

# Global Crises and Populism: the Role of Eurozone Institutions\*

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## Abstract

Populist parties are likely to gain consensus when mainstream parties fail to satisfactorily manage the shocks faced by their economies. Institutional constraints, which limit the possible actions in the face of shocks, result in poorer performance and frustration among voters who, disappointed with mainstream parties, may turn consensus to populist movements. We rely on this logic to explain the different support of populist parties among European countries in response to globalization shocks and to the 2008-2011 financial and sovereign debt crisis. We predict a greater success of populist parties in response to these shocks in Euro area countries, and our empirical analysis confirms this prediction. This is consistent with voters' frustration for the greater inability of the Euro zone governments to react to difficult-to-manage globalization shocks and financial crises. Our evidence has implications for the speed of construction of political unions. A slow, staged process of political unification can expose the EU to a risk of political backlash if hard to manage shocks hit the economies during the integration process.

**Keywords:** Frustration, Relocation, Globalization, Financial Dependence, Populism.

**JEL codes:** D72, D78, F14, F16

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# 1 Introduction

Our goal in this paper is to show that the effects of globalization and the financial crisis on voting for populists in a European country crucially depend on whether or not such a country belongs to the Euro-zone. Our hypothesis is that both the increasing competition of Chinese products and firms, and the financial crisis, have stronger effects on fear of economic insecurity in countries within the Euro-zone than in the rest of Europe, and the fear of economic insecurity is the main driver of populism. There are two main intuitive reasons that lead us to the conjecture that fear of economic insecurity grew significantly more in Euro-zone countries: the greater difficulty of Euro-zone countries' policy makers in responding to a shock, due to greater constraints in terms of fiscal and monetary policy; and the greater incentive to relocate production for firms in a Euro-zone country than in the rest of Europe. We will make these two intuitions as precise as possible and we will provide strong evidence in favour of our hypothesis.

Before explaining our hypothesis about the differential effects of shocks on fear of economic insecurity across countries, let us first summarize the recently established connections between fear of economic insecurity and populism. A large number of recent papers have uncovered the importance of economic insecurity shocks to explain the recent wave of populism – see Guiso, Herrera, Morelli and Sonno (2017) and references therein. Zooming in on the nationalism sub-wave in continental Europe, Colantone and Stanig (2017) have highlighted the significant role of the fear of the effects of globalization, the so called “China effect”. The regions where manufacturing plays an important role are the regions where the fear of losing a job due to Chinese competition is highest, and such regions are those where nationalistic sentiments and protection demand kick in the most.<sup>1</sup> The explanation of this finding given in Guiso et al. (2017) is that populism is a three-part phenomenon: (1) anti-elite rhetoric; (2) immediate protection offer; (3) hiding the future costs of the protection policies proposed.<sup>2</sup> For the specific case of the globalization effect, the way this three-part theory works is as follows: the reduction in wages, prices and employment opportunities in western countries creates a first direct effect in terms of immediate perception of economic insecurity; such an economic insecurity perception, if protracted and pervasive, reduces trust in current government policies and institutions and reduces turnout. Then, if there is a widespread perception that government policies don't work on any side, markets or governments (particularly when the institutional constraints make it even harder for government policies to counter the crisis), then populist supply arrives, tempting the voters with an easy protection strategy, such as protectionism, build a wall to protect from migrants, exit from the Euro zone. Such protection policies are insulated from future cost considerations through the populist manipulation strategies: everybody who talks about future costs or complicated solutions is simply depicted as part of the elite and should not be listened to. The same sequence of effects and demand-supply interactions is at play for any form of economic insecurity shocks, including those that can be related to the financial crisis and simultaneous debt crisis in Europe.

In order to start identifying the sources of the differential effects between Euro-zone

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<sup>1</sup>Rodrik (2017) and Guiso et al. (2017) also highlight the role of economic insecurity shocks for the supply of populism.

