Vote for populism: A way to revolt in democracies?*

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Abstract

Why do people vote for populism? Differently from the literature, I argue that demand for protection is conditional on political institutions. I introduce a Hecksher-Ohlin trade model into a two-groups model of redistribution by Acemoglu and Robinson (2006) to model trade, which entails winners and losers. I first show that in a full democracy the losers of trade prefer the free-trade to the autarky equilibrium, as the tax rate compensates their loss. Second, I allow the winners to influence the tax rate through ideology, lobbying, campaign contributions. The losers are not fully compensated for their loss. I show that, depending on the level of political power of the winners and of trade-induced inequality, losers may prefer a party offering indirect redistribution through a tariff on imports. Third, I provide additional evidence for the growth-led anti-incumbent effect documented by the literature, and show that growth mitigates the effect of trade on demand for protection. Using the dataset and the empirical strategy of Colantone and Stanig (2018), I find that growth mitigates the effect of trade on preferences over protectionism as predicted by the theory.

Keywords: Demand for protection, institutions, trade, growth.

JEL Classification: D7, F13, P16

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1 Introduction

In a well-functioning democracy, election outcomes represent the vote of the majority. The simplest model of political competition in economic theory predicts that policy platforms converge toward the preferences of the median voter (Downs et al. (1957)). Economic theories also explain how the political system is prone to forms of political capture in favour of some groups in society. Not only ideology plays a key role (as in probabilistic voting models), but also lobbying and campaign contributions shape institutions and political outcomes (Acemoglu and Robinson (2006)). Those groups whose preferences are not represented may lose faith into the mainstream political system and its redistributive policies, especially in times of economic hardship. Non-mainstream parties can then gain popularity.

This paper studies why citizens cast vote in support of populist parties. Given the multifaceted definition of populism, it focuses on protectionism. Differently from the existing literature, this paper argues that demand for protection is conditional on political institutions. It proposes a simple economic reasoning suggesting that, in the lack of appropriate redistributive policies due to the capture of the political system, rising inequality due to trade liberalisation may push the losers of trade to turn to parties that offer redistribution in the form of protection. It also suggests that positive (negative) growth reduces (acerbates) demand for protection.

In the theoretical model formalised below I introduce a Heckscher-Ohlin (HO) framework in a two-groups model of redistribution by Acemoglu and Robinson (2006) to model trade. I focus on the capital-abundant country inhabited by capitalists and workers.[1] In the autarky equilibrium, I assume that capitalists are richer than workers. Workers and capitalists vote for two mainstream parties that compete over a tax rate. The parties converge to the tax rate preferred by the median voter, here a workers since I assume that they are the majority in society. First, I let the country opens to trade. The HO model predicts that in the free-trade equilibrium, capitalists get richer and workers poorer. However, trade raises average income in society. Given the trade-induced loss, workers demand a higher tax rate. I show that workers are better off in the free-trade equilibrium compared to autarky. They in fact benefit from the larger share of the pie through the tax rate. Second, I allow the capitalists, the winners of trade, to influence the political system to obtain a tax rate closer to their preferences (a lower tax rate since they are richer). Political capture of mainstream parties is due for instance to lobbying, ideological positions and campaign contributions.[2] The political system delivers a tax rate that does not fully compensate losers. In such situation, they may prefer a party offering a tariff on imports, which increases losers' incomes, but decreases average income (as it reduces trade). I third introduce the protectionist party. I show that in a full

[1] They could be also low- and high- skilled individuals.

[2] I use a reduced-form model by Acemoglu and Robinson (2006). It derives from micro-funded model, as discussed in section 3.2.

democracy, the tariff damages the losers, who prefer the share of the gains of trade delivered by the tax rate. I also show that there is a level of political capture such that the tax rate is too low, and that they are better off with the tariff. Depending on the level of inequality, I further show that when import competition intensifies, the threshold value of political capture required to vote for the protectionist party reduces. Fourth, I introduce technological change to model growth. When the mainstream party is in power, growth raise the threshold value of political capture required for the protectionist party to win, mitigating the effect of trade. The contrary is true in case of negative growth.

These claims appear particularly relevant to developed countries, where in the post-1990s populist parties gained support. Over the 1970-2015 period, these countries experienced not only a period of globalisation, culminating in what is referred to as hyper-globalisation (Rodrik (2020)), but also a drop in the average GDP growth rates starting in the 1990. Between the late 90s and early 2000s a particularly intense trade shock invested European countries and US, among others: the rise in manufacturing imports from China. To study empirically the impact of this very specific shock on political preferences along the business cycle, the paper exploits a dataset built by Colantone and Stanig (2018). The data covers 76 legislative elections in fifteen European countries, between the 1988 and the 2007. The estimates of the effects of the import shock on political preferences show strong and robust evidence that the import shock has different political implications along the business cycle. To appreciate the magnitude of the effects, consider two countries: one with a *zero* GDP growth rate and another with a positive growth rate (around 4%). The estimates suggest that a one standard deviation increase in the exposure to imports from China would increase the vote share of *protectionist right* parties by 6.3 percentage point (p.p.) across districts in the *zero* growth country. In the other country, the same import shock would entail a rise in the vote share of only 1.3 p.p..

To deal with endogeneity issues, I follow Colantone and Stanig (2018) and instrument the import shock from China to European countries with import shock to US. The results are robust to the use of different measures of trade openness and to controlling for region-specific trends based on different historical characteristics and for country-level variables. I also test for the validity of the exclusion restriction applying restrictions to the instrumental variable and using a completely different instrument (similarly to Colantone and Stanig (2018)). I finally control for immigration and population growth.

The results are in line with the prediction of the theoretical model. I find that positive growth mitigates the effect of the import shock: the effect of the Chinese import shock sparks support for protectionist policies only in country whose GDP growth is negative or low. For level of growth higher than 5%, the effect of growth prevails so that intensification of import shocks is associated with a decrease in support for protectionism.

Related literature. A number of recent papers studied the impact of the rise of Chinese imports on political preferences.[3] Colantone and Stanig (2018) show how European electoral constituencies more exposed to the Chinese import shocks tend to vote for extreme right parties between 1988 and 2007. They also link trade exposure to less support for globalization, perception of ineffective redistribution policies and higher demand for protection. They argue that demand for protection from exposure to globalisation explains the rise in protectionist right-wing parties, stressing how increasing capital mobility reduced the tax base to meet the increasing demand for redistribution from the losers (see also Rodrik (1997), Burgoon (2001)). Autor et al. (2020) analyse US congressional elections from 2002 to 2010 and find that exposure to import shocks from China pushes more republican US districts in the pre-shock further to the right. This paper differs from Colantone and Stanig (2018) and Autor et al. (2020) as it argues that the effect of trade on demand for protection is conditional on institutions.

On the contrary, a relative old literature in economics and political science claims that trade liberalisation or, more broadly, globalization shocks, generates more demand for redistribution. The literature identifies two channels: the insecurity due to the exposure to the international business cycle (e.g., Rodrik (1998)) and the inequality resulting from trade as predicted by the Heckscher-Ohlin or Ricardo-Viner models (e.g., Cameron (1978)). Other paper find that trade openness increases government size (e.g., Swank and Betz (2003) Ventura (2006) Che et al. (2016)). In this paper, I aim to reconcile these two strands of literature. I find that positive growth benefits the incumbent party, and mitigates the effect of trade increasing the level of political capture required to vote for the protectionist party.

An additional related literature inspects the political effect of changes in "aggregate income" induced by economic shocks other than trade. Studies on the impact of the the 2008 crisis and of the European austerity policies not only explain how voters punish incumbents when the economy is in recession (e.g., Lewis-Beck and Stegmaier (2000), Lewis-Beck et al. (2008)), but also that recessions drive political turnover (Frieden et al. (2017)), pushing voters toward the far-right (Jackman and Volpert (1996)), and firing up anti-Europe sentiment (Algan et al. (2017)). Studies on the effect of crises cover historical evidence from the Great Depression to nowadays, finding positive links between unemployment rate and the rise in support for anti-establishment and populist parties (e.g., Lechler (2019), Dustmann et al. (2017), Guiso et al. (2020)). In this paper, I show that a country opened to trade demand more trade protection when aggregate income falls, opposing the mainstream party.

The literature studies the effect of other variables on the rise in support for populism (see Guriev and Papaioannou (2020) for a review): Norris and Inglehart (2019) proposes the cultural

[3] Malgouyres (2017) for French, and Dippel et al. (2020) and Dippel et al. (2017) for Germany find a positive effect of import shock on vote for right/protectionist parties.

backlash hypothesis, while this paper suggests that economic dislocation triggers cultural reactions, as suggested by Rodrik (2020). Others stressed how immigration sparks support for far-right movements in Europe due mainly to cultural mechanisms (e.g., Lucassen and Lubbers (2012), Rydgren (2008) and Halla et al. (2012). Yet, Gelman et al. (2008) find no effect of immigration on partisanship). In the empirical section, I find that import shock sparks support for the protectionist right when immigration growth increases (perhaps enhancing the cultural aspects of the economic dislocation of import competition).

Finally, an important literature theoretically explains the drop in demand for redistribution and the rise in demand for protection using identity politics. Gennaioli and Tabellini (2019) argue that the demand for big government disappeared because poorer and less educated voters identify with conservative losers of globalisation, and this identification effect shifts the focus from conflict over classes to conflict over globalisation. Grossman and Helpman (2018) argue that when trade shocks increases inequalities people tend to oppose pro-trade policies because they push citizens further from the identity of the 'broad nation'. In this paper, demand for protection does not arise from identity effects. Rather, demand for protection stems from structural issues in political institutions. Finally, the paper aims to answer to the 'Why now?' question raised by Guriev and Papaioannou (2020). It claims that positive growth mitigates the effect of trade shock exposure on political preferences. As discussed in the next section, a drop in the average growth rate in the post-1990 and the intensification in trade can explain why protectionism rose in the last three decades.

The rest of the paper is organised as follows. Section 2 presents the argument of the paper and provides preliminary descriptive evidence. Section 3 provides the theoretical framework that explains how growth modifies the impact of import shock on political preferences in presence of political capture. Section 4 presents the data used in the analysis and section 5 discusses the descriptive statistics. Section 6 explores empirically the interaction discussed in theoretical model. Section 7 reports the empirical results and Section 8 concludes.

2 Descriptive evidence

Before turning to the formal theoretical model, in this section I discuss some anecdotal and descriptive evidence on how growth and trade may affect political preferences.

Trade theories suggest that despite trade liberalisation leads to net welfare gains, it also unevenly redistributes such gains across owners of the factors of production, modifying the level of inequalities (see, for instance, H-O model or the Ricardo-Viner). Further, trade opening increases competition for firms, pushing the less productive ones out of the markets (Melitz (2003)). Several studies have shown that import competition induces significant adjustment costs in terms of job displacement and reduced earnings (e.g., Acemoglu et al. (2016) and Autor et al. (2013)). The

(trade) globalisation shock acts through two demand-side channels: a direct effect of income on policy preferences, and an indirect effect of income that acts through culture, social identity and racial attitudes before impacting policy preferences (Rodrik (2020)). Positive growth, on its part, increases present income, delivers higher job finding rates and might improve sectoral mobility. The job loss caused by trade shocks can then be partly mitigated by the booms of the business cycle. On the contrary, economic downturns acerbates the impact of trade shocks on the losers of globalization.

Besides, sustained deterioration in economic condition due to business cycles downturns erodes present income of individuals. Such deterioration decreases the opportunity-cost of voting for protectionist party offering a tariff in absence of appropriate redistributive policy. In fact, the tariff reduces average income (cost), and increase the pre-tax income of losers of trade (opportunity). The literature on revolt and conflicts in dictatorship already exploits the idea of variation in opportunity cost due to changes in income (Grossman (1991), Acemoglu and Robinson (2006)). If the share of average income gained by revolting, net of the fraction of resources destroyed in the conflict, is higher than income under the dedicator-ship, people revolt. Revolting is costly since it destroys resources and lives. In democracies citizens do not revolt, as they have to much to lose from it and because there are alternatives to direct revolt, such as to vote for non-mainstream parties.

Figure 2.1 aims to provide descriptive evidence in support of the effect of growth and trade. The blue line represents average GDP growth rates in annual % across the 15 countries in the sample, while the yellow line represent the average of the sum of the value of imports and exports (in €) as a percentage of GDP across the countries in the sample.[4] Both time series are sourced by the World Development indicator (WDI) dataset between the 1960 and the 2020. I noted above how the literature document the rise in populism in European countries starting from the 1990s onwards, with an intensification in the aftermath of the financial crisis. These decades are characterised by what is referred to as hyper-globalisation, and a expansion of trade as shown by the yellow line. Interestingly, figure 2.1 shows that these same decades are marked by a considerable fall in growth in most developed economies. The red line in each graph represents the average GDP growth rate between 1960 and 1990, while the green line the average between 1991 and 2020. The fall in the average GDP growth rate across the countries in the sample is of about 2% between the pre- and post- 1990.

[4]Since GDP is only the value added domestically, it may happen that small countries export more than is produced in the country and/or import more than is consumed in the country and the external trade rate is thus over 100%

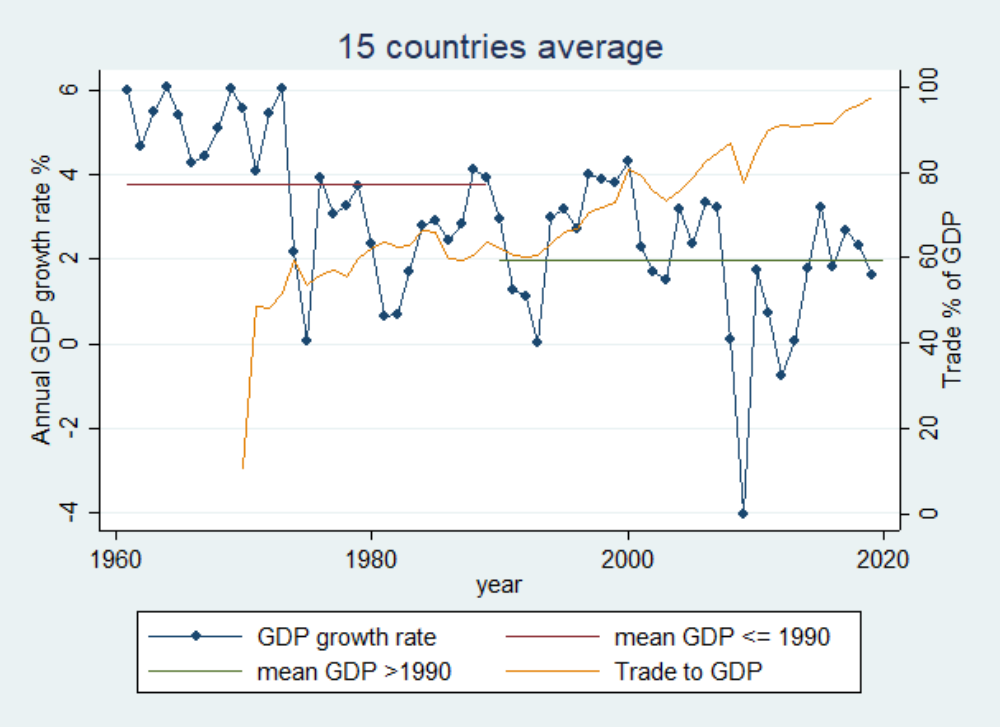


Figure 2.1: GDP growth rates in annual % and trade to GDP of 15 EU countries in the sample.

3 Theoretical framework

In this section, I formally explain how the effect of trade and growth on demand for protection is conditional on institutions. To do so, I use the theoretical framework of Acemoglu and Robinson (2006) to model the political process and the HO theory to model trade and growth.

In section 3.1, I look at the effect of trade liberalisation on political preferences over a tax rate in a full democracy. The first important finding is that workers prefer the Free-Trade (FT) to the autarky equilibrium in presence of redistribution. In 3.2, I let capitalists, the winners of trade, influence the political process to obtain their preferred tax rate. The redistributive power of the tax rate falls and losers are not fully compensated for their trade-induced loss. In section 3.3, I introduce a party that offers a tariff protecting workers. Workers can now choose between the protectionist (P) party (tariff), and the mainstream (M) party (captured tax rate). I find that depending on political power and inequality, losers may prefer the tariff. Further, I find that import shocks reduce the threshold level of political capture required to vote for the P party. I also find that positive (negative) growth shocks benefit (penalise) the incumbent party.

3.1 Full democracy and trade openness

In this section, I introduce a country inhabited by two groups, capitalists and workers, that moves from autarky to FT. Two M parties compete offering a tax rate to the two groups. Despite trade rises capitalists' rents and reduces workers' wage, in presence of redistribution workers prefer the FT equilibrium.

