcome, which depends on economic determinants as well as on family characteristics and social conditions within communities. The reduction of intergenerational income mobility induced by trade may then reflect in a comprehensive way the far-reaching effects of structural economic change. Importantly, in addition to perpetuating initial income differences, the induced reduction in mobility may reinforce the political consequences

of trade shocks, as rising inequality becomes less socially acceptable when matched by declining social mobility, thus fostering political backlash.

As we think about future developments, another source of worry comes from the COVID-19 pandemic. In fact, there are reasons to fear that this might compound the other processes we have isolated as drivers of the globalization backlash. For instance, the pandemic-induced economic crisis seems to have a regressive character, thus raising inequalities and potentially decreasing social mobility, especially due to school closures (Antràs 2020; Burgess and Sievertsen 2020; Chetty et al. 2020). The pandemic might then deepen existing cleavages and give rise to new long-term grievances. In turn, this might breed political discontent and raise support for anti-globalization parties. Moreover, the reliance on global markets for the supply of personal protective equipment in the early phases of the pandemic (and of vaccines later on) and, at a more general level, the disruption of global value chains, have given oxygen to calls for national self-sufficiency as the main road to national security and sovereignty, a central element of autarkic platforms. All this may foster the globalization backlash in the near future.

6 Conclusion

We have reviewed the literature on the globalization backlash, seen as the political shift of voters and parties in a protectionist and isolationist direction, with substantive implications on governments' leaning and enacted policies. We have documented the backlash using newly assembled data covering 23 advanced democracies, over 1980-2019. The protectionist and isolationist shift in politics is detectable from the mid-1990s onwards, with the only exceptions of Australia and New Zealand. Until the financial crisis, the backlash is mostly driven by rising support for anti-globalization parties on the right of the political spectrum. From the crisis onwards, there is also a surge in support for protectionist parties of the left, especially in Europe. The backlash in voting is associated with a noticeable protectionist shift in trade policy –although with some notable nuances– especially since the financial crisis. However, it is not accompanied by a generalized worsening of individual attitudes on trade, for which survey evidence is mixed.

We have discussed the economics of the backlash. In particular, from a theoretical perspective we have highlighted how the backlash may arise within standard trade models when taking into account the 'social footprint' of globalization. That is, the persistent welfare losses, at least for some social groups, arising from trade-induced factor reallo-

cations when these foster inequality or destroy positive externalities. Reallocations are needed in order for the gains from trade to materialize. However, they may also cause pains from trade when they create social problems that linger on unsolved even in the long run (Rice and Venables 2020), including issues related to social immobility, status threat, and loss of cultural identity. Yet, from a theoretical point of view, protectionism remains only a second-best solution. The first-best option is for governments to directly target the market frictions and market failures that lead to inefficiency, inequality, and social immobility.

We have reviewed the literature on the drivers of the globalization backlash. There are two main messages emerging from this literature. First, globalization is a significant driver of the backlash. In particular, trade exposure is found to raise support for anti-globalization parties on the right of the political spectrum. In this respect, we may conclude that the backlash is endogenous to globalization itself. However, the second message is that not all the globalization backlash can be attributed to globalization. In particular, the success of left-wing protectionist parties seems to be rather driven by exposure to fiscal austerity. Moreover, technological changes seem to produce the same political implications as globalization. Such economic determinants of the backlash are closely intertwined with cultural factors. In fact, a fundamental way in which economic shocks translate into voting behavior is by tilting individual attitudes, for instance in an authoritarian and nativist direction. Immigration is indeed found to operate as a catalyst for economic concerns, as well as a driver of nativist and protectionist reactions on its own.

To summarize, several different factors, both economic and cultural, compound in generating the backlash, in a way that resonates with the concept of comorbidity in clinical studies. Globalization thus seems to be at stake also for reasons that are not directly related to trade. The future of the open and liberal global order depends on how successful society will be at making not only globalization but also structural change in general more inclusive, and therefore more politically sustainable.

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