<sup>2</sup>See Encyclopedia Britannica (2015) as well: <http://www.britannica.com/topic/populism>

and non Euro-zone countries, it is useful to focus first on globalization, anticipating one of our empirical findings. The recognized positive impact of import dependence on populist voting (Steiner, 2012; Autor et al., 2016; Autor et al., 2017; Colantone and Stanig, 2017; Colantone and Stanig, 2017b; Jensen et al., 2016), changes dramatically when the Euro-zone distinction is introduced: all the positive effects on populist voting goes through the interaction with the Euro-zone dummy, while once this interaction effect is considered the import dependence effect changes sign. This sign switch can be explained in part on the basis of relocation incentives and the pattern of inflow and outflow of jobs. Outside the Euro-zone there is less frustration with domestic policy effectiveness, as discussed below. Moreover, a potential relocation effect, from Euro-zone countries to other European countries, more than compensates workers in a European country outside the Euro-zone, for the direct threat of job losses coming from Asia. The low cost of production in China and other Asian countries has been highlighted in the literature and media as the main threat in a world of free trade and globalization, but obviously reality is more “continuous”: costs of labor and production are clearly much higher in Italy than in China, but there is a wide range of values for such variables for countries “in between”, and when a firm decides to relocate away from a high cost and high tax country it may consider a variety of factors, leading to a decision to relocate plants to Hungary, Romania or Serbia rather than going all the way to another continent. Thus, even if a manufacturing region of Romania were to be equally threatened by Chinese competition as a similar Italian region, the former expects an inflow of jobs from Italian firms, compensating the potential Chinese effects.

The above “market and incentives” reasons of a greater fear within the Euro-zone are only one part of the story. The other substantial part concerns institutions. There are many reasons to believe that Euro-zone countries can be more vulnerable to shocks than countries outside the Euro-zone. The two classic policies that can be used to counter shocks, monetary and fiscal, are basically unavailable for individual countries in the Euro-zone, to counter idiosyncratic shocks, since the monetary policy is centralized and fiscal policy is constrained (at the individual country level) and/or absent (at the European level).<sup>3</sup> In spite of all the benefits of monetary integration,<sup>4</sup> the incompleteness of the EMU architecture without a proper fiscal and perhaps political union is often recognized.<sup>5</sup>

Even though there should actually be less blaming of domestic governments in the Euro zone – because the inability to act is due to the additional constraints imposed by the Euro-zone treaties – relative frustration effects go the other way: the observation of how ineffective the government is, drives the disappointed to search for alternative solutions. The frustration effect is a first order consideration, and the root cause of the crisis remains

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<sup>3</sup>See Luque, Morelli and Tavares (2014) and Fahri and Werning (2017) for the phenomenon of increased volatility in the Euro-zone that has been caused by such policy constraints.

<sup>4</sup>See e.g. Mundell (1961), Alesina and Barro (2002), and Baldwin and Wyplosz (2006) for an excellent survey.

<sup>5</sup>Theoretically, Celentani et al. (2004) show that a set of decentralized fiscal entities can lead to inefficient risk sharing, even if countries have access to a sequentially complete financial structure of assets. For an example of policy discussion on the need to complete the Euro-zone institutions with a fiscal union, see e.g. the report of the Tommaso Padoa-Schioppa Group (2012) “Completing the Euro - A road map towards fiscal union in Europe”. The vulnerability to external shocks when both monetary and fiscal policies are constrained for individual countries was a known weakness even before the start of the Euro, but the extent of the problem was not anticipated.

a second order harder to understand consideration. Also, the government is blamed for entry in the Eurozone in the first place.

The market based reasoning and the institutional policy constraint reasoning can also reinforce each other: a firm who decides to relocate away from Italy expects the policy making authorities of a country outside the Euro-zone to be able to respond with greater flexibility to shocks, using monetary as well as fiscal incentives, and these institutional flexibility effects are considered a valuable addition to the lower costs effect.

We will test our general differential hypothesis not only using the globalization shocks but also focusing on the financial crisis. A region's vulnerability to external shock also depends on the financial dependence of the industries operating in the region. Weighing the external dependence of each manufacturing industry (obtained from Rajan and Zingales, 1998) by the labour share of that industry in a given region, we can obtain a measure of financial stress for the citizens of that region. The frustration hypothesis has a clear prediction: regions belonging to the Euro area with more financially dependent firms should suffer more insecurity as a consequence of the crisis and thus vote disproportionately for populist parties compared to similar regions in non Euro-zone countries.

The paper is organized as follows: Section 2 contains a simple theoretical framework to make the two main drivers of our differential hypothesis clear. Section 3 describes our data collection and measuring choices; Section 4 contains our empirical results and section 5 concludes.

## 2 Conceptual framework

In this section we want to provide a theoretical basis for the main hypothesis of the paper. Namely, we rationalize here the frustration and relocation effects, and how these are more present in Euro-zone countries.