I model trade using a HO trade framework with Constant Return to Scale, two goods $g = \{x, y\}$, two countries $c = \{1, 2\}$ and two factors of production $f = \{l, k\}$. In each country, capitalists and workers are remunerated by the inputs prices r and w. I further assume that country A is *k-abundant* and country B is *l-abundant* ($\frac{K_A}{L_A} > \frac{K_B}{L_B}$), that the good x is *k-intensive* and the good y is *l-intensive*. In what comes next, I focus on country A, since the empirical analysis focus on the trade shock from China, a labour abundant country in the manufacturing industry, toward relative capital abundant European countries. I assume a $1:1$ relation of input of labour and worker. The fraction of capitalists δ owns capital k, so that each k-owner owns $\frac{k}{\delta n}$ of k. I further normalise population to 1 and assume that workers are the majority in society: $1 - \delta > \frac{1}{2}$. Under autarky, the workers and capitalists get respectively:

$$w^A = \left(\frac{1}{\theta^A}\right)^{\beta_y} \qquad and \qquad r^A = \left(\theta^A\right)^{1-\beta_y} \tag{3.1}$$

where A stays for Autarky values, and $\theta^A \equiv \frac{L_A}{K_A}\phi$. The parameter θ^A corresponds to how much capitalists earn in autarky relative to the price of good y, the numéraire. It is then the relative wage of capitalists. Its inverse is the relative wage of workers. As in all developed economies, the capitalists are richer: $w^A < r^A$, i.e., $\theta^A > 1$.

Once the countries open to trade, the HO model predicts that country A exports the good that uses intensively the factor with which the country is relatively well endowed, i.e., the good x, and imports the good y. At the FT equilibrium, the model predicts that factor prices and good prices equalise across countries. The rise in the relative price of x under free-trade in country A increases the return of K, i.e., r, while reduces the return of the other factor, w. It follows that in country A, considered by assumption *k-abundant*, the capitalists are the *winners* of globalization and the workers the *losers*, as $r \uparrow$ and $w \downarrow$. The HO values under free-trade are:

$$w^{FT} = \frac{1}{\theta^{\beta_y}} \qquad and \qquad r^{FT} = \theta^{1-\beta_y} \tag{3.2}$$

where FT stays for Free-Trade values, and $\theta \equiv \frac{\bar{L}}{\bar{K}}\phi$, without any subscript, is the relative wage of capitalists in the FT equilibrium. In FT, capitalists get richer and workers poorer: $\theta > \theta^A > 1$.

In country A, there are two mainstream (M) parties that compete for election over a tax rate. The revenues from taxation are redistributed in form of lamp-sum transfer. The government budget

constraints and post-tax income under the M party are:

$$T = \left(\tau^M - \frac{\tau^M}{2}\right)\bar{w} \tag{3.3}$$

$$\hat{y}^M = (1-\tau^M)y + \left(\tau^M - \frac{\tau^M}{2}\right)\bar{w} \quad for \quad y = r, w \tag{3.4}$$

where $\bar{w} = (1-\delta)w^{FT} + \delta r^{FT}$ is average income. Individuals vote for a redistributive policy, $\tau \geq 0$. The gains are shared in a lump-sum fashion among citizens and that generates a "Laffer curve" distortion $C(\tau)$.[5] I need to assume quadratic costs to have insightful results, such that $C(t) = \frac{\tau^2}{2}$.

Democratic politics delivers the tax rate most preferred by the median voter, here a worker. This is the Nash equilibrium of a game played between the M parties. Each party sets the tax rate preferred by the majority of people, which with single-peaked preferences over the unique policy dimension τ corresponds to the one of the median voter m. Maximisation of equation 3.6 leads to:

$$\tau_m^M = \frac{\delta(\theta-1)}{1+\delta(\theta-1)} \tag{3.5}$$

Taking a partial derivative with respect to θ:

$$\frac{\partial \tau^M}{\partial \theta} = \frac{\delta}{[1+\delta(\theta-1)]^2} > 0 \tag{3.6}$$

θ parametrises inequality. As θ increases, capitalists get richer, and workers poorer. They then demand more redistribution.

When country A opens to trade, the consumption possibilities of the economy expands increasing average income $\bar{w}^A > \bar{w}^{FT}$. Also, capitalists get richer and workers poorer: $\theta > \theta^A > 1$. The losers will then demand a higher tax rate for compensation of their loss as $\frac{\partial \tau^M}{\partial \theta} > 0$, and benefit from the greater size of the pie. As long as the political system compensate the losers of globalisation with appropriate redistribution, trade liberalisation expands the frontier of the economy as predicted by the HO framework and everyone gains. This leads to the following proposition (appendix A.1 for proof)):

Proposition 1 *If capitalists' FT-share is larger than workers' FT-share, i.e., $\theta^* > \frac{1-\delta}{\delta}$, workers' post-tax income is larger under the Free-Trade regime: $\hat{w}_{FT}^M > \hat{w}_A^M$.*

[5] As in Acemoglu and Robinson (2006), the cost function has the following properties: $C' > 0$, $C'' > 0$, $C(0) = 0$, $C(1) = 1$ and $C : [0,1] \to \mathbb{R}_+$.

3.2 Political power and trade openness

I now allow some groups to influence the political process. As explained below, the tax rate does not fully compensate the losers of trade.

To model political power, I use the reduced-from model of Acemoglu and Robinson (2006).[6] Over-representation of some groups' preferences arise for instance due to ideological positioning (probabilistic voting models), campaign contributions and lobbying, and, more generally, the political institutions. Consider the same model of section 3.1, but now there are political weights in favour of a the winners that hold political power over redistribution, captured by the parameter χ. It follows that losers' political power is $1-\chi$. I relabel the maximization problem of post-tax income in society and the F.O.Cs with respect to τ^M as:

$$\max_{\tau^M\in[0,1]}(1-\chi)(1-\delta)\left[(1-\tau^M)w^{FT}+\left(\tau^M-\frac{(\tau^M)^2}{2}\right)\bar{w}^{FT}\right]+\chi\delta\left[(1-\tau^M)r^{FT}+\left(\tau^M-\frac{(\tau^M)^2}{2}\right)\bar{w}^{FT}\right]$$

The FOCs yield to:

$$\tau^M(\chi)=\frac{(1-2\chi)(1-\delta)}{(1-\chi-\delta+2\chi\delta)}\times\frac{\delta(\theta-1)}{[1+\delta(\theta-1)]} \tag{3.7}$$

where $\tau^M(\chi)$ is the equilibrium tax rate when the political power parameter is χ. As before, $\frac{\partial\tau^M(\chi)}{\partial\theta}>0$. When $\chi\to 0$, we are back to the full democracy and the tax rate preferred by the majority (MVT) prevails. However, as $\chi\to\frac{1}{2}$, the winners have the power and the tax rate is the one preferred by them:

$$\tau^M(\chi)=\frac{\delta(\theta-1)}{[1+\delta(\theta-1)]} \qquad if\ \ \chi\to 0 \tag{3.8}$$

$$\tau^M(\chi)\to 0 \qquad if\ \ \chi\to\frac{1}{2} \tag{3.9}$$

As political power χ of the winners increases, the tax rate $\tau^M(\chi)$ decreases. When country A opens to trade, the fraction θ the political system does not compensate the losers of trade for their loss. This leads to the following proposition (appendix A.2 for proof):

Proposition 2 *If the tax rate is subject to political capture* $0<\chi<\frac{1}{2}$*, workers are worse off:* $\hat{w}^M_{FT}>\hat{w}^M_{FT}(\chi)$.

where $\hat{w}^M_{FT}(\chi)=\left[\left(1-\tau^M(\chi)\right)w^{FT}+\left(\tau^M(\chi)-\frac{(\tau^M(\chi))^2}{2}\right)\bar{w}^{FT})\right]$.

[6]The model results from micro-funded models emphasizing different institutional details, lobbying relatively autonomous political parties, or the presence of swing voters.

3.3 The protectionist party and the tariff

In this section, I assume that country A is in the FT equilibrium. There is the M party that offers the tax rate with political capture, so that workers post-tax income is $\hat{w}^M_{FT}(\chi)$. There is also a protectionist (P) party that offers an *ad valorem* trade policy, $t^P > t^M = 0$, on import y. As I discuss in the next section, certain conditions guarantee that in a full democracy the tariff damages the losers, who benefit from the increased size of the pie due to trade through redistribution. However, when political capture grows, the tax rate decreases. The tariff, despite reducing the size of the pie, may become beneficial for the losers.

With the tariff, the price of the imported good y rises to $p^P_y = p^{FT}_y(1+t)$, where p^P_y is the price under the P party and p^{FT}_y is the free-trade price under the M party. I also assume that country A is a small country (in terms of consumption of the imported good). It follows that $p^{FT}_y < p^P_y$, and by the Stopler-Samuelson theorem,[7] the increase in the relative price (p_y/p_x) of the imported good y increases the real return of the factor used intensively in it, i.e., w. Domestic producers and consumers respond to the rise in the the relative price of good y by, respectively, increasing its production and decreasing its consumption and, at the same time, decreasing the production and increasing the consumption of good x. Consequently, the relative price of good x decreases, and so the real return of the factor used intensively in it: $w^{FT} < w^P < r^P < r^{FT}$ (see section A.6 in appendix for a proof). Overall, this implies a reduction of the volume of trade. The tariff produces also a *social cost* by reducing the real value of national output, moves the consumption bundle to a lower indifference curve and reduces average income, i.e., $\bar{w}^P < \bar{w}^{FT}$, in society (see section A.6.5 for a proof).

It follows that under the P party pre-tax income is:

$$w^P = \frac{1}{\theta^{\beta_y}}(1+t)^{\frac{1}{\beta_x-\beta_y}} \qquad and \qquad r^P = \frac{\theta^{1-\beta_y}}{(1+t)^{\frac{1}{\beta_x-\beta_y}}} \tag{3.10}$$

Equation 3.10 comes from introducing the tariff t in the FT equilibrium in HO (see appendix A.5.4.1). Capitalists must remain richer even under the protectionist regime, as in all developed economies. Then, $w^P < r^P$ if $t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$. This level of the tariff is such that $\frac{(1-\delta)w^P}{\bar{w}^P} = \frac{\delta r^p}{\bar{w}^P} = \frac{1}{2}$, i.e., it equalises capitalists' and workers' shares (see appendix A.6.7). For the rest of the model, results are derived out of this level of the tariff, which is extremely high and unlikely to be applied by any protectionist party, making results conservative.

[7] As long as both goods are produced in equilibrium and Factor Intensity Reversal (FIR) does not occur, there is a 1:1 relationship between good prices and factor prices. I assume it to be true.

3.4 Political equilibrium

The losers compare post-tax income under the two parties. The P party wins the election if the post-tax income of the median voter m is grater under the P party:

$$\begin{aligned} f(\chi) &\coloneqq w^P - \hat{w}^M_{FT}(\chi) > 0 \\ &\coloneqq w^P - \left[\left(1 - \tau^M(\chi)\right) w^M + \left(\tau^M(\chi) - \frac{(\tau^M(\chi))^2}{2} \right) \bar{w}^M \right] > 0 \end{aligned} \tag{3.11}$$

The function $f(\chi)$ is the distance between post-tax income of losers under the two parties. In appendix A.3.1, I show that the function is monotonically increasing in χ. In appendix A.3.2, I find some conditions for which $f(\chi = 0) < 0$ and $f(\chi = \frac{1}{2}) > 0$. This leads to theorem 1:

Theorem 1 *Given the following conditions:*

1) If $\theta^* > \frac{(1-\delta)}{\delta}$*, then* $f(\chi = \frac{1}{2}) > 0$*,*

2) If $\theta^* < \theta < \underline{\theta} \vee \theta > \bar{\theta}$*, then* $f(\chi = 0) < 0$*,*

3) If $\underline{\theta} < \theta < \bar{\theta}$*,* $f(\chi = 0) > 0$ *and* $f(\chi) > 0$*,* $\forall \chi$*, since* $\frac{\partial f(\chi)}{\partial \chi} > 0$*,*

point 1) and 2) guarantee the existence of a threshold value $0 < \bar{\chi} < \frac{1}{2}$ *such that if* $\chi > \bar{\chi}$ *the losers vote for the P party, if* $\chi < \bar{\chi}$ *they do not. Point 3) implies that when* $\underline{\theta} < \theta < \bar{\theta}$*, workers will always vote for the P party.*

From theorem 1, an important corollary follows determining import shocks in the model:

Corollary 1 *From point 1), 2) and 3) of theorem 1, there exists a threshold level* $\underline{\theta} < \theta^\star < \bar{\theta}$ *such that:*

- *If* $\theta < \theta^\star$*, then* $\frac{\partial f(\chi)}{\partial \theta} > 0$ *and* $\frac{d\bar{\chi}}{d\theta} < 0$*,* $\forall \chi$*.*
- *If* $\theta > \theta^\star$*:*
  - *if* $\chi < \chi^*$*, then* $\frac{\partial f(\chi)}{\partial \theta} < 0$ *and* $\frac{d\bar{\chi}}{d\theta} > 0$ *.*
  - *if* $\chi > \chi^*$*, then* $\frac{\partial f(\chi)}{\partial \theta} > 0$ *and* $\frac{d\bar{\chi}}{d\theta} < 0$ *.*

θ parametrises inequality. It in fact represents the capitalists' relative wage, and its inverse the one of workers. An increase in θ (due for instance to a rise in import from country B) makes capitalists richer and workers poorer. From theorem 1 and its corollary 1, when $\theta^* < \theta < \underline{\theta}$, there exists a threshold value of political capture $\bar{\chi}$, decreasing in θ, such that if $\chi > \bar{\chi}$ they vote for the P party. If $\underline{\theta} < \theta < \bar{\theta}$, the level of inequality caused by trade liberalisation is such that the workers' relative wage is always higher under the tariff regime, regardless of the level of political capture. Further, when $\theta > \bar{\theta}$, the tariff is no longer able to compensate the workers for any level of χ, and the threshold value $\bar{\chi}$ exists again. This time is however increasing in trade liberalisation,

so that a rise in θ makes harder for workers to vote for the protectionist party if $\chi < \bar{\chi}$. The mathematical intuition is that in the model the tariff is increasing in θ, but concave, while the tax of the M party is increasing and convex. This means that if $\theta > \bar{\theta}$, the tax rate takes a big share of the capitalists' income in favour of workers. Such share compensates more than the tariff if $\chi < \bar{\chi}$. Clearly, increases in θ benefits the M party. This theoretical finding is not explained by the empirical literature. For the rest of the analysis I focus on the case such that $\theta^* < \theta < \underline{\theta}$.

3.5 Growth shocks

I now model TFP shocks using a Cobb-Douglas (CD) production function, such that A_g, $g = X, Y$ in $X_c = A_x \left(\frac{K_c}{\beta_x}\right)^{\beta_x} \left(\frac{L_c}{1-\beta_x}\right)^{1-\beta_x}$ model technological change. Given the CD production function, technological progress is skill-neutral. As innovation happens, both capitalists' and workers' incomes equally rise, and so does average income $\bar{w}$. This modifies the equilibrium FT values as:

$$w^{FT} = \left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y} A_y \quad \textit{and} \quad r^{FT} = \left(\frac{\bar{L}}{\bar{K}}\phi\right)^{1-\beta_y} A_y \tag{3.12}$$

where A_y is technological progress in sector Y. In appendix A.4, I prove the following proposition:

Proposition 3 *When $\theta^* < \theta < \underline{\theta} \vee \theta > \bar{\theta}$: if $\chi < \bar{\chi}$, then $\frac{\partial f(\chi)}{\partial A_y} < 0$ and if $\chi > \bar{\chi}$, then $\frac{\partial f(\chi)}{\partial A_y} > 0$.*

Neutral technological change does not move the threshold value $\bar{\chi}$. However, proposition 3 states that a rise in average income reduces the distance between incomes, moving away from the threshold along the function $f(\chi)$. It becomes harder for the party P to win the election. On the contrary, if the P party is in power, technological shock increases the distance between income, making it harder for them to lose election. This is the anti-incumbent effect of growth.[8]

I next aim to introduce a CES production function. The additive properties allow to have skilled biased technological change that affects the threshold value. Capital-enhancing technological change would increase capitalists' wages more than the one of workers, and vice-versa for labour-enhancing technological change. Further, it should directly modify change in trade liberalisation θ. This would provide a comparative statics closer to the interaction model in the following empirical section.

3.6 Implications

The theoretical model presented above first shows how trade liberalisation with redistribution in a full democracy is beneficial for everyone in society: when a country opens to trade, the losers require compensation for this loss demanding a higher tax rate. Second, it allows the winners to curb the political system (institutions) to obtain their preferred tax rate. In this case, the tax rate

[8] see for example the theoretical work of Fair (1978). Empirical evidence in EU by Lewis-Beck and Stegmaier (2000), Lewis-Beck et al. (2008).

does not compensate the losers. Third, it shows that a protectionist party may win by proposing indirect redistribution through a trade tariff on imports, which raise losers' pre-tax income, but reduces average income in society. The victory of the P party depends on the level of political capture in the system and on the level of inequality. The losers "revolt" against the M party if the political power of the winners makes redistribution under the M party too low. However, in case of positive growth, the present income of individuals in society under the M party, i.e., the one in power, increases, rising the threshold required to vote for the P party. This last prediction is what the rest of the analysis aims to test empirically.