### 2.1 Frustration effect

The most common frustration among voters is due to the lack of simple ready solutions to the threats posed by the globalization and financial crisis shocks. Voters seem to desire and believe in a simple fix. Populist followers are more keen to buy the exit from the Euro solution proposed by the populist rhetoric, and disregard the intricate (and more complicated to understand) negative consequences of their solution. The truth may be that there is no quick and easy solution for the globalization and immigration and automatization loss of income problem, but many people, perhaps understandably, don't want to hear that. The drivers of this belief are probably similar to the drivers of the persistence of wrong beliefs in other very different domains.

For instance, despite the fact that this theory has been proven wrong, the belief that vaccines causes autism persist, with dramatic longer term consequences as the rebirth of small epidemics of diseases that had been eradicated. The most effective way to discredit this wrong belief would be to say "We know the real cause of autism: this is the cause of autism, not vaccines." However, the truth is: there is no understood cause of autism. This lack of clear alternative explanation, helps the wrong belief about vaccines to persist

further. Similarly, there is no agreed explanation for and no easy to implement solution to the costs imposed by fast globalization (Rodrik, 2017), leaving the door open to illusory explanation or solutions.

This “behavioral” frustration is clearly stronger in countries within the Euro zone: the fiscal policy constraints imposed by European rules determines lower expected effectiveness and credibility of political promises by traditional parties, and, as a reverse of the medal effect, the simple populist proposals in terms of protectionism and exit from the Euro have great relative impact.

## 2.2 Relocation effect

Consider a firm in, say, Germany (G) that evaluates the costs and benefits to relocate production to, say, Hungary (H). This move from G to H entails relocation costs  $R > 0$ , which may be heterogeneous across firms or industries. The relocation option becomes more profitable after Chinese entry in the firm’s market competition. The following table summarizes the change in cost-benefit analysis due to the China effect:

	Profits in G	Profits in H	Differential
Before Chinese Entry	$\pi^G > 0$	$\pi^H > 0$	$\pi^H - \pi^G < R$
After Chinese Entry	$\pi_C^G < \pi^G$	$\pi_C^H < \pi^H$	$\pi_C^H - \pi_C^G > R$

In sum, global competition from, say, China (C) erodes profits everywhere, but if the erosion of profits is larger in Germany than in Hungary,<sup>6</sup> then relocation is more likely to happen after Chinese entry. More specifically, since more firms are likely to have a relocation cost in that right gap, the likelihood of relocation is increasing in the above differential. The differential impact is

$$\Gamma \equiv (\pi_C^H - \pi_C^G) - (\pi^H - \pi^G) = \Delta\pi^G - \Delta\pi^H$$

where

$$\Delta\pi^G := \pi^G - \pi_C^G, \quad \Delta\pi^H := \pi^H - \pi_C^H$$

are the profit erosions in each country after Chinese entry.

In what follows, simple assumptions guarantee that strong enough Chinese competition causes ex-post relocation.

Assume demand for a product in every country is linear, namely:

$$q = a - p$$

Assume that before Chinese entry firms act as monopolists of their products with different production costs in each country. Namely, in Germany the marginal cost is constant and equal to  $g$ . Thus, the optimal monopoly pricing and profits are:

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<sup>6</sup>The greater expected erosion effects in Germany than in Hungary is simply related to the lower cost of labor in Hungary. If we considered Italy rather than Germany as the country of the decision maker, then the differential expected erosion would also be triggered by the higher taxes and the inability of domestic policy makers to alter fiscal policy within the fiscal compact.

$$\begin{aligned}\pi^G &= (a - p)(p - g) \\ p^{*G} &= \frac{a + g}{2} \quad \rightarrow \quad \pi^{*G} = \left(\frac{a - g}{2}\right)^2\end{aligned}$$

Assume Chinese entry disciplines prices downward, so that the firms cannot sell above a certain ceiling price  $k$ . Namely profits become:

$$\pi_C^G = (a - k)(k - g)$$

Hence, the (absolute value of the) drop in profits in Germany due to Chinese entry becomes:

$$\Delta\pi^G = \left(\frac{a - g}{2}\right)^2 - (a - k)(k - g)$$

Likewise in Hungary, where the production costs are lower, namely the marginal cost is  $h < g$ , the optimal monopoly pricing and profits are:

$$p^{*H} = \frac{a + h}{2} \quad \rightarrow \quad \pi^{*H} = \left(\frac{a - h}{2}\right)^2$$

Thus, the drop in profits in Hungary after Chinese entry becomes:

$$\Delta\pi^H = \left(\frac{a - h}{2}\right)^2 - (a - k)(k - h)$$

Hence, after Chinese entry the profit loss in Germany is larger than the profit loss in Hungary if:

$$\Delta\pi^G - \Delta\pi^H = (g - h) \left( \frac{2a + g + h}{4} - k \right) > 0 \quad \rightarrow \quad k < \frac{2a + g + h}{4}$$

In sum, if Chinese produces are competitive enough, namely if the price ceiling imposed by Chinese entry  $k$  is low enough, then profit erosion due to Chinese entry is larger in Germany than in Hungary, thus, after the China entry effect, relocation to Hungary becomes a more profitable strategy.

Moreover, all else equal the chance of relocation increases in the competitiveness of Chinese products, lower  $k$ , and also increases in the cost differential between Germany and Hungary ( $g - h$ ). Lastly, note that if this cost differential is high Western firms might turn to negative profits at home after the Chinese entry, making relocation to Eastern Europe their only viable option.

### 2.3 Summing the effects

The two differential effects described above determine our main testable hypothesis: an increasing China effect creates greater relocation incentives and greater frustration within the Euro-zone, generating greater support for populist parties in these regions. On the

contrary, in countries like Hungary, workers in a similar industrial region have a compensating inflow of firms from Germany, Italy and so forth, making the manufacturing regions of Hungary comparatively less frustrated or even better off than before. The rise of nationalism in Eastern Europe is therefore supported primarily by xenophobic fears, such as non-EU immigration or race related issues, rather than by globalization-induced greater competition in the manufacturing sector, as in Western Europe.

### 3 Data Description

In this section we provide a general description of the data and indicators used, namely our dependent variable, the electoral data, and our main explanatory measures of exposure to globalization and to the financial crisis. Table 1 presents summary statistics of the main variables for several samples that we will describe below, both for the effects of globalization shocks and that of the financial crisis. Tables 2 and 3 list the sample countries used in the two set of regressions.

**Electoral data.** The European Election Database<sup>7</sup> provides electoral results at local level for a number of European countries. Data are available according to the NUTS classification of European regions. In our research we will rely on the most disaggregated level whenever possible, namely NUTS3, resorting to the more aggregated NUTS2 classification when relevant variables are only available at the NUTS2 level. Overall, our dataset comprises electoral results for 28 European countries ranging over more than a decade, focusing on the period from 2000 onwards. The identification of populist parties follows Guiso et al. (2017). Populist parties, and the populist vote, are therefore classified according to Van Kessel (2015).

**Exposure to globalization.** Our index of exposure to globalization is inspired by measures used in literature, such as Autor et al. (2016) and Colantone and Stanig (2017), with some modifications. For each region in our sample we construct an indicator of exposure to globalization (labeled Import Dependence) by first computing the rise in imports from China in each manufacturing industry at the country level and then attributing these measures to each regions using the regional occupational weights in the various manufacturing sectors. Formally, our import dependence measure in region  $r$ , in country  $c$  at time  $t$  is defined as:

$$ImportDependence_{crt} = \frac{L_{cr(pre-sample)}^m}{L_{cr(pre-sample)}} \times \sum_s \frac{L_{crs(pre-sample)}^m}{L_{cr(pre-sample)}^m} \frac{\Delta IMP(China)_{cst}^m}{L_{cs(pre-sample)}^m}$$

where  $L_{r(pre-sample)}^m$  is the number of workers in aggregate manufacturing in region  $r$ ,  $L_{cr(pre-sample)}$  is the total employment in region  $r$ ,  $L_{crs(pre-sample)}^m$  and  $L_{cs(pre-sample)}^m$  are

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<sup>7</sup>Disclaimer from the data source: "Some of the data applied in the analysis in this publication are based on material from the "European Election Database". The data are collected from original sources, prepared and made available by the NSD - Norwegian Centre for Research Data (NSD). NSD are not responsible for the analyses/interpretation of the data presented here [http://www.nsd.uib.no/european\\_election\\_database/about/](http://www.nsd.uib.no/european_election_database/about/)".