4 Data

In this section, I introduce the main sources of data used in the analysis. The dataset is borrowed from Colantone and Stanig (2018). The data cover 15 European countries for a period of twenty years, from 1988 to 2007. Table **??** below lists the countries in the sample, 13 of which belongs to the EU and 2 of which not (Switzerland and Norway). Of course, UK is not any more an EU country, but it was so at the time.

The primary geographical units of observation in the analysis are the *NUTS-2* administrative regions. In total, there are 196 regions with a population between 800,000 and 3 million. The import shocks data are at the *NUTS-2* region level, but electoral outcomes are at the district level. Thus, districts belonging to the same region have the same exposure to trade shocks. Sometimes, *NUTS-2* regions correspond to districts, while other times a *NUTS-2* regions contain two or three districts. Overlapping never happens since districts are always fully contained into regions.[9] The dataset has a panel structure whose observational unit is the district observed over time (elections). The observational unit districts in the dataset was previously concatenated with the year (election), so that the dataset's identifier is a district observed in each election happening in the country over the period 1988-2007, for a total of 9190 unique district-year observations across countries. Each district-year belongs to a *NUTS-2* region, which belongs to a country. Moreover, the dataset is weakly unbalanced, as each panel contains the same number of observations (same districts in each election), but not the same years. This is due to the fact that elections happen in different years with a different frequency in each country.

Also, all import and export data are deflated using country-specific Consumer Price Indexes from the OECD Stats at the basis year 2006.

I start by presenting the data on elections, then those on trade shock at the EU level and the ones used for the instrument. I subsequently present the data used to capture economic conditions.

[9]The matching between districts and regions was implemented manually by Colantone and Stanig (2018) and their research assistants.

4.1 Political preferences data

Data on political preferences constitute the dependent variables. There are three main categories, defined in this section: data on direct share each party gains at the district level, the median of the ideological positions of parties and the Centre Of Gravity (COG) of a district. The data are sourced by Colantone and Stanig (2018) from two datasets, the Global Election Database by Brancati (2016) and the Constituency-level election archive (CLEA, Kollman et al. (2016)). The data covers 76 lower-house elections over the period 1988-2007 in each district of the fifteen European countries. Thus, the dependent variables are always at the district-level.

The COG is the average of the policy positions of the competing parties weighted by their vote shares in the regions and measured as:

$$COG_{dt} = \frac{\sum_{l=1}^{n} p_{ldt} Score_{lt}}{\sum_{l=1}^{n} p_{ldt}} \tag{4.1}$$

where d indexes districts, l parties, and t years (elections). p_{ldt} is the vote share for party l in district d at time (election) t. Following the methodology proposed by Lowe et al. (2011), Colantone and Stanig (2018) measure political position of parties based on announcements in their Manifestos (data source is Volkens et al. (2020), Comparative Manifesto Project Database). The score of each party in each district is computed as follow:

$$Score_{lct} = log(0.5 + z^{+}_{lct}) - log(0.5 + z^{-}_{lct}) \tag{4.2}$$

where z^{+}_{lct} is the number of claims in a positive direction (e.g., nationalism), and z^{-}_{lct} in a negative direction. Colantone and Stanig (2018) provide three main scores. First, *Nationalism* is based on claims about the national way of life, traditional morality, law and order and multiculturalism. Second, *Net Autarky* includes claims about protectionism, internationalism and the EU. Third, *Nationalist Autarky* is a mix of the previous two, and it comprehends also human rights, democracy and constitutionalism. Furthermore, they compute scores on *Economic Nationalism*, i.e., economic left-right positioning based on claims about free market economy, welfare state, regulation, demand management and planning.

As discussed by the authors, the median voter score is the ideological position of the (weighted) median party in the district. Parties are sorted from least- to most-nationalist (or from economic left to right). Then, Colantone and Stanig (2018) calculate the cumulative vote share of each party. The median voter score is the ideology of the party at which cumulative vote share reaches 50%, and corresponds to the party chosen by a (sincere, proximity-driven) median voter respectively on the nationalism or the left-right dimension. Thus, the centre of gravity (COG) is sensitive to the whole distribution of policy positions and vote shares. Citing the authors of the database, the

COG "might increase, for instance, if an extreme party radicalizes further its position, even when the positions of all the other parties, and the vote shares of all parties, remain constant". On the other hand, they explain that the median voter score captures ideological shifts at the centre of the electorate: "it is unaffected by ideology changes at the extremes of the ideological distribution, and is less sensitive to small changes in the vote shares".

Finally, Colantone and Stanig (2018) compute the vote share for *radical right* parties, for *protectionist left* and *protectionist right*, which I use in the analysis. The authors explain that to compute them they classify parties according to the *Net Autarky* (inward vs outward orientation of a party) and the *economic conservativism* (i.e., right to left) positioning and then they calculate the cumulative vote share of each party by district.

4.2 Import shock

The empirical strategy exploits the rise in import competition in the manufacturing sector sparked by Chinese imports in European countries. It resort to this specific import shock for two main reasons. First, because it is a quantitatively large change. Second, it fits the theoretical model discussed above. In fact, country A (the relative *k-abundant* one) represents the European manufacturing sectors, while the country B (the relative *l-abundant* one) represents China and its imports (good y). The theoretical model suggests that in country A import competition reduces the losers' income in absence of proper redistribution. Further, its intensity induced significant adjustment costs in terms of job displacement and reduced earnings (e.g., Acemoglu et al. (2016) and Autor et al. (2013)).

Import shock is defined as in Colantone and Stanig (2018), who use the methodology developed by Autor et al. (2013) and reproposed in a similar context by Autor et al. (2020). The measure is a region specific indicator for the exposure to Chinese imports defined as follow:

$$\Delta IM_{crj} = \sum_{j} \frac{L_{rj(pre-sample)}}{L_{r(pre-sample)}} \times \frac{\Delta IMChina_{cjt}}{L_{cj(pre-sample)}} \tag{4.3}$$

The variable ΔIM_{crj} is a weighted sum of the changes in imports per-worker across industries. To see why, the second term of the sum, $\frac{\Delta IMChina_{cjt}}{L_{cj(pre-sample)}}$, is the change in real imports from China in country c in industry j over the last n years normalized by the number of workers in the same country and industry. The first term of the sum is the weight and it is necessary to capture the region-specific trade shock. It equals the ratio of the number of workers, denoted by L in region r and industry j, over the total number of workers in the region at the beginning of the sample period (1988). This term measures how much the region r was specialized in the sector j. It is taken in the pre-sample period to neutralize changes in specialization due to the import shock. Thus, the different regions are more or less exposed to the growth in Chinese imports depending on their ex-

ante industry specialization. Finally, the lagged pre-employment levels attenuate the simultaneity bias that import shocks exposure may induce on contemporaneous political preferences.

Employment data used in equations 4.3 are mainly sourced from national sources (see Table A2 in the online appendix of Colantone and Stanig (2018)), while import data are downloaded from the Eurostat Comext dataset with the exception of Norway and Switzerland, the two NON-EU countries in the sample. The data for these two countries are sourced from the CEPII-BACI dataset.

4.3 Instrument

To understand how growth modifies the effect of the import competition on political preferences, the empirical strategy consists in regressing the political outcomes on the import shock variable and its interaction with economic condition. Nonetheless, the import shock exposure is unlikely to be randomly allocated across regions, which may generate a bias in the estimates of the model parameters. As explained by Colantone and Stanig (2018), reverse causality could stem from the fact that some districts are better connected to mainstream government parties in each country, resulting in more protection for them (upward bias). Thus, an instrument is necessary.

Following Colantone and Stanig (2018), who borrow from Autor et al. (2020) and Autor et al. (2013), I instrument Chinese import to European countries with Chinese import to USA:

$$\Delta IM_{crt} = \sum_{j} \frac{L_{rj(pre-sample)}}{L_{r(pre-sample)}} \times \frac{\Delta IMUS_{jt}}{L_{cj(pre-sample)}} \tag{4.4}$$

Equation 4.4 differs from 4.3 in that the sectorial variation is now given by the US imports from China. The IV strategy identifies the Chinese productivity and trade-cost components of import growth in European countries if the common rise in Chinese imports both to EU and US is driven by China's rising comparative advantage and/or decreases in trade costs. As noted by Colantone and Stanig (2018), any correlation in demand or supply shocks across high income countries that impact impact imports demand from China both in USA and EU represents a threat to this Instrumental Variable (IV) strategy, possibly contaminating both the Ordinary Least Square (OLS) and IV estimates. Following Colantone and Stanig (2018) the results are robust to the introduction of a completely different instrument that exploits time variation in bilateral exchange rates compute by the authors at the regional level.

The data for US import are sourced from the Center for International Data of UC Davis.[10]

[10]Import flows are available at the 5-digit level of the SITC (Rev. 3) classification, which are mapped into 2-digit NACE Rev. 1.1. codes, which are further aggregated into subsections.

4.4 Economic condition

The aim of the empirical section is to check if growth mitigates the effect of trade on demand for protection. To proxy economic condition, I use the GDP growth rate, following the methodology by Manacorda and Tesei (2020) who identify the causal effect of coverage on political mobilization as the economic condition varies. As explained in the theory, GDP growth rate is suitable beacuse it modifies employment prospect of individuals, increasing present income, allowing for sectoral change and delivering higher job finding rates, which dilute the perception of the negative effects of import shocks. Data are sourced from the World Development Indicator (WDI) dataset of the World Bank. It is defined as the annual percentage growth rate of GDP at market prices based on constant local currency. The WDI aggregates are based on constant 2010 U.S. dollars.

4.5 Other variables

Data on exchange rates come from the International Financial Statistics Database of the International Monetary Fund, while the one for FDI flows from UNCTAD.

The data on population growth in section 7.6 are downloaded from the World Development Indicator (WDI) dataset of the World Bank, and represents the country-level growth rate in annual % of the population in the fifteen European countries in the sample. Data are sourced from the Eurostat dataset. Eurostat produces net migration figures by taking the difference between total population change and natural change at EU level. Unfortunately, data are not available in several years for France, Austria and UK. Thus, I drop them from the sample, which is considerably reduced.

5 Descriptive statistics

Table 5.1 shows the descriptive statistics of the variable of interest of Colantone and Stanig (2018)'s database, plus the variable "GDP growth rate in annual %". The standard deviation of the import shock variable is 0.113 rather than 0.133, the latter reported by the authors in the paper. The *pure replication* is verified, which suggests that the database is correct. The maximum for *protectionist right* shares is above one (respectively 1.371 and 1.315). Since they are cumulative vote shares, they should be smaller than or equal one. When tabulating the variable, there is are two districts for which *protectionist right* shares is greater than one and I drop the values from the dataset.

6 Identification Strategy

Following the empirical strategy of Colantone and Stanig (2018), I model here the occurrence of the vote/ideological positions of parties in a district as a function of the import shock exposure. I

Table 5.1: Descriptive statistics

	obs	mean	sd	min	max
Import shock	8181	0.059	0.113	-0.177	3.297
Instrument for shock	7938	0.851	2.051	-0.492	23.234
GDP_t growth rate %	9190	2.305	1.823	-6.400	10.900
GDP_{t-1} growth rate %	9190	1.896	1.602	-2.070	7.410
Nationalism (M)	9190	0.412	0.909	-2.120	3.917
Nationalism (COG)	9190	0.455	0.643	-1.918	2.763
Nationalist Autarchy (M)	9190	0.195	0.900	-2.979	3.051
Nationalist Autarchy (COG)	9190	0.250	0.591	-2.144	3.050
Radical Right (Share)	9190	0.047	0.074	0.000	0.524
Protectionist Left (Share)	9190	0.078	0.123	0.000	0.755
Protectionist Right (Share)	9190	0.367	0.225	0.000	1.315
Ec. Conservatism (COG)	9190	0.284	0.575	-2.439	3.382

however allow the effect of import shock to vary with economic conditions. The *regression model* is:

$$PO_{cdt} = \beta_0 + \beta_1 \Delta IM_{cr(d)t} + \beta_2 \, \Delta GDP_{ct} \;\; \Delta IM_{cr(d)t} + f_{ct} + \epsilon_{cdt} \tag{6.1}$$

where c refers to country, d to district and t to time. PO_{cdt} is one of the district-level summaries defined above. The function $r()$ maps district d to its $NUTS$-2 region r. The f_{ct} are country-year fixed effects, which account for any unobservable characteristic across countries and time (election). The variable ΔGDP_{ct} captures the variation in the rate of growth of GDP. Without the interaction with ΔGDP_t, we have the Colantone and Stanig (2018) specification. Again, the interaction captures how variations in GDP growth rate modify the impact of import shocks on political outcome. Further, notice that the country-year fixed effect absorbs the $E(PO|\Delta IM = 0, \Delta GDP \neq 0)$, i.e., the expected political outcome at positive growth and at *zero* changes in import.

As I condition on country-year (election) fixed effects, parameter estimates capture the average (across countries) effect of the explanatory variables on the differential change in vote across districts in the same country.[11] The coefficient β_1 captures the effects of trade shocks on vote for PAS party at *zero* GDP growth rate. The coefficient β_2 measures how country-level economic booms and busts translate into differential vote for PAS parties in areas with different exposure to trade shocks. In other words, $\beta_2 = \frac{\partial PO}{\partial \Delta IM \, \partial \Delta GDP}$, i.e., how a 1 s.d. change in GDP growth affects the impact of import shock on the share differential of PO across districts. If GDP growth reduces the impact of import shock on the dependent variables, then I expect $\beta_2 < 0$. This would confirm the prediction of the theoretical model, according to which decreases in present average income reduces the threshold

[11] More precisely, the parameter capture the average effect across countries of the average effects of the explanatory variables across districts in the same country on the differential change in vote between districts in the same country.

required for the losers to vote for the P party.

To account for a possible correlation across districts within the same industrial region, all specifications have standard errors clustered at the *NUTS-2* level. The clustering control for potential correlation due for example to common industrial shocks affecting all the districts in a region, thus inflating/deflating the standard errors. Further, *NUTS-2* clusters account for auto-correlation in the error term within region and over time, since imports are likely to be auto-correlated over time and not only spatially. Regressions exploit across country-year variation in country level variables, since the dependent variables are at district-level. Its mean and s.d. at $NUTS$-2 represent the average of the districts contained in the $NUTS$-2 (unless a 1:1 matching between the two).

A possible additional concern with the model 6.1 is that the GDP growth has a direct effect which is likely to be endogenous, for instance because GDP growth may be the outcome of other shocks, or policies, that affect political outcomes, or because political outcomes themselves may directly affect GDP. This direct effect is handled with the country-year fixed effects, which eliminate any source of bias due to time-invariant unobserved characteristics of countries that may affect both GDP growth and political outcomes. Further, I introduce aggregate GDP growth, not local one, which may be less endogenous to political outcome at district/regional level. Second, I instrument the interaction. I assume that this endogeneity bias do not vary across regions with different US import shocks. The fact that I instrument the interaction term with US Import shocks ensures that the variation of GDP growth is exogenous across municipalities. If I did not use the instrument, more exposed regions (more import shocks from China) would have perhaps specific GDP because they have more particular unobserved "skills" (it would be a sort of selection bias, since those who specialized in a sector have specific characteristics and thus 'select' into the more specialized distributions of districts). Assuming US import shocks are "randomly" assigned or simply exogenous to local political outcomes makes such variation in GDP across regions not biased anymore.

To deal with this concern, I instrument Chinese import shock to European countries with Chinese import shock to US, resulting in equation 4.4 above. The first-stage equations are:

$$\Delta IM^{eu}_{crt} = \delta_0 + \delta_1 \, \Delta IM^{us}_{crt} + \delta_2 \, \Delta GDP_{ct} \;\; \Delta IM^{us}_{crt} + f_{ct} + \epsilon_{cdt} \tag{6.2}$$

$$\Delta GDP_{crt} \;\; \Delta IM^{eu}_{crt} = \delta_0 + \delta_1 \, \Delta IM^{us}_{crt} + \delta_2 \, \Delta GDP_{ct} \;\; \Delta IM^{us}_{crt} + f_{ct} + \epsilon_{cdt} \tag{6.3}$$

Consistency of the 2SLS estimates relies on the assumption that, other than because of differences in Chinese import to European countries and its differential effect over the business cycle, the vote for PAS parties does not vary differentially over time across districts depending on average import to US intensity (i.e., it is uncorrelated with any other determinants of the dependent variables). As noted by Colantone and Stanig (2018), a possible concern with the identification strategy is that correlated demand and supply shocks across countries may impact Chinese imports both to

US and other developed countries and at the same time affecting electoral outcome. The use of different instruments (such as restrictions on the Chinese imports to US, Chinese imports to other developed countries and a completely different one, i.e., time variation in bilateral exchange rates) reassure the validity of the results, as tested in the different robustness checks below.