the number of workers in the manufacturing sector  $s$  in region  $r$  and in the whole country  $c$  respectively. All occupational figures are taken at the pre-sample period. Finally,  $\Delta IMP(China)_{cst}^m$  is the (value) change in real imports from China to country  $c$  in year  $t$  over the last  $n$  years. The measure captures the exposure of the region to the China shocks through two channels: the regional composition of the manufacturing industry and the relative size of manufacturing in the region. The larger the weight of import-intensive manufacturing sectors, the more exposed the region is, holding constant the relative size of manufacturing. Holding constant industry structure, exposure declines with the relative size of manufacturing. Although mathematically redundant in the formula, the double weighting first within manufacturing and then as aggregate manufacturing on the total regional employment is justified by our data structure. Disaggregated employment data at sectorial level ( $L_{rs(pre-sample)}^m$ ) are only available for NUTS2 regions, while the aggregated manufacturing measures ( $L_{r(pre-sample)}^m$ ) are available also at NUTS3. In order to conduct our analysis at both levels, we use NUTS2 level occupational weights for the manufacturing sector and NUTS3 data on the relative size of manufacturing (i.e. compute the term  $\frac{L_{cr(pre-sample)}^m}{L_{cr(pre-sample)}}$  using NUTS3 data). The import data are collected from COMEXT, while the labour data come from EUROSTAT and INSEE (for France). In our analysis, the pre-sample period is year 2000 and the import change is computed over two years.

Following the literature, in order to clean our exposure measure from the possible endogeneity due to both a supply effect of Chinese imports and a demand effect of European regions, we build an instrument replacing import from China in the country with US import from China in the equation above, and dividing the change in real imports by the number of US workers in the manufacturing sector  $s$ , always taken at the pre-sample value. Data on US imports are collected from the UN COMTRADE, data on US employment are source from the OECD.

**Exposure to financial crisis.** This measure builds on the concept of *external financial dependence* developed by Rajan and Zingales (1998). Intuitively, regions whose industries are more dependent on external finance are also more vulnerable to financial shocks. Using detailed data on employment in manufacturing from EUROSTAT, we devise a regional-specific measure of exposure to the financial crisis. The idea is to weigh the external dependence of each manufacturing industry by the labour share of that industry in a given region. More formally, our measure is defined as:

$$FinancialDependence_{crt} = \frac{L_{rt}^m}{L_{rt}} \times \sum_s \frac{L_{rst}^m}{L_{rt}^m} \times ExtDep_s^m$$

where  $\frac{L_{rt}^m}{L_{rt}}$  is the labour share of aggregate manufacturing with respect to the total employment in region  $r$ ,  $L_{rst}^m/L_{rt}^m$  is the labour share within manufacturing of sector  $s$  in region  $r$  at time  $t$  and  $ExtDep_s^m$  is the Rajan and Zingales (1998) measure of financial dependence of the manufacturing sector  $s$  in the United States, used to identify the technological component of a firm's need to rely on external finance.

In our estimates the measures described above will be interacted with a **Eurozone**



**dummy variable**, set to 1 if the region is in a country belonging to the Eurozone in a given year covered by our sample. Variation in membership come from the fact that in a given year some countries are part of the Eurozone and others are not and from the fact that a given country that at the beginning of the sample is not part of the Eurozone joins it later.

## 4 Empirical Results

In this section we study how different shocks can impact populist electoral outcomes. Our focus is on the heterogeneous effects within and outside the Euro zone. In particular, we analyze the impact of a globalization shock, such as the China effect, and that of a financial crisis, such as the 2008-2009 credit crisis. Both shocks share the feature of being “hard to manage”, in the sense that differ from traditional business cycle shocks, and both may imply that a country may benefit from enjoying greater flexibility in devising policies to respond to the shocks. We use variants of the following general specification:

$$v_{crt} = \alpha + \gamma shock_{rt} + \beta shock_{rt} \times eurozone_{ct} + FE_{ct} + X_{rt} + \epsilon_{rt} \quad (1)$$

where as before  $(c,r,t)$  identify the country, the NUTS-3 (or NUTS2) region, and year (of the election), respectively. The outcome variable  $v_{crt}$  is the share of votes obtained by populist parties in region  $r$  in country  $c$  in year  $t$ ;  $shock_{rt}$  is either the measure of the China shock or of the 2008-2009 shock described above;  $eurozone_{ct}$  indicates whether the country belongs to the Euro zone;  $X_{rt}$  are a battery of region-year specific controls; and  $\epsilon_{rt}$  is the error term.  $FE_{ct}$  are country $\times$ year fixed effects, which are equivalent to country-election fixed effects. These dummies control for all the factors that impact symmetrically all the regions within the same country in an election (e.g. general political trends, political orientation of the government, performance of the economy at the national level, political tensions etc.). Our test exploits variation in populist voting and exposure to shocks across regions of a given country and of regions of different countries, once general cross countries differences in populist voting have been netted out by the country-year fixed effects.