7 Empirical results

In this section, I first present the baseline results of equation 6.1. Second, I report the Marginal Effects (MEs) of the import shock along the business cycle to help interpretation of results. Third, I report results of a robustness check in which I control for different measures of trade openness. Fourth, I test the IV exclusion restriction and finally I control for country level correlates with GDP.

7.1 Baseline results

Table 7.1 reports the first-stage of the model 6.1. Estimates in column (1) correspond to equation 6.2 and show that US and EU import are correlated. Similarly, estimates in column (2) implies that the interaction term is significantly correlated with the endogenous interaction. In the table, I also report the Sanderson and Windmeijer (2016) conditional first stage F-statistics for the validity of the instruments in model with multiple endogenous variables. Since the Stock-Yogo 10 percent critical value for a perfectly identified model with two endogenous variables is 7.03, I can reject that the instruments are weak. Table 7.2 shows the baseline results of the second stage of equation

Table 7.1: IV First-Stage

	(1) ΔIM_t^{EU}	(2) $\Delta GDP_t \times \Delta IM_t^{EU}$
ΔIM_t^{US}	0.0361**	0.0324
	(0.0117)	(0.0307)
$\Delta GDP_t \times \Delta IM_t^{US}$	0.00110	0.0288*
	(0.00318)	(0.0135)
SW F - ΔIM_t^{US}	24.46	-
SW F - $\Delta GDP_t\, \Delta IM_t^{US}$	-	24.70
Observations	7782	7782

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

6.1. The results clearly shows that GDP_t mitigates the effect of the import shock from China, i.e.,

$\beta_2 < 0$.[12] The coefficient of the interaction in column (7) shows that the vote for *protectionist right* party is more responsive to economic downturns in areas more exposed to the import shocks[13]: a 1 s.d. increase in in the Chinese import shock increases the vote share of *protectionist right* parties by 6.3 p.p. (0.560×0.113) across districts in the same country at *zero* GDP growth rate while its impact reduces by 1.02 p.p. (-0.0976×0.113) as GDP increase by 1 s.d., i.e., 1.823%. Considering that the mean share of *protectionist right* party in a district is 36.7%, with a standard deviation of 7%, a 22.5 p.p. decreases in such vote share across districts when GDP increase by 1.823% is of a quite important magnitude.

Effects of grater magnitude are found on the median and COG of *nationalist* and *nationalist autarky* positioning differential across districts. In column 3 for instance a 1 s.d. increase in in the Chinese import shock increases the median positioning by 43 p.p. (3.804×0.113) across districts in the same country at *zero* GDP growth rate while its impact reduces by 4.6 p.p. (-0.408×0.113) as GDP increase by 1 s.d., i.e., 1.823%). Again, considering that the the mean is 20% with a standard deviation of 90% for the *nationalist autarky* positioning of a district, the magnitude is not negligible (the minimum value of the median of nationalism is -2.979 while the maximum is 3.051).

Interestingly, the import shock effect at *zero* GDP growth (β_1) remains strongly significant in all relevant specifications. As discussed in the next section, the import shock have a positive effect at negative and low level of GDP growth rate.

The coefficient of the interaction on *protectionist left* is positive and significant (col. 6). It suggests that the impact of a 1.s.d. increase in the import shock on the vote share of *protectionist left* increases as GDP growth rates rise. The effect on *protectionist left* parties is in contrast with the finding of Autor et al. (2020), whose results suggest that exposure to Chinese trade shock leads to support for parties at both the extreme of the political spectrum.[14]

Coefficients on *radical right* (col. 5), although not significant, display correct signs and have a considerable magnitude. The lack of significance is probably due to the very low variation of the variable across districts. Finally, the coefficients of the Centre of Gravity for *Economic conservativism* (col. 8) are as expected again. Import shocks exposure at *zero* GDP growth increases support for parties who propose *economic nationalist* policies. However, high growth reduces the impact of import shock on the differential between districts, suggesting again a mitigating effect of growth (although the interaction on Economic conservativism is not significant). Note that I tested a model with $NUTS$-2 fixed effects additionally to the country-year ones. When using both country-year and region fixed effects, I apply a double demeaning of all variables in the regression

[12] Note that results vary a lot in magnitude across different models mainly because the different scaling across variables. This is evident considering that median, COG and share measures have similar magnitude within group.

[13] Note that the section on marginal effects below reports statistically significant effect for low and negative level of GDP growth

[14] Also Colantone and Stanig (2018) do not find signs of polarization in Europe.

Table 7.2: Baseline Results

	(1) Nationa-lism (M)	(2) Nationa-lism (COG)	(3) National. aut-arky (M)	(4) National. aut-arky (COG)	(5) Radical Right (S)	(6) Protect. Left (S)	(7) Protect. Right (S)	(8) Ec. Conser-vatism (COG)
ΔIM_t	3.403**	1.932**	3.804**	1.284*	0.281	-0.304**	0.560*	1.457**
	(1.268)	(0.601)	(1.384)	(0.626)	(0.173)	(0.109)	(0.228)	(0.547)
$\Delta GDP_t \times \Delta IM_t$	-0.724*	-0.408**	-0.865*	-0.135	-0.0516	0.0874**	-0.0976	-0.280+
	(0.321)	(0.155)	(0.342)	(0.173)	(0.0422)	(0.0318)	(0.0615)	(0.146)
Observations	7782	7782	7782	7782	7782	7782	7782	7782

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

model. Thus, I exploit variation within country-years, and variation within districts across years (elections) in each country-year. Significance is lost throughout all the specifications, also when applying it to Colantone and Stanig (2018) specification, who do not report it in their paper.

7.2 Marginal effects

To help interpretation of results, table 7.3 below reports the Marginal Effects (MEs) of the import shock on the dependent variables at different GDP growth levels. Taking partial derivatives of equation 6.1, the MEs are:

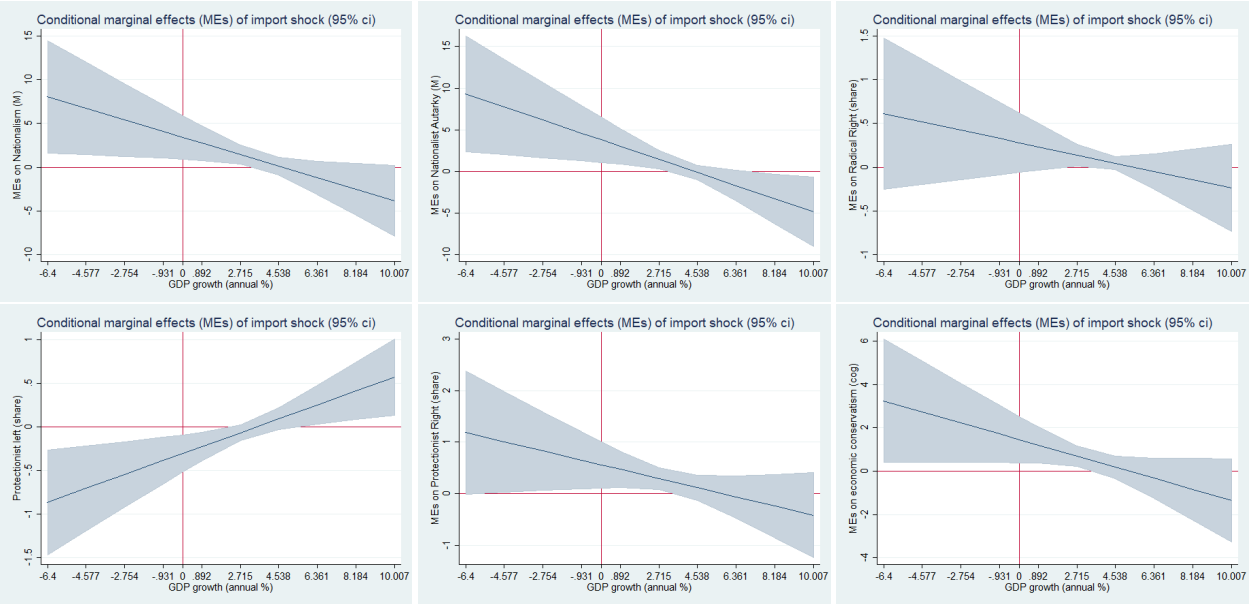
$$\frac{\partial PO}{\partial \Delta IM} = \beta_1 + \beta_2 \Delta GDP \tag{7.1}$$

Figure A.1 offers a visual representation of the marginal effects for six dependent variables.[15] On the x-axis it reports GDP growth distanced by one s.d. (1.823), while on the y-axis there are the MEs. The red vertical and horizontal lines represents respectively the 0 growth rate and the null effects, while the shaded areas are 95% confidence intervals. For five of the 6 variables in the figure, negative or low growth leads to greater support for parties with a nationalist position, and increase the share of protectionist right parties in districts belonging to country experiencing low growth.[16] Notice that Colantone and Stanig (2018) do not find any effect of import shock on *protectionist left*, while here I find a strong effect along the business cycle. Nonetheless, the effect is opposite to the one found by Autor et al. (2020) in US, as they find that the Chinese import shock raises support at both the extremes of the political spectrum (i.e., also for protectionist left). We can also see how import shock has a positive effect on *protectionist right* for low and negative values of GDP. I also report the MEs in table 7.3, where again the GDP growth levels are distanced by 1 s.d (1.823), thus MEs should be interpreted as the impact of a 1 s.d. increase in the Chinese import shock on the share/positioning across districts in the same country at different GDP growth rate. For instance, consider the MEs on the *median nationalist* positioning of districts (column 1). A 1 s.d. fall in GDP growth increases the impact of import shock on the differential in nationalist position

[15] In appendix B I also display the COG measure.

[16] as said above radical right is not significant, probably because of small variation in the variable across districts

Figure 7.1: Marginal effects



across districts by 1.32. In other words, the difference between any two coefficients of column 1 equals 1.32, as the coefficient $\beta_2 = -0.724$ in table 7.2 suggests ($0.724 \times 1.823 = 1.32$). Further, in row 5 of table 7.3, I report the MEs at *zero* GDP growth, which correspond to the β_1 coefficient of equation 6.1, as table 7.2 shows.

At a glance, the first three columns of table 7.3 show that the import shock has a significant *positive* effect on the median/COG positioning of districts only at *negative* or low level of GDP growth. The MEs of the import shock has a negative effect at very high level of GDP growth, suggesting that Chinese import shock reduces the differential between districts in countries that grow a lot compared to in the ones that do not. Thus, grater exposure to the Chinese import shock may even reduce the support for these ideological positions at growth rates, above around 5%. This is again in line with the theoretical predictions, according to which the growth increases the threshold required to vote for P party. The MEs in column (4) and (5) are significant and positive only at low level of GDP growth. However, signs along the business cycle are in line with the theory.

In column (6), (7) and (8) results are significant along the business cycle as discussed above. Column (6) signs are opposite as the dependent variable is *protectionist left*.

Column (12) suggests that import shock exposure induce a grater support for Economic conservationist positioning at low level of GDP growth.

In conclusion, greater exposure to import shocks from China at low and negative level of GDP growth increases the share of *protectionist right* parties, pushes parties to embrace nationalist claims about the way of life, traditional morality etc. as well as claims about protectionism,

Table 7.3: Marginal effects

	(1) Nationa-lism (M)	(2) Nationa-lism (COG)	(3) National. aut-arky (M)	(4) National. aut-arky (COG)	(5) Radical Right (S)	(6) Protect. Left (S)	(7) Protect. Right (S)	(8) Ec. Conser-vatism (COG)
import_shock								
1. at = -6.4	8.040*	4.541**	9.340**	2.146	0.612	-0.864**	1.185+	3.250*
	(3.268)	(1.557)	(3.538)	(1.689)	(0.442)	(0.306)	(0.607)	(1.456)
1. at = -4.577	6.719*	3.798**	7.763**	1.900	0.517	-0.704**	1.007*	2.740*
	(2.691)	(1.280)	(2.919)	(1.380)	(0.365)	(0.249)	(0.497)	(1.193)
3. at = -2.754	5.399*	3.054**	6.186**	1.655	0.423	-0.545**	0.829*	2.229*
	(2.117)	(1.005)	(2.303)	(1.073)	(0.288)	(0.192)	(0.388)	(0.931)
4. at = -.931	4.078**	2.311**	4.609**	1.410+	0.329	-0.386**	0.651*	1.718*
	(1.550)	(0.735)	(1.692)	(0.773)	(0.212)	(0.137)	(0.281)	(0.674)
5. at = 0	3.403**	1.932**	3.804**	1.284*	0.281	-0.304**	0.560*	1.457**
	(1.268)	(0.601)	(1.384)	(0.626)	(0.173)	(0.109)	(0.228)	(0.547)
6. at = .892	2.757**	1.568**	3.032**	1.164*	0.235+	-0.226**	0.473**	1.207**
	(1.005)	(0.479)	(1.095)	(0.493)	(0.136)	(0.0842)	(0.180)	(0.429)
7. at = 2.715	1.436**	0.825**	1.455**	0.919**	0.141*	-0.0671	0.295**	0.697**
	(0.547)	(0.279)	(0.557)	(0.295)	(0.0637)	(0.0471)	(0.105)	(0.237)
8. at = 4.538	0.116	0.0814	-0.122	0.673+	0.0467	0.0922	0.118	0.186
	(0.521)	(0.291)	(0.446)	(0.360)	(0.0372)	(0.0637)	(0.122)	(0.264)
9. at = 6.361	-1.205	-0.662	-1.699+	0.428	-0.0474	0.251*	-0.0603	-0.325
	(0.962)	(0.500)	(0.930)	(0.609)	(0.103)	(0.112)	(0.209)	(0.476)
10. at = 8.184	-2.526+	-1.405+	-3.276*	0.182	-0.142	0.411*	-0.238	-0.835
	(1.504)	(0.758)	(1.518)	(0.900)	(0.178)	(0.167)	(0.313)	(0.724)
11. at = 10.007	-3.846+	-2.148*	-4.853*	-0.0629	-0.236	0.570*	-0.416	-1.346
	(2.070)	(1.029)	(2.127)	(1.203)	(0.254)	(0.223)	(0.420)	(0.982)
N	7782	7782	7782	7782	7782	7782	7782	7782

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

against internationalism and the EU (*Nationalism* and *Nationalist Autarky*). At the same time, the support for *protectionist left* parties drops.

7.3 Robustness check 1: Different measure of trade openness

Table A.1 in appendix shows the results of five robustness checks based on different measures of trade openness, following Colantone and Stanig (2018). First, I substitute the import shock from China with the import shock from all countries, similarly using the import shock from all countries to US as instrument. Significance disappears both on the coefficients for import shocks (except for the radical right share where is positive and significant) and for the interaction term. This suggests that the import shock from China has a specific characteristic than generic import exposure, probably related to its intensity and to the *foreign* cultural component (as found by Colantone and Stanig (2018)).

Second, following include the baseline measure of the Chinese import shock and I also for the growth in import from all EU countries. As we can see, coefficients remain significant for both the variables of interest, slightly decreasing in magnitude for the interaction. The only coefficient significantly different from zero for import shock from EU at *zero* GDP growth is the one on *radical right*, which, contrary to Colantone and Stanig (2018), suggests that EU integration led to a rise in support for radical right parties. However, the impact of import shocks decreases at *low* level

of GDP growth, suggesting that growth may have a mitigating effect also in the case of import shock from the EU. The results of the main independent variables of interest are robust to the introduction of import shock from EU.

Third, I control for a disaggregate measure of import shock from EU countries. In particular, EU-15 refers to imports from those countries annexed to the EU before the 2004 and 2007, while the EU-12 refers to the ones annexed after and which are mostly Eastern European countries. Again, European integration from the EU15 is found to spark support for radical right parties, and that GDP growth has a mitigating effect. The coefficients on the two variables of interest are robust to the introduction of these controls. Finally, the coefficients on EU-12 are not significant, although present expected signs.

Fourth, I control for export growth and FDI inflows and outflows. Note that the coefficients are robust to the introduction of the controls. Interestingly, the coefficients on the export growth at *zero* GDP growth is positive and in two cases significant: export growth has a positive effect on the share of *radical right* parties across districts at *zero* GDP growth. Moreover, GDP growth mitigatesthe effect of export growth. A possible explanation is offered by the prediction of trade theories, suggesting that the less productive firms are pushed out from the market. As note above, this induces job losses. In addition, the H-O trade framework used in the theoretical framework predicts that the trade liberalisation has inequality effect. Consider again country A (the *k-abundant* one) an increase in exports would imply a grater remuneration of capital relative to labour, increasing inequality and decreasing the threshold for the losers to vote for P party. For what concerns FDI, they do not seem to have political implications.

7.4 Robustness check 2: Control for region-specific trends based on historical characteristics

In table A.2 in appendix, I interact the country year dummies with variables measured at the regional level that are kept fixed over time following Colantone and Stanig (2018). The interaction with this set of variables allows to identify coefficients controlling for variation due to each of the variables interacted in a given country-year. Thus, the difference between two districts in a country is now identified out of variation due to these variables which is kept fixed over time. To control for these historical trends is useful as it shows that omitted factors at the regional level which could induce a shift over time in a nationalist direction for reasons other than trade do not bias the results obtained.

The variables interacted with the country-years dummies in each respective column of table A.2 are the following region-specific trends based on historical: 1) Employment share of primary sector 2) Employment share of services 3) Employment share of finance and business services 4) Employment share of high-tech industries 5) Employment share of low- and medium-tech indus-

tries 6) Employment share of low-skill workers 7) Employment share of medium-skill workers 8) Employment share of high-skill workers 9) Share of foreign-born people in the population 10) Stock of foreign-born people in the population

We can see that the coefficients on the two main variables of interest remain of the same sign and similar magnitude (although sometimes largely increasing) and that significance most often remains throughout the different specifications.

7.5 Robustness check 3: testing the IV exclusion restriction

The robustness checks reported in table A.3 in appendix experiment different instruments to test the exclusion restrictions of the import shock from China and check the possibility of transshipment of imports. The former is implemented by excluding some industries for which correlated demand and technology shocks are likely to be important (Panel 1-4). In Panel 5 I also use the Colantone and Stanig (2018) reconstruction of the instrument based on using Chinese imports in high-income countries other than the US.[17] The latter (in panel 7) instead aims at controlling for the possibility that Chinese imports pass through Netherlands and Belgium before reaching the country of destination, causing a measurement error in import exposure for Netherlands as well as the other countries.

Unfortunately, for these robustness checks I can test only the three dependent variables *Nationalism* median and COG and *radical right* (S). The coefficients on the interaction remain negative and of a similar magnitude and that significance is unaltered. This is not true for panel 6 where the instrument is completely different. Significance is lost, although signs are the same and magnitude is reduced. Colantone and Stanig (2018) "compute effective exchange rates for each country and industry, using industry-specific import shares computed in the first available year, and kept constant throughout. Then, we retrieve a region-specific measure of effective exchange rates, based on the relevance of each industry in each region" as done for the US import shock instrument. In this new instrument based on exchange rates (borrowed by the international economics literature Revenga (1992)), time-variation is induced only by changes in bilateral exchange rates over time due to macroeconomics factors, and variation across *NUTS-2* regions stems from differences in the historical regional specialization. As they suggest, "this alternative instrument is unlikely to reflect region-specific shocks occurring over the sample.". When I instrument import shock from China with this new instrument, significance on the interaction is lost. However, the conditional first stage F-statistics for the validity of the new instrument in the model are 11.82 and 20 for, respectively, the import shock variable and the interaction term. The Stock-Yogo 10 and 15 percent critical value for a perfectly identified model with two endogenous variables and 4 IVs are, respectively, 16.87 and 9.93. It appears that I can reject that the instruments are weak only at the 15% critical

[17] In particular, they jointly consider Australia, Canada, Japan, and New Zealand.

value. In any case, it is reassuring that coefficients have the correct signs.

7.6 Robustness check 4: Controlling for country level interactions

In this section I perform to additional robustness checks, not explored by Colantone and Stanig (2018). Table 7.4 reports results of the specification 6.1 to which I add the interaction with population growth and immigration growth. Population and immigration growth are likely to be correlated with both GDP growth and political outcomes, and it could produce omitted variable bias. For instance, migration-induced population growth can lead to racial/cultural effect which affects political preferences and/or increase the GDP growth rate of a country. Also, population growth implies a compositional change of the population over time, where a higher share of young people can shape both growth (e.g., offering labour supply for new/modern sectors) as well as political preferences (e.g., Pro-EU, more/less interest in politics etc.). Notice however that population growth is likely to be endogenous to import shock and the dependent variables. In support to the identification strategy, however, similar arguments as in the case of GDP growth in section 6 can be raised. Finally, an additional reason for which I control for immigration is that the literature finds that populism support increase with immigration. Including this variable could help to understand how it affects the impact of import shocks.

The results in table 7.4 show that the negative interaction is robust to the inclusion of population and immigration growth at country-level, as coefficients remain more or less of the same magnitude and significance is unaltered. Interestingly, the interaction with population growth is never significant.

The results show that the negative interaction remains, varying in magnitude (but remaining consistently large), as well as in significance, which is lost on some dependent variables. Further, signs of coefficients of the interaction of interest remain the same. When controlling for immigration growth, the coefficient on *radical right* of the interaction of interest becomes for the first time significant and it doubles in magnitude. In particular, a 1 s.d. increase in in the Chinese import shock decreases the vote share of *radical right* parties by 2.9 p.p. (0.293×0.113) across districts in the same country at *zero* immigration, population and GDP growth rate while its impact further increase by 1.7 p.p. (-0.144×0.113) as population growth increases by 1 s.d.. As before, countries whose GDP growth increases on average tend to have a higher impact of the import shock on the share of *Protectionist left* (column 6) parties across districts.

The fact that the coefficients of population growth are insignificant perhaps suggest that the only effect of population growth on nationalism, autarky and radical right is caused by the immigration component of the growth in population. An increase of immigration seems in fact to increase the vote share of *radical right* parties across districts in a country (column 5), while it reduces the median and the COG positioning of *nationalist autarchy* (column 3 and 4).

Table 7.4: Robustness check 4 - POP and IMM

	(1) Nationa-lism (M)	(2) Nationa-lism (COG)	(3) National. aut-arky (M)	(4) National. aut-arky (COG)	(5) Radical Right (S)	(6) Protect. Left (S)	(7) Protect. Right (S)	(8) Ec. Conser-vatism (COG)
ΔIM_t	3.661**	1.784**	3.959**	1.260*	0.459*	-0.330**	0.680**	1.219*
	(1.396)	(0.637)	(1.336)	(0.544)	(0.211)	(0.111)	(0.249)	(0.485)
$\Delta GDP_t \times \Delta IM_t$	-0.818^{+}	-0.206	-0.592^{+}	-0.0656	-0.193*	0.0863***	-0.236**	-0.108
	(0.458)	(0.220)	(0.314)	(0.137)	(0.0837)	(0.0261)	(0.0862)	(0.117)
$\Delta POP_t \times \Delta IM_t$	-0.352	-0.448	-0.956	0.253	0.0666	0.00753	0.114	-0.0484
	(0.852)	(0.536)	(0.830)	(0.314)	(0.146)	(0.0439)	(0.125)	(0.271)
$\Delta IMM_t \times \Delta IM_t$	2.118	-2.779	-4.688^{+}	-3.127**	2.187*	-0.164	1.680*	-2.238*
	(4.895)	(2.641)	(2.577)	(0.969)	(0.910)	(0.177)	(0.656)	(1.036)
Observations	3407	3407	3407	3407	3407	3407	3407	3407

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Column (7) suggests that a 1 s.d. increase in in the Chinese import shock decreases the vote share of *protectionist right* parties by 7.6 p.p. (0.680×0.113) across districts in the same country at *zero* immigration, population and GDP growth rate while its impact further increase by 18.9 p.p. (1.680×0.113) as population growth increases by 1 s.d.. This is true in spite of the negative GDP-interaction coefficients, as the magnitude of the effect of immigration growth is larger (similarly for radical right parties in column 5). Furthermore, grater immigration growth decreases the impact of import shock on the COG of *economic conservativism* across districts (col. 8). In short, immigration growth in a country seems to increase the impact of import shock on the share of *protectionist right* and *radical right* parties between districts, while decreasing the distance in the median and the COG measures of parties' position (*nationalist autarchy, economic conservativism*).

8 Conclusion

In this paper, I offer an explanation to why people vote for populism, and in particular for protectionism. I develop a theory that explains the effect of trade and growth on demand for protection, and how it is conditional on political institutions. When direct redistribution does not compensate the trade-induced loss due to political capture, the losers of trade liberalisation vote for the protectionist party, that offers indirect redistribution through a protectionist trade tariff. Using a database built by Colantone and Stanig (2018) from different sources for fifteen European countries, I find that growth mitigates the effect of trade shocks, focusing on a particular import shock, the one from China, between the 1988 and 2007. I find a strong and robust evidence that negative GDP growth indeed acerbates the impact of import shock, strengthening its effect on nationalist and pro-far right preferences in periods of economic downturns, while reverting it in period of considerably positive growth.

Although not comprehensive of the 2008 crisis and the following austerity, in the period of analysis (1988-2007) European countries experienced a fall in average growth rate compared to the post-war period. Furthermore, the same period was characterised by a consistent increase in globalisation, and especially import from China. My results suggest that the finding in the literature on the effects of import shock on political preferences are valid only when countries experience negative or low level of GDP growth. Further, although not yet tested empirically, it offers a different theoretical explanation from the one advanced by identity theory (Grossman (1991) and Gennaioli and Tabellini (2019)). Here, the mechanism seems closer to the one of revolt. In dictatorship, citizens trade-off the income (and lives) destruction resulting from a revolution, with the potential gains in case of victory. If the share of average income gained by revolting, net of the fraction of resources destroyed in the conflict, is higher than income under the dedicator-ship, people revolt. Revolting is costly since it destroys resources and lives. In democracy, sustained deterioration in economic condition due to business cycles downturns erodes present income of individuals. Such deterioration decreases the opportunity-cost of voting for protectionist party offering a tariff in absence of appropriate redistributive policy. In fact, the tariff reduces average income (cost), and increase the pre-tax income of losers of trade (opportunity). In democracies citizens do not revolt, as they have to much to lose from it and because there are alternatives to direct revolt, such as to vote for non-mainstream parties.

Future research could aim to explore implications of growth theoretically. Using the CES production function I aim at study skilled-biased technological change, and its impact on trade. This would extend the capability prediction of the model on the effect of technological shock on political preferences, also discussed by the literature (Rodrik (2020)).

Finally, one main limitation of the paper is that in the empirical part it does not control for political capture. It is then important to build a robust measure of political capture to test the conditional effect of trade and growth on political preferences.

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Appendices

A Theoretical appendix

A.1 Proof of Proposition 1

I first rewrite post-tax income of worker i under any regime as:

$$\begin{aligned}
\hat{w} &= \left[(1-\tau)w + \left(t - \frac{\tau}{2}\right)\bar{w}\right] \\
&= \left[(1-\tau)w + \left(t - \frac{\tau}{2}\right)\bar{w}\right] \\
&= w - \tau w^A + \left(t - \frac{\tau}{2}\right)\bar{w} \\
&= w + w\tau\left[-1 + \left(1 - \frac{\tau}{2}\right)(1 + \delta(\theta - 1)\right] \\
&= w + w\left(\frac{\delta(\theta-1)}{1+\delta(\theta-1)}\right)\left[-1 + \left(1 - \left(\frac{\delta(\theta-1)}{2[1+\delta(\theta-1)]}\right)[1 + \delta(\theta^A - 1)]\right)\right] \\
&= w + w\left(\frac{\delta(\theta-1)}{1+\delta(\theta-1)}\right)\left[\frac{\delta(\theta-1)}{2}\right] \\
&= w\left[1 + \frac{\delta^2(\theta-1)^2}{2\left[1+\delta\left(\theta-1\right)\right]}\right]
\end{aligned}$$

Comparing post tax income in Autarky and FT:

$$\begin{aligned}
\hat{w}^{FT} &> \hat{w}^A \\
\left[(1-\tau^{M2})w^M + \left(\tau - \frac{\tau^{M2}}{2}\right)\bar{w}^M\right] &> \left[(1-\tau^{A2})w^A + \left(\tau - \frac{\tau^{A2}}{2}\right)\bar{w}^A\right] \\
w^M\left[1 + \frac{\delta^2(\theta-1)^2}{2\left[1+\delta\left(\theta-1\right)\right]}\right] &> w^A\left[1 + \frac{\delta^2\left(\theta^A-1\right)^2}{2[1+\delta(\theta^A-1)]}\right] \\
\frac{(\theta^A)^{\beta_y}[1+\delta(\theta^A-1)]}{[2+\delta(\theta^A-1)(2+\delta(\theta^A-1))]} &> \frac{(\theta)^{\beta_y}[1+\delta(\theta-1)]}{[2+\delta(\theta-1)(2+\delta(\theta-1))]} \qquad \text{(A.1.1)}
\end{aligned}$$

Since $\theta^A < \theta$, a sufficient condition for A.1.1 is that:

$$\frac{\partial\left[\frac{(\theta)^{\beta_y}[1+\delta(\theta-1)]}{[2+\delta(\theta-1)(2+\delta(\theta-1))]}\right]}{\partial\theta} < 0 \qquad \text{(A.1.2)}$$

A.1.2 is equivalent to:

$$\frac{\partial\left[\frac{(\theta)^{\beta_y}[1+\delta(\theta-1)]}{[2+\delta(\theta-1)(2+\delta(\theta-1))]}\right]}{\partial\theta} = \frac{\theta^{\beta_y}\left\{\left[\frac{\beta_y}{\theta}(1+\delta(\theta-1))+\delta\right][2+\delta(\theta-1)(2+\delta(\theta-1))] - 2\delta[1+\delta(\theta-1)]^2\right\}}{[2+\delta(\theta-1)(2+\delta(\theta-1))]^2}$$

Setting the term in curly brackets smaller then 0 leads to (after some algebra):

$$\beta_y < \frac{\delta\theta}{1+\delta(\theta-1)}\frac{1+\delta(\theta-1)(2+\delta(\theta-1))}{1+\frac{\delta(\theta-1)(2+\delta(\theta-1))}{2}}$$

Since in country A the good y is *l-intensive*, $\beta_y < \frac{1}{2}$. A sufficient condition is:

$$\begin{aligned}\frac{\delta\theta}{1+\delta(\theta-1)} &> \frac{1}{2}\\ \theta &> \frac{1-\delta}{\delta}\end{aligned} \tag{A.1.3}$$

I conclude that if $\theta > \frac{1-\delta}{\delta}$, then $\frac{\partial\left[\frac{(\theta)^{\beta_y}[1+\delta(\theta-1)]}{[2+\delta(\theta-1)(2+\delta(\theta-1))]}\right]}{\partial\theta} < 0$ and inequality A.1.1 holds. Then, $\hat{w}^{FT} > \hat{w}^{A}$.

The value $\theta > \frac{1-\delta}{\delta}$ implies that capitalists' share is larger than workers':

$$\begin{aligned}\frac{\delta r^{FT}}{\bar{w}^{FT}} &> \frac{(1-\delta)w^{FT}}{\bar{w}^{FT}}\\ \delta\theta^{1-\beta_y} &> (1-\delta)\frac{1}{\theta^{\beta_y}}\\ \theta^{*} &> \frac{1-\delta}{\delta}\end{aligned} \tag{A.1.4}$$

where I recall that $\delta < \frac{1}{2}$ is the number of capitalists as population is normalised to 1.

A.2 Proof of Proposition 2

Post-tax income of worker i with political capture is (after some algebra):

$$\begin{aligned}\hat{w}(\chi) &= \left[(1-\tau(\chi))w + \left(t(\chi) - \frac{\tau(\chi)}{2}\right)\bar{w}\right]\\ &= w\left[1 + \frac{(1-2\chi)\delta^2(\theta-1)^2(1-\delta)[1-\delta(1-2\chi)]}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]}\right]\end{aligned}$$

And, comparing post-tax incomes:

$$\hat{w}^{M}_{FT} > \hat{w}^{M}_{FT}(\chi)$$

$$[1-\chi-\delta+2\chi\delta]^2 > [1-\delta(1-2\chi][1-2\chi-\delta+2\chi\delta]$$

$$\chi > 0 \tag{A.2.1}$$

If there's political capture $\hat{w}^M_{FT} > \hat{w}^M_{FT}(\chi)$.