### 4.1 Populism and the globalization shock

Table 4 presents the results of equation (1), when  $shock_{rt}$  is the measure of globalization shock induced by China. All the specifications include country-year dummies, and standard errors are clustered at the NUTS-3 level. The first-stage estimates of our IV regressions are shown at the bottom of the Table. They reveal that our instrument and the instrument interacted with the Eurozone dummy consistently predict the supposedly endogenous variable; the F-statistic of the Kleibergen-Paap test does not signal a weakness problem, in line with earlier studies (Autor et al., 2013; Colantone and Stanig, 2017). To run our test in a context as close as possible to that of the model and to rely on the finer available information in this first set of estimates we only include countries for which we have full data on employment for the manufacturing industry sectors as of year 2000 and for the NUTS3 classification; in addition we restrict the sample of non-Euro countries to Eastern European countries. These requirements leave us with seven Euro area countries (Austria,

Germany, Greece, Spain, France, Italy and the Netherlands) and three non-Euro Eastern European countries (Poland, Romania and Slovakia). Table 2 shows the list of countries in our dataset, whether they belong to the Eurozone, and the level of disaggregation available.

In the first two columns we replicate the result obtained by Colantone and Stanig (2017), namely the positive and significant role of the Chinese imports on populist vote share – the first column estimating a simple OLS model and the second using an IV approach. Both estimates are positive and statistically significant, showing a positive effect of import penetration on populist consensus. The IV model results in a higher estimated effect of import penetration on populist voting, consistent with the idea that the instrument helps isolate the dynamics in imports from China that reflects China increased advantage in producing manufacturing goods compared to local industries - causing disappointment in local workers and voters. A one standard deviation increase in import penetration from China raises the average share of votes to populist parties across European regions by 13.5% of the sample mean - a non negligible effect.

In the third column we show IV estimates of equation (1), thus adding the interaction between imports from China and the Eurozone dummy. The result is striking. The coefficient  $\gamma$  measuring the effect of Chinese import alone becomes *negative* and statistically significant at the 5% confidence level, and its absolute size is large. This coefficient measures the effect of imports from China on populist voting in non-Euro countries: face value, imports from China have *lowered* consensus to populist parties in European regions located in countries not belonging to the Euro area, an issue we come back to below. The effect of the interaction terms ( $\beta$ ) is positive, large and highly statistically significant ( $p$ -value 0.01). The effect of China import penetration on populist voting among Euro-area countries is the sum of the two effects - and thus equal to about 6.8. Hence, all the positive effect on populist voting of China import penetration in Europe as a whole is due to the positive effect on voting in the Euro area countries. In the regions of these countries a one standard deviation increase in imports from China raises populist voting by as much as 28% of the populist vote share in regions of the Euro area. In regions outside the Euro area and belonging to Eastern European countries, imports from China, far from contributing to a populist backlash have actually halted consensus to populist parties. Absent the China shock populist parties would have gained much more consensus than they have been actually able to. One standard deviation increase in imports from China has contributed to contain the populist vote share by 7.7 percentage points - 34% of the average share in these regions. The finding that the effect of import penetration is positive within the Euro area regions and negative in the non-Euro area is clearly inconsistent with the “rational” voter hypothesis which implies that voters should be more forgiving of the national government because they understand that their incapacity to contrast China competition reflects binding constraints on action imposed by the Eurozone, compared to countries that maintain their own currency (e.g. cannot devalue unilaterally). They are instead supportive of the frustration hypothesis that predicts that voters behavior is not driven by the root cause of the crisis (which remains a harder to understand consideration), but by the perceived economic insecurity due to the globalization shock and the proximate, more salient and easier to grasp cause - the relocation of local firms to other regions and the impediments to adopt those that appear the optimal policies from a local point of view because of the Euro area constraints. Furthermore, this effect can be amplified if voters blame the country elite

for having adopted the Euro in the first place, possibly fueled by populist rhetoric. Even more to, there is evidence<sup>8</sup> that, despite the legislation forbids it, EU structural funds have been used to relocate companies from Western to Eastern countries of the EU-27 - a use that while boosting consensus towards Europe (