A.3 Proof of Theorem 1

Here I report the proof of the existence and the monotonicity of the threshold. The voting constraint is:

$$\begin{aligned}
f(\chi) &\coloneqq w^P - \hat{w}^M_{FT}(\chi) > 0 \\
&\coloneqq w^P - \left[\left(1-\tau^M(\chi)\right)w^M + \left(\tau^M(\chi) - \frac{(\tau^M(\chi))^2}{2}\right)\bar{w}^M\right] > 0 \\
&\coloneqq w^{FT}(1+t)^{\frac{1}{\beta_x-\beta_y}} - w^{FT}\left[1 + \frac{(1-2\chi)\delta^2(\theta-1)^2(1-\delta)[1-\delta(1-2\chi)]}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]}\right] \\
&\coloneqq \frac{A_y}{\theta^{\beta_y}}\left\{(1+t)^{\frac{1}{\beta_x-\beta_y}} - \left[1 + \frac{(1-2\chi)\delta^2(\theta-1)^2(1-\delta)[1-\delta(1-2\chi)]}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]}\right]\right\} \\
&\coloneqq \frac{A_y}{\theta^{\beta_y}}\left\{\sqrt{\frac{\delta}{(1-\delta)}}\theta - \left[1 + \frac{(1-2\chi)\delta^2(\theta-1)^2(1-\delta)[1-\delta(1-2\chi)]}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]}\right]\right\}
\end{aligned} \tag{A.3.1}$$

where in A.3.1 I used the the maximum value of the tariff, i.e., $\bar{t} < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$ (see A.6.7). The values is such that $\frac{\delta r^P}{\bar{w}^P} = \frac{(1-\delta)w^P}{\bar{w}^P}$, i.e., capitalists share is equal to workers' share under the P party. Still, $r^P > w^P$ (see appendix A.6.7).

A.3.1 Monotonicity.

A sufficient condition for $f(\chi)$ to be monotonic in χ is that $\frac{\partial f(\chi)}{\partial \chi}$ is either positive or negative. If $f(\chi)$ is monotonic in χ, I know that there is only one $\chi = \bar{\chi}$ in which the constraint is binding and for which the losers decide to vote for P. I look for the threshold to be increasing in χ since as political power increase, redistribution under the M party decreases, and losers increasingly prefer the P party. Taking derivative of the the threshold in the RHS with respect to χ:

$$\frac{\partial f(\chi)}{\partial \chi} = -w^{FT}\left[\frac{\delta(\theta-1)(1-\delta)}{A}\right]\{((1-2\chi)(1-2\delta))[1-\delta(1-2\chi)] - 2A[1-2\delta(1-2\chi)]\} \tag{A.3.2}$$

where $A \equiv (1-\chi-\delta+2\chi\delta)$. A sufficient condition for $\frac{\partial f(\chi)}{\partial \chi}$ to be positive is that the term in curly brackets in the derivative is negative:

$$\{((1-2\chi)(1-2\delta))[1-\delta(1-2\chi)] - 2A[1-2\delta(1-2\chi)]\} < 0$$

$$-1 + \delta(3 - 2\delta) - 8\chi\delta(1-\delta)(1-\chi) < 0 \tag{A.3.3}$$

Which is negative if:

$$\begin{aligned} -1 + \delta(3 - 2\delta) - 8\chi\delta(1-\delta)(1-\chi) &< 0 \\ 2\delta^2 - 3\delta + 1 &> 0 \end{aligned} \tag{A.3.4}$$

Inequality A.3.4 holds for $\delta < \frac{1}{2} \vee \delta > 1$. Since $0 < \delta < \frac{1}{2}$, it holds and inequality A.3.3 is negative, and so the terms in curly brackets: $\frac{\partial f(\chi)}{\partial \chi} < 0$.

A.3.2 Existence.

To proof the existence of the threshold I need it to be negative at $\chi = 0$ and positive at $\chi = \frac{1}{2}$.

Proof that $f(\chi = \frac{1}{2}) > 0$. Setting equation A.3.1 larger than 0 and assuming $\chi = 1$:

$$\begin{aligned} \sqrt{\frac{\delta}{(1-\delta)}\theta} &> 1 \\ \theta^* &> \frac{1-\delta}{\delta} \end{aligned} \tag{A.3.5}$$

The A.3.5 is the same condition found in proposition 1. Again, if $\theta^* > \frac{1-\delta}{\delta}$, capitalists' share is larger than workers'.

Proof that $f(\chi = 0) < 0$. Setting equation A.3.1 smaller than 0 and assuming $\chi = 0$

$$\begin{aligned} \sqrt{\frac{\delta}{(1-\delta)}\theta} &< 1 + \frac{\delta^2 (\theta-1)^2}{2\left[1 + \delta(\theta-1)\right]} \\ \sqrt{\frac{\delta}{(1-\delta)}\theta} &< \frac{2 + \delta(\theta-1)[2 + \delta(\theta-1)]}{2[1 + \delta(\theta-1)]} \\ \frac{\delta}{(1-\delta)}\theta &< \frac{\{2 + \delta(\theta-1)[2 + \delta(\theta-1)]\}^2}{4[1 + \delta(\theta-1)]^2} \\ \frac{\delta}{(1-\delta)}\theta &< \frac{4 + 4\delta(\theta-1)[2 + \delta(\theta-1)] + \delta^2(\theta-1)^2[2 + \delta(\theta-1)]^2}{4[1 + \delta(\theta-1)]^2} \\ \frac{4\delta\theta\left[1 + 2\delta(\theta-1) + \delta^2(\theta-1)^2\right]}{(1-\delta)} &< 4 + 8\delta(\theta-1) + 4\delta^2(\theta-1)^2 + 4\delta^2(\theta-1)^2 + 4\delta^3(\theta-1)^3 + \delta^4(\theta-1)^4 \end{aligned}$$

Developing this inequality (after some algebra):

$$4\left[\delta(\theta+1) - 1\right]\left[1 + 2\delta(\theta-1) + \delta^2(\theta-1)^2\right] < \delta^2(1-\delta)(\theta-1)^2\left[4 + 4\delta(\theta-1) + \delta^2(\theta-1)^2\right]$$

Since $\left[1+2\delta(\theta-1)+\delta^2(\theta-1)^2\right] < \left[4+4\delta(\theta-1)+\delta^2(\theta-1)^2\right]$, it remains to check if:

$$4\left[\delta(\theta+1)-1\right]-\delta^2(1-\delta)(\theta-1)^2<0$$
$$\delta^2(1-\delta)\theta^2-2\delta[\delta(1-\delta)+2]\theta+(1-\delta)(4+\delta)>0$$

Solving the second degree inequality, I obtain that $f(\chi=0)<0$ if $\theta < \frac{2+\delta(1-\delta)-\delta\sqrt{12-\delta^2(7+2\delta-\delta^2}}{\delta(1-\delta)} \vee \theta > \frac{2+\delta(1-\delta)+\delta\sqrt{12-\delta^2(7+2\delta-\delta^2}}{\delta(1-\delta)}$. I now define $\underline{\theta} \equiv \frac{2+\delta(1-\delta)-\delta\sqrt{12-\delta^2(7+2\delta-\delta^2}}{\delta(1-\delta)}$ and $\bar{\theta} \equiv \frac{2+\delta(1-\delta)+\delta\sqrt{12-\delta^2(7+2\delta-\delta^2}}{\delta(1-\delta)}$ I conclude that $f(\chi=\frac{1}{2})>0$ if $\theta^* > \frac{(1-\delta)}{\delta}$ and $f(\chi=0)<0$ for $\theta<\underline{\theta} \vee \theta > \bar{\theta}$. I now check if $\underline{\theta} > \theta^*$, to obtain:

$$1+6\delta-6\delta^2-12\delta^3+11\delta^4+2\delta^5-\delta^6>0 \tag{A.3.6}$$

It is easy to check that for $\delta=0$ and $\delta=\frac{1}{2}$, $\underline{\theta}>\theta^*$. With the help of a software, it is easy to see that for $0<\delta<\frac{1}{2}$, inequality A.3.6 is positive.

A.4 Comparative statics

In this section, I perform comparative statics of the threshold value $\bar{\chi} \coloneqq f(\chi)=0$. I start rewriting equation A.3.1 here:

$$f(\chi) \coloneqq \frac{A_y}{\theta^{\beta_y}}\left\{\sqrt{\frac{\delta}{(1-\delta)}}\theta-\left[1+\frac{(1-2\chi)\delta^2(\theta-1)^2(1-\delta)[1-\delta(1-2\chi)]}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]}\right]\right\} \tag{A.4.1}$$

Import shock The partial derivative of the function A.4.1 with respect to import shock θ is:

$$\begin{aligned}\frac{d\bar{\chi}}{d\theta} &= -\frac{\frac{\partial f(\chi)}{\partial\theta}}{\frac{\partial f(\chi)}{\partial\chi}} \\ &= -\frac{\frac{A_y}{\theta^{\beta_y+1}}\left\{\sqrt{\frac{\delta}{(1-\delta)}}\theta\left[\frac{1}{2}-\beta_y\right]+\beta_y-\frac{(1-2\chi)\delta^2(\theta-1)(1-\delta)[1-\delta(1-2\chi)]\{\theta(2-\beta_y)+\beta_y+\delta(\theta-1)[\theta(1-\beta_y)+\beta_y]\}}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]^2}\right\}}{\frac{\partial f(\chi)}{\partial\chi}}\end{aligned} \tag{A.4.2}$$

The sign of $A.4.2$depends on χ and θ. For $\chi=\frac{1}{2}$, $\frac{\partial f(\chi)}{\partial\theta}>0$ and $\frac{d\bar{\chi}}{d\theta}<0\ \forall\theta$. For $\chi=0$, the derivative $\frac{\partial f(\chi)}{\partial\theta}$ becomes:

$$\frac{\partial f(\chi)}{\partial\theta}=\frac{A_y}{\theta^{\beta_y+1}}\left\{\sqrt{\frac{\delta}{(1-\delta)}}\theta\left[\frac{1}{2}-\beta_y\right]+\beta_y-\frac{\delta^2(\theta-1)\{\theta(2-\beta_y)+\beta_y+\delta(\theta-1)[\theta(1-\beta_y)+\beta_y]\}}{2[1+\delta(\theta-1)]^2}\right\} \tag{A.4.3}$$

Clearly, if $\theta = 1$, $\frac{\partial f(\chi)}{\partial \theta} > 0$. Further, since $f(\chi = \frac{1}{2}) > 0$ if $\theta^* > \frac{(1-\delta)}{\delta}$ and $f(\chi = 0) < 0$ for $\theta^* < \theta < \underline{\theta} \vee \theta > \bar{\theta}$, it follows that there exists a threshold value $\theta^\star$ such that if $\theta < \theta^\star$, then $\frac{\partial f(\chi=0)}{\partial \theta} > 0$. If $\theta > \theta^\star$, $\frac{\partial f(\chi=0)}{\partial \theta} < 0$. Since the function is monotonic in χ, then $f(\chi = \frac{1}{2}) > f(\chi = 0)$ $\forall \theta$, which guarantees that:

- If $\theta < \theta^\star$, then $\frac{\partial f(\chi)}{\partial \theta} > 0$ and $\frac{d\bar{\chi}}{d\theta} < 0$, $\forall \chi$.
- If $\theta > \theta^\star$:
  - if $\chi < \chi^*$, then $\frac{\partial f(\chi)}{\partial \theta} < 0$ and $\frac{d\bar{\chi}}{d\theta} > 0$.
  - if $\chi > \chi^*$, then $\frac{\partial f(\chi)}{\partial \theta} > 0$ and $\frac{d\bar{\chi}}{d\theta} < 0$.

Growth shock. Consider Neutral technological change. Such type of growth does not move the threshold value, i.e., $\frac{d\bar{\chi}}{dA_y} = 0$. However, it moves along the function $f(\chi)$. The partial derivative of A.4.1 with respect to technological change A_y is:

$$\frac{\partial f(\chi)}{\partial A_y} = \frac{1}{\theta^{\beta_y}} \left\{ \sqrt{\frac{\delta}{(1-\delta)}}\theta - \left[1 + \frac{(1-2\chi)\delta^2(\theta-1)^2(1-\delta)[1-\delta(1-2\chi)]}{2[1-\chi-\delta+2\chi\delta]^2[1+\delta(\theta-1)]} \right] \right\} \tag{A.4.4}$$

The sign of A.4.4 depends on the sign of $f(\chi)$. If $\chi < \bar{\chi}$, then $\frac{\partial f(\chi)}{\partial A_y} < 0$, while if $\chi > \bar{\chi}$, then $\frac{\partial f(\chi)}{\partial A_y} > 0$.

A.5 The Hecksher and Ohlin model and the effect of the tariff

A.5.1 Autarky equilibrium values

The absolute equilibrium values are:

$$p^*_{xc} = \left(\frac{1}{\theta^A}\right)^{\beta_y - \beta_x} \frac{A_y}{A_x} \tag{A.5.1}$$

$$p^*_{yc} = 1 \tag{A.5.2}$$

$$w^*_c = \left(\frac{1}{\theta^A}\right)^{\beta_y} A_y \tag{A.5.3}$$

$$r^*_c = \left(\theta^A\right)^{1-\beta_y} A_y \tag{A.5.4}$$

$$X^*_c = \alpha L_c^{1-\beta_x} K_c^{\beta_x} \frac{(1+\phi)}{\phi^{\beta_x}} A_x \tag{A.5.5}$$

$$Y^*_c = (1-\alpha) L_c^{1-\beta_y} K_c^{\beta_y} \frac{(1+\phi)}{\phi^{\beta_y}} A_y \tag{A.5.6}$$

where $\phi = \frac{\beta_x\alpha + \beta_y(1-\alpha)}{1-[\beta_x\alpha+\beta_y(1-\alpha)]}$ and $\theta^A = \frac{L_c}{K_c}\phi$, β_g is the cost share of good g, α parametrises preferences from a Cobb-Douglas (CD). A_y and A_x are TFP parameters coming from the CD

production function. For sector X, this is: $X_c = A_x \left(\frac{K_c}{\beta_x}\right)^{\beta_x} \left(\frac{L_c}{1-\beta_x}\right)^{1-\beta_x}$ The relative values are:

$$p_i^* = \frac{p_{xc}}{p_{yc}} = \left(\theta^A\right)^{\beta_x - \beta_y} \frac{A_y}{A_x} \tag{A.5.7}$$

$$\rho_c^* = \frac{r_c}{w_c} = \theta^A \tag{A.5.8}$$

$$x_c^* = \frac{X_c}{Y_c} = \frac{\alpha}{(1-\alpha)} \left(\theta^A\right)^{\beta_y - \beta_x} \frac{A_x}{A_y} \tag{A.5.9}$$

A.5.2 FT equilibrium values

Solving the system using the same method as in autarky, and treating the two countries world as an integrated economy, I get the FT equilibrium values (denoted by $\star$):

$$p_x^{FT} = \left(\frac{1}{\theta}\right)^{\beta_y - \beta_x} \frac{A_y}{A_x} \tag{A.5.10}$$

$$p_y^{FT} = 1 \tag{A.5.11}$$

$$w^{FT} = \frac{1}{\theta^{\beta_y}} A_y \tag{A.5.12}$$

$$r^{FT} = (\theta)^{1-\beta_y} A_y \tag{A.5.13}$$

$$X^{FT} = \alpha \bar{L}^{1-\beta_x} \bar{K}^{\beta_x} \frac{(1+\phi)}{\phi^{\beta_x}} A_x \tag{A.5.14}$$

$$Y^{FT} = (1-\alpha) \bar{L}^{1-\beta_y} \bar{K}^{\beta_y} \frac{(1+\phi)}{\phi^{\beta_y}} A_y \tag{A.5.15}$$

I recall that $\phi = \frac{\beta_x \alpha + \beta_y (1-\alpha)}{1-[\beta_x \alpha + \beta_y (1-\alpha)]}$ and $\theta = \frac{\bar{L}}{\bar{K}} \phi$.

The optimal supply equations by country are:

$$X_c^{S\star} = \frac{1}{(\beta_x - \beta_y)} L_c \left(\frac{\varkappa}{\phi}\right)^{\beta_x} \left((1-\beta_y)\phi \frac{\varkappa_c}{\varkappa} A_x - \beta_y A_y\right) \tag{A.5.16}$$

$$Y_c^{S\star} = \frac{1}{(\beta_y - \beta_x)} L_c \left(\frac{\varkappa}{\phi}\right)^{\beta_y} \left((1-\beta_x)\phi \frac{\varkappa_c}{\varkappa} A_y - \beta_x A_x\right) \tag{A.5.17}$$

where I recall that $\varkappa = \frac{\bar{K}}{\bar{L}}$ and $\varkappa_c = \frac{K_c}{L_c}$.

And the optimal demand by country are:

$$X_c^{D\star} = \alpha L_c \left(\frac{\varkappa}{\phi}\right)^{\beta_x} \left(1 + \phi \frac{\varkappa_c}{\varkappa}\right) \tag{A.5.18}$$

$$Y_c^{D\star} = (1-\alpha) L_c \left(\frac{\varkappa}{\phi}\right)^{\beta_y} \left(1 + \phi \frac{\varkappa_c}{\varkappa}\right) \tag{A.5.19}$$

And the optimal export and imports by country are:

$$Y_1^{S*} - Y_1^{D*} = \frac{\gamma(s_{K1} - s_{L1})}{(\beta_x - \beta_y)\phi^{\beta_y}} \bar{L}^{1-\beta_y} \bar{K}^{\beta_y} \tag{A.5.20}$$

$$X_1^{S*} - X_1^{D*} = \frac{\gamma(s_{K1} - s_{L1})}{(\beta_x - \beta_y)\phi^{\beta_x}} \bar{L}^{1-\beta_x} \bar{K}^{\beta_x} \tag{A.5.21}$$

Hence if sector X is K-intensive ($\beta_x > \beta_y$) and country 1 is relatively K-abundant ($s_{K1} > s_{L1}$), expression A.5.21 is positive so that country 1 is an exporter of good X. This corresponds to the Heckscher-Ohlin Theorem: a country tends to export the good which is using relatively more of the factor that the country is relatively well endowed with.

A.5.3 Proof that real and nominal incomes grow when moving to free-trade

Recall that nominal income is defined as:

$$I^* = w_c^* L_c + r_c^* K_c \tag{A.5.22}$$

$$I^{FT} = w^{FT} L_c + r^{FT} K_c \tag{A.5.23}$$

A.5.3.1 Nominal income

$I^{FT} > I^*$ if $\frac{r^{FT}}{w^{FT}} = \rho^{FT} > \rho_c^* = \frac{r_c^*}{w_c^*}$. If this is true, it means that the increase in the nominal remuneration of capital r is grater than the decrease of the remuneration of labour w following trade liberalisation.

First, let me show that $w_c > w$

$$\left(\frac{K_c}{L_c}\frac{1}{\phi}\right)^{\beta_y} > \left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y}$$

$$s_{Kc} > s_{Lc} \tag{A.5.24}$$

which is true for country 1, the capital abundant one.

Then, proving $\rho^{FT} > \rho_c^*$:

$$\frac{\bar{L}}{\bar{K}}\phi > \frac{L_c}{K_c}\phi$$

$$s_{Kc} > s_{Lc} \tag{A.5.25}$$

which is true for country 1, the capital abundant one.

Thus, I conclude that nominal income under free-trade increases compared to autarky.

A.5.3.2 Real income

First, I define the price index as:

$$\begin{aligned} U_c^{FT} &= \frac{I_c^{FT}}{P^{FT}} \\ X_c^{\star\alpha} Y_c^{\star(1-\alpha)} &= \frac{I_c^{FT}}{P^{FT}} \\ \left(\alpha \frac{I_c^{FT}}{p_x}\right)^{\alpha} \left((1-\alpha)\frac{I_c^{FT}}{p_y}\right)^{1-\alpha} &= \frac{I_c^{FT}}{P^{FT}} \\ P^{FT} &= \left(\frac{p_x}{\alpha}\right)^{\alpha} \left(\frac{p_y}{(1-\alpha)}\right)^{1-\alpha} \end{aligned} \tag{A.5.26}$$

Second, nominal incomes under autarky and free trade are:

$$\begin{aligned} I_c^* &= w^* L_c + r^* K_c \\ &= \left(\frac{K_c}{L_c}\frac{1}{\phi}\right)^{\beta_y} L_c(1+\phi) \end{aligned} \tag{A.5.27}$$

$$\begin{aligned} I_c^{FT} &= w^{FT} L_c + r^{FT} K_c \\ &= \left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y} \bar{L}(s_{Lc} + s_{Kc}\phi) \end{aligned} \tag{A.5.28}$$

Third, I define real income as $\frac{I}{P}$. I need that real income under autarky to be smaller than real income under free trade:

$$\begin{aligned} \frac{I_c^{FT}}{P^{FT}} &> \frac{I_c^*}{P^*} \\ \frac{I_c^{FT}}{I_c^*} &> \frac{P^{FT}}{P^*} \\ \frac{\left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y} \bar{L}(s_{Lc} + s_{Kc}\phi)}{\left(\frac{K_c}{L_c}\frac{1}{\phi}\right)^{\beta_y} L_c(1+\phi)} &> \frac{\left(\frac{p_x}{\alpha}\right)^{\alpha} \left(\frac{p_y}{(1-\alpha)}\right)^{1-\alpha}}{\left(\frac{p_{xc}}{\alpha}\right)^{\alpha} \left(\frac{p_{yc}}{(1-\alpha)}\right)^{1-\alpha}} \\ \frac{\left(\frac{K_c}{L_c}\frac{1}{\phi}\right)^{\beta_y} L_c(1+\phi)}{\left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y} \bar{L}(s_{Lc} + s_{Kc}\phi)} &> \frac{\left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y-\beta_x}}{\left(\frac{K_c}{L_c}\frac{1}{\phi}\right)^{\beta_y-\beta_x}} \\ \left(\frac{K_c}{L_c}\right)^{2\beta_y-\beta_x} s_{Lc} &> \left(\frac{\bar{K}}{\bar{L}}\right)^{2\beta_y-\beta_x} [(1-\gamma)s_{Lc} + s_{Kc}\gamma] \end{aligned} \tag{A.5.29}$$

In line three I replace the prices with the equilibrium values. If the inequality is true, it means that real income increases when moving to free trade. First, notice that $\frac{K_c}{L_c} > \frac{\bar{K}}{\bar{L}}$ is true since it is equivalent to $s_{Kc} = \frac{K_c}{\bar{K}} > \frac{L_c}{\bar{L}} = s_{Lc}$, and since country 1 is capital abundant by assumption,

$s_{Kc} > s_{Lc}$. Second, $s_{Lc} < [(1-\gamma)s_{Lc} + s_{Kc}\gamma]$. Thus, the inequality A.5.29 holds if and only if:

$$\begin{aligned} s_{Kc}^{2\beta_y-\beta_x} - s_{Lc}^{2\beta_y-\beta_x} &> s_{Lc} - [(1-\gamma)s_{Lc} + s_{Kc}\gamma] \\ s_{Kc}^{2\beta_y-\beta_x} - s_{Lc}^{2\beta_y-\beta_x} &> \gamma(s_{Lc} - s_{Kc}) \end{aligned} \tag{A.5.30}$$

which is true since in country 1 $s_{K1} > s_{L1}$.

I finally conclude that, if the 2 sectors in country 1 are not too different in capital intensity (i.e. $\beta_y > \frac{\beta_x}{2}$), real incomes are higher under FT in country 1. I think that in case sector y did not employed enough capital, most of the workers would be relocated to the industry x when moving to free trade and wage would decreases even further than if production of y remained higher (i.e., in case it employed enough capital, so that the country 1 would not produce more and more of x to export and import more and more of y).

A.5.4 Introducing the tariff

Notation: In this section, everything that has a subscript t is equivalent to P, i.e., the PAS party equilibrium values under the tariff.

I now introduce the tariff on import of country 1, the labour intensive good y. Assuming that country 1 is sufficiently small in consumption of good y ensures that the tariff does not modify the terms of trade between country 1 and 2.

The introduction of the tariff will increase production of the good y, now relatively more profitable. Its production will expand, reducing the amount of imports from country 2, while the production of x will contract, as well as the quantity of x exported. This shift in production will be accompanied by a transfer of both labour and capital from the x industry to the y industry. But by a reduction in the production of x, more capital will be released than can be re-employed at the same rates in the production of y. This is because the amount of labour released, while insufficient to employ a unit of capital in the production of x, is sufficient to employ it in y. Hence, there is over-supply of capital, which pushes down its remuneration ,i.e., r, and it follows from the changed factor proportions that the real wage must also decline, i.e., the price falls as well. In the y industry instead, the increase in labour employment due to the shift in production increases the remuneration of y, i.e., w.

Thus, the tariff will reduce trade between countries, reducing exports and imports, but leaving the terms of trade unchanged (because of the small country assumption).

Also, the revenues from the tariff are (equally) redistributed to the citizens in society.

A.5.4.1 The tariff

Notation: In this section, everything that has a subscript t is equivalent to P, i.e., the PAS party equilibrium values under the tariff.

I now focus on country 1 and its internal structure. Recall that profit maximisation (p=mc) and free entry (p=AC) give the same condition in perfect competition:

$$p_{gi} = r_c^{\beta_{gi}} w_c^{1-\beta_{gi}}$$

From the p=mc we have:

$$\frac{p_{xc}}{p_{yc}} = \left(\frac{r_c}{w_c}\right)^{\beta_x - \beta_y}$$

This is the Stopler-Samuelson theorem: there is a one-to-one correspondence between relative price of goods and relative price of factors.

I now introduce the tariff on the price of good y such that $p_y^t = p_y^{FT}(1+t)$:

$$\frac{p_{xc}^{FT}}{p_{yc}^t} = \left(\frac{r_c^{FT}}{w_c^{FT}}\right)^{\beta_x - \beta_y} \tag{A.5.31}$$

The introduction of the tariff in country 1 modifies the equilibrium values of factor prices and good prices in country 1. Solving equation A.5.31 for the factor price of capital, referred to as r_c^t, I obtain:

$$r_c^t = \left(\frac{p_{xc}^{FT}}{p_{yc}^t}\right)^{\frac{1}{\beta_x - \beta_y}} w^{FT}$$

I now substitute the equilibrium values resulting from free trade, i.e., $\frac{p_x^{FT}}{p_y^{FT}} = \left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y - \beta_x}$ and $w^{FT} = \left(\frac{\bar{K}}{\bar{L}}\frac{1}{\phi}\right)^{\beta_y}$, and I obtain the value of r modified by the tariff (remember that $\frac{p_x^{FT}}{p_y^t} = \frac{p_x^{FT}}{p_y^{FT}(1+t)}$):

$$\begin{aligned} r_c^t &= (\theta)\,\frac{1}{\theta^{\beta_y}}(1+t)^{\frac{1}{\beta_x - \beta_y}} \\ r_c^t &= (\theta)^{1-\beta_y}\,\frac{1}{(1+t)^{\frac{1}{\beta_x - \beta_y}}} \end{aligned} \tag{A.5.32}$$

Solving A.5.31 for w_c^{FT} and substituting A.5.32, I obtain:

$$w_c^t = \left(\frac{1}{\theta}\right)^{\beta_y} (1+t)^{\frac{1}{\beta_x - \beta_y}} \tag{A.5.33}$$

Equations A.5.32 and A.5.33 are the factor prices equilibrium values after the introduction of the

tariff. The relative value is:

$$\rho_c^t = \frac{r_c^t}{w_c^t} = (\theta)\,(1+t)^{\frac{2}{\beta_y-\beta_x}} \tag{A.5.34}$$

Substituting A.5.34 in A.5.31, I obtain the price of good x:

$$p_{xc}^t = (\theta)^{\beta_x-\beta_y}\,\frac{1}{(1+t)} \tag{A.5.35}$$

As we can see, the tariff increases the price of good y and the price of the factor intensively employed in its production, w, while it dampens the price of good x and the remuneration of the factor intensively used in its production, r.

To sum up the equilibrium values in country A modified by the tariff are:

$$r_c^t = (\theta)^{1-\beta_y}\,\frac{1}{(1+t)^{\frac{1}{\beta_x-\beta_y}}} \tag{A.5.36}$$

$$w_c^t = \left(\frac{1}{\theta}\right)^{\beta_y}(1+t)^{\frac{1}{\beta_x-\beta_y}} \tag{A.5.37}$$

$$p_{xc}^t = (\theta)^{\beta_x-\beta_y}\,\frac{1}{(1+t)} \tag{A.5.38}$$

$$p_{yc}^t = p_y^{FT}(1+t) \tag{A.5.39}$$

A.6 H-O assumptions to fit the story.

A.6.1 HO conditions

(i) $\frac{K_1}{L_1} > \frac{K_2}{L_2}$

(ii) $\beta_x > \frac{1}{2}$ **and** $\beta_y < \frac{1}{2}$

(iii) $r^{FT} > w^{FT}$ **if** $\theta > 1$**(A.6.3).**

(iv) $r^P > w^P \iff \theta > (1+t)^{\frac{2}{\beta_x-\beta_y}} \iff t < (\theta)^{\frac{\beta_x-\beta_y}{2}} - 1$ **(A.6.4)**

(v) $\bar{w}^M > \bar{w}^P \iff t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\beta_x-\beta_y} - 1$ **(A.6.5).**

(vi) $\frac{\partial \bar{w}^P}{\partial t} < 0 \iff t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$ **(A.6.6)**

(vii) from previous four points $t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$, such that $\frac{\delta r^P}{\bar{w}^P} = \frac{(1-\delta)w^P}{\bar{w}^P}$ (A.6.7)

A.6.2 Autarky-wages comparison

In the model I also assume that the wage of capitalist in autarky is higher then the wage of worker. In a capital abundant country this is equivalent to say:

$$\begin{aligned} r^* &> w^* \\ \left(\frac{L_1}{K_1}\phi\right)^{1-\beta_y} &> \left(\frac{K_1}{L_1}\frac{1}{\phi}\right)^{\beta_y} \\ \left(\theta^A\right) &> 1 \end{aligned}$$

A.6.3 FT-wages comparison

Further I check the condition for which the wage of capitalist is larger than the one of worker in free trade:

$$\begin{aligned} r^M &> w^M \\ (\theta)^{1-\beta_y} &> \left(\frac{1}{\theta}\right)^{\beta_y} \\ \theta &> 1 \end{aligned} \tag{A.6.1}$$

A.6.4 Tariff-wages comparison

and the condition such that the tariff do not invert the ordering of wages:

$$\begin{aligned} r^P &> w^P \\ (\theta)^{1-\beta_y}\ \frac{1}{(1+t)^{\frac{1}{\beta_x-\beta_y}}} &> \frac{1}{\theta^{\beta_y}}(1+t)^{\frac{1}{\beta_x-\beta_y}} \\ (1+t)^{\frac{2}{\beta_x-\beta_y}} &< \theta \\ t &< (\theta)^{\frac{\beta_x-\beta_y}{2}} - 1 \end{aligned} \tag{A.6.2}$$

A.6.5 Average income comparison

I check the condition for which $\bar{w}^M > \bar{w}^P$:

$$\begin{aligned} \bar{w}^M &> \bar{w}^P \\ (1-\delta)w^M + \delta r^M &> (1-\delta)w^P + \delta r^P \\ (1-\delta)(w^M - w^P) &> \delta(r^P - r^M) \end{aligned}$$

$$(1-\delta)\left(\frac{1}{\theta}\right)^{\beta_y}\left[1-(1+t)^{\frac{1}{\beta_x-\beta_y}}\right] > \delta\left(\frac{1}{\theta}\right)^{\beta_y}\theta\left[\frac{1}{(1+t)^{\frac{1}{\beta_x-\beta_y}}}-1\right]$$

$$t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\beta_x-\beta_y} - 1 \tag{A.6.3}$$

Further, the condition holds if and only if $\left[\frac{\delta}{(1-\delta)}\theta\right]^{\beta_x-\beta_y} - 1 > 1$, that is if $\frac{\delta}{(1-\delta)}\theta > 1$.

A.6.6 Average income wrt to tariff

Given average income

$$\bar{w}^P = (1-\delta)w^P + \delta r^P = \frac{1}{\theta^{\beta_y}}\left[(1-\delta)(1+t)^{\frac{1}{\beta_x-\beta_y}} + \delta\theta\frac{1}{(1+t)^{\frac{1}{\beta_x-\beta_y}}}\right]$$

its derivative with respect to the tariff t is:

$$\begin{aligned}\frac{\partial\bar{w}^P}{\partial t} &= \frac{1}{\theta^{\beta_y}}\left[(1-\delta)\frac{1}{\beta_x-\beta_y}(1+t)^{\frac{1-\beta_x+\beta_y}{\beta_x-\beta_y}} - \delta\frac{1}{\beta_x-\beta_y}\theta\frac{1}{(1+t)^{\frac{1+\beta_x-\beta_y}{\beta_x-\beta_y}}}\right] \\ &= \frac{1}{\theta^{\beta_y}}\frac{1}{\beta_x-\beta_y}\left[(1-\delta)(1+t)^{\frac{1-\beta_x+\beta_y}{\beta_x-\beta_y}} - \delta\theta\frac{1}{(1+t)^{\frac{1+\beta_x-\beta_y}{\beta_x-\beta_y}}}\right]\end{aligned}$$

and the derivative its negative if

$$\begin{aligned}(1-\delta)(1+t)^{\frac{1-\beta_x+\beta_y}{\beta_x-\beta_y}} &< \delta\theta\frac{1}{(1+t)^{\frac{1+\beta_x-\beta_y}{\beta_x-\beta_y}}} \\ t &< \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1\end{aligned} \tag{A.6.4}$$

A.6.7 Restriction on tariff

From A.6.2, A.6.3 and A.6.4, we know respectively that

- $t < (\theta)^{\frac{\beta_x-\beta_y}{2}} - 1$
- $t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\beta_x-\beta_y} - 1$
- $t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$

I know check which condition is true:

$$\left[\frac{\delta}{(1-\delta)}\theta\right]^{\beta_x-\beta_y} - 1 > \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$$

$$\frac{\delta}{1-\delta}\theta > 1 \tag{A.6.5}$$

which is true (see A.6.3).

I also check if:

$$\begin{aligned}(\theta)^{\frac{\beta_x-\beta_y}{2}} - 1 &> \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1 \\ 1 &> \frac{\delta}{1-\delta}\end{aligned} \tag{A.6.6}$$

which is true.

I conclude that the tariff must be such that $t < \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$. I must stress that this level of the tariff is such that the capitalists' share and workers' share are equal:

$$\begin{aligned}\frac{(1-\delta)w^P}{\bar{w}^P} &= \frac{(1-\delta)w^p(1+t)^{\frac{1}{\beta_x-\beta_y}}}{w^p\frac{\left[(1+t)^{\frac{2}{\beta_x-\beta_y}}+\delta\left(\theta-(1+t)^{\frac{2}{\beta_x-\beta_y}}\right)\right]}{(1+t)^{\frac{1}{\beta_x-\beta_y}}}} \\ &= \frac{(1-\delta)(1+t)^{\frac{2}{\beta_x-\beta_y}}}{(1+t)^{\frac{2}{\beta_x-\beta_y}} + \delta\left(\theta-(1+t)^{\frac{2}{\beta_x-\beta_y}}\right)} \\ &= \frac{(1-\delta)\frac{\delta}{(1-\delta)}\theta}{\frac{\delta}{(1-\delta)}\theta + \delta\left(\theta-\frac{\delta}{(1-\delta)}\theta\right)} \\ &= \frac{1}{2}\end{aligned}$$

where in line three I substitute $t = \left[\frac{\delta}{(1-\delta)}\theta\right]^{\frac{\beta_x-\beta_y}{2}} - 1$.

B Empirical appendix

Figure A.1: Marginal effects

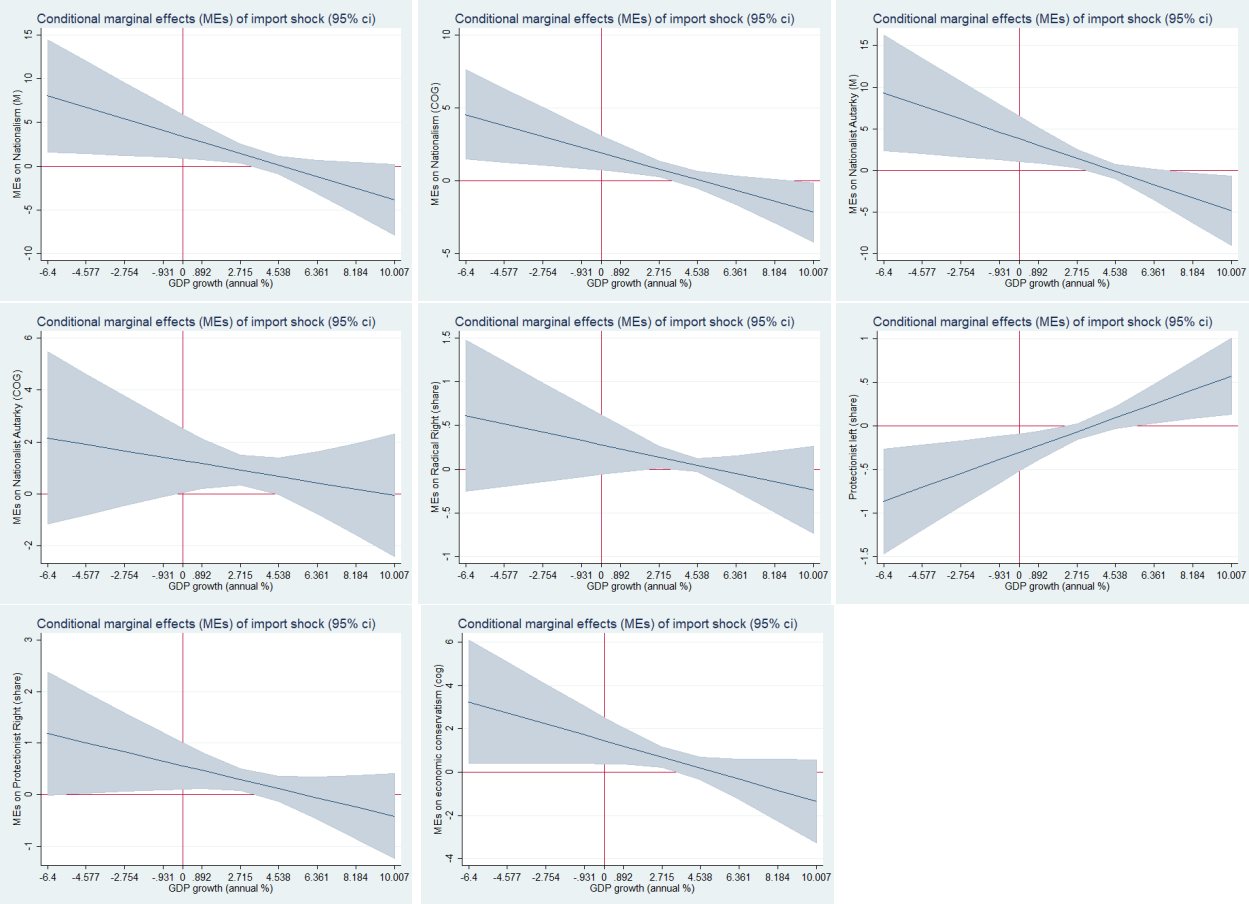

Table A.1: Robustness check 1 - Controlling for different measures of trade openness

IV: Import shock from all countries	(1) Nationalism M	(2) Nationalism COG	(3) Nationalist Autarchy M	(4) Nationalist Autarchy (COG)	(5) Radical Right (S)
$\Delta IMall_t$	0.365	0.199^{+}	0.259	-0.00912	0.109^{+}
	(0.290)	(0.107)	(0.192)	(0.113)	(0.0618)
ΔGDP_t $\Delta IMall_t$	-0.0113	-0.0352	-0.00956	0.0563	-0.0260
	(0.0986)	(0.0432)	(0.0729)	(0.0517)	(0.0195)
Observations	7782	7782	7782	7782	7782

Control: Import shock from EU	(1) Nationalism M	(2) Nationalism COG	(3) Nationalist Autarchy M	(4) Nationalist Autarchy (COG)	(5) Radical Right (S)
ΔIM_t	3.459**	1.945**	3.641**	1.239*	0.314^{+}
	(1.283)	(0.598)	(1.327)	(0.599)	(0.187)
ΔGDP_t ΔIM_t	-0.638*	-0.386**	-0.647*	-0.0776	-0.0600
	(0.301)	(0.144)	(0.298)	(0.162)	(0.0443)
ΔIM_t^{EU}	0.0740	0.0178	-0.189	-0.0529	0.0408*
	(0.111)	(0.0533)	(0.159)	(0.0704)	(0.0185)
ΔGDP_t ΔIM_t^{EU}	-0.0830^{+}	-0.0206	-0.0496	-0.0115	-0.0123^{+}
	(0.0469)	(0.0217)	(0.0527)	(0.0247)	(0.00656)
Observations	7782	7782	7782	7782	7782

Control: Import shock from EU15-12	(1) Nationalism M	(2) Nationalism COG	(3) Nationalist Autarchy M	(4) Nationalist Autarchy (COG)	(5) Radical Right (S)
ΔIM_t	3.437**	1.930***	3.605**	1.168*	0.298^{+}
	(1.237)	(0.576)	(1.310)	(0.595)	(0.171)
ΔGDP_t ΔIM_t	-0.675*	-0.386**	-0.719*	-0.0748	-0.0622
	(0.303)	(0.141)	(0.305)	(0.163)	(0.0418)
ΔIM_t^{EU15}	0.0770	0.0151	-0.181	-0.0665	0.0382*
	(0.120)	(0.0580)	(0.166)	(0.0719)	(0.0170)
ΔGDP_t ΔIM_t^{EU15}	-0.0902^{+}	-0.0201	-0.0635	-0.00861	-0.0122^{+}
	(0.0498)	(0.0234)	(0.0557)	(0.0251)	(0.00625)
ΔIM_t^{EU12}	0.567	0.139	0.701	0.504	0.195
	(0.650)	(0.316)	(0.898)	(0.432)	(0.132)
ΔGDP_t ΔIM_t^{EU12}	-0.0571	-0.0395	0.00855	-0.106	-0.0305
	(0.236)	(0.101)	(0.215)	(0.124)	(0.0347)
Observations	7782	7782	7782	7782	7782

Control: FDI flows & export growth	(1) Nationalism M	(2) Nationalism COG	(3) Nationalist Autarchy M	(4) Nationalist Autarchy (COG)	(5) Radical Right (S)
ΔIM_t	3.584*	1.600**	4.229**	1.215^{+}	0.274
	(1.421)	(0.589)	(1.612)	(0.674)	(0.170)
ΔGDP_t ΔIM_t	-0.737*	-0.375*	-0.893*	-0.137	-0.0576
	(0.350)	(0.149)	(0.378)	(0.155)	(0.0423)
Export Growth	0.112	0.0677^{+}	0.0460	0.0749	0.0270^{+}
	(0.0773)	(0.0411)	(0.0722)	(0.0499)	(0.0142)
ΔGDP_t $(ExportGrowth)$	-0.0461^{+}	-0.0151	-0.0410^{+}	-0.0307*	-0.00653^{+}
	(0.0264)	(0.0154)	(0.0245)	(0.0147)	(0.00364)
FDI inflow	-0.0700	0.0520	-0.242	0.251^{+}	0.0509^{+}
	(0.204)	(0.123)	(0.268)	(0.143)	(0.0291)
ΔGDP_t $(FDIinflow)$	0.0228	-0.00578	0.0425	-0.0366	-0.00836
	(0.0403)	(0.0255)	(0.0499)	(0.0281)	(0.00605)
Fdi outflow	-0.101	0.00865	0.00257	-0.149	-0.0564
	(0.247)	(0.171)	(0.281)	(0.205)	(0.0449)
ΔGDP_t $(FDIoutflow)$	0.0326	-0.00673	0.0192	0.0252	0.0123
	(0.0623)	(0.0439)	(0.0597)	(0.0457)	(0.0104)
Observations	7641	7641	7641	7641	7641

Standard errors in parentheses
$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.2: Robustness check 2 - including region-specific trends based on historical:

Region-specific trends based on historical:	Employment share of primary sector	Employment share of service	Employment share of: finance and business services	Employment share of high-tech industries	Employment share of low- and medium-tech industries	Employment share of low-skill workers	Employment share of high-skill workers	Employment share in population	Share of foreign-born Nationalism	Stock of foreign-born in population
Dep. variable										
Nationalism (M)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ΔIM_t	3.161**	4.588**	2.843*	4.869**	3.692**	3.796**	8.805***	4.806**	3.495*	4.514**
	(1.196)	(1.408)	(1.130)	(1.722)	(1.241)	(1.251)	(2.256)	(1.796)	(1.501)	(1.501)
$\Delta GDP_t\ \Delta IM_t$	-0.676*	-0.989**	-0.442	-1.153*	-0.662+	-0.812*	-2.464***	-1.130*	-0.770+	-0.975*
	(0.314)	(0.378)	(0.304)	(0.580)	(0.348)	(0.326)	(0.740)	(0.507)	(0.399)	(0.387)
Observations	6113	6113	7067	7656	7656	7545	7656	7656	7656	7656
Dep. variable										
Nationalism (COG)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ΔIM_t	2.209***	2.537***	2.416***	2.948***	2.876***	2.404***	4.045***	2.456**	2.499**	2.671***
	(0.621)	(0.680)	(0.699)	(0.814)	(0.724)	(0.655)	(0.959)	(0.807)	(0.800)	(0.703)
$\Delta GDP_t\ \Delta IM_t$	-0.522***	-0.587***	-0.523**	-0.782**	-0.645***	-0.564***	-1.121***	-0.584**	-0.605**	-0.614***
	(0.155)	(0.176)	(0.164)	(0.270)	(0.183)	(0.167)	(0.306)	(0.212)	(0.206)	(0.167)
Observations	6113	6113	7067	7656	7656	7545	7656	7656	7656	7656
Dep. variable										
Nationalist Autarchy (M)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ΔIM_t	3.983**	4.656**	2.980*	4.217*	4.049**	3.816**	6.718**	4.130*	2.911*	4.417**
	(1.484)	(1.546)	(1.285)	(1.909)	(1.463)	(1.338)	(2.094)	(1.779)	(1.471)	(1.541)
$\Delta GDP_t\ \Delta IM_t$	-1.005**	-1.114**	-0.604+	-1.020+	-0.900*	-0.900**	-1.726**	-0.891*	-0.662+	-0.973**
	(0.390)	(0.394)	(0.327)	(0.562)	(0.371)	(0.335)	(0.611)	(0.452)	(0.382)	(0.360)
Observations	6113	6113	7067	7656	7656	7545	7656	7656	7656	7656
Dep. variable										
Nationalist Autarchy (COG)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ΔIM_t	1.940**	2.130**	1.756*	2.062*	2.244**	2.083**	3.386***	1.751*	1.834*	2.150**
	(0.643)	(0.722)	(0.705)	(0.917)	(0.745)	(0.656)	(0.952)	(0.853)	(0.792)	(0.691)
$\Delta GDP_t\ \Delta IM_t$	-0.382**	-0.406*	-0.310+	-0.367	-0.435*	-0.428**	-0.694**	-0.283	-0.362+	-0.413**
	(0.141)	(0.168)	(0.172)	(0.257)	(0.181)	(0.151)	(0.262)	(0.219)	(0.197)	(0.154)
Observations	6113	6113	7067	7656	7656	7545	7656	7656	7656	7656
Dep. variable										
Radical Right (S)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ΔIM_t	0.120+	0.194+	0.154	0.387*	0.298+	0.277	0.211	0.443+	0.335+	0.433+
	(0.0699)	(0.107)	(0.116)	(0.182)	(0.167)	(0.181)	(0.137)	(0.267)	(0.188)	(0.236)
$\Delta GDP_t\ \Delta IM_t$	-0.00868	-0.0293	-0.0218	-0.0728	-0.0548	-0.0521	-0.0210	-0.0964	-0.0767	-0.0938
	(0.0182)	(0.0275)	(0.0299)	(0.0498)	(0.0446)	(0.0472)	(0.0378)	(0.0711)	(0.0490)	(0.0611)
Observations	6113	6113	7067	7656	7656	7545	7656	7656	7656	7656

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.3: Robustness check 3 - testing the IV exclusion restriction

1) Excluding mchinery and computers (nace DL)	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	4.341***	2.661^{+}	0.403
	(1.290)	(1.480)	(0.261)
$\Delta GDP_t \, \Delta IM_t$	-0.736*	-0.292	-0.0630
	(0.314)	(0.372)	(0.0608)
Observations	7782	7782	7782
2) Excluding Construction materials (nace DI-DJ)	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	1.940**	1.345*	0.268
	(0.614)	(0.639)	(0.169)
$\Delta GDP_t \, \Delta IM_t$	-0.417**	-0.135	-0.0478
	(0.158)	(0.174)	(0.0402)
Observations	7782	7782	7782
3) Excluding Oil (nace DF)	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	1.923**	1.275*	0.282
	(0.596)	(0.620)	(0.175)
$\Delta GDP_t \, \Delta IM_t$	-0.405**	-0.132	-0.0518
	(0.153)	(0.171)	(0.0426)
Observations	7782	7782	7782
4) Excluding Textile-Leather (nace DB-DC)	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	2.230**	1.767*	0.447^{+}
	(0.683)	(0.692)	(0.262)
$\Delta GDP_t \, \Delta IM_t$	-0.574**	-0.259	-0.0890
	(0.202)	(0.181)	(0.0661)
Observations	7782	7782	7782
5) Instrument other high-income countries	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	2.123**	1.280*	0.649^{+}
	(0.662)	(0.562)	(0.343)
$\Delta GDP_t \, \Delta IM_t$	-0.537**	-0.220	-0.153^{+}
	(0.197)	(0.148)	(0.0904)
Observations	8181	8181	8181
6) Instrument: regional effective exchange rates	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	2.661^{+}	1.673	0.956
	(1.500)	(1.812)	(0.649)
$\Delta GDP_t \, \Delta IM_t$	-0.219	-0.223	-0.244
	(0.448)	(0.476)	(0.184)
Observations	8181	8181	8181
7) Excluding Belgium and Netherlands	(1) Nationalism (COG)	(2) Nationalist Autarchy (COG)	(3) Radical Right (Share)
ΔIM_t	2.390**	0.954	0.416
	(0.766)	(0.831)	(0.275)
$\Delta GDP_t \, \Delta IM_t$	-0.434^{+}	0.167	-0.0590
	(0.242)	(0.239)	(0.0646)
Observations	7595	7595	7595

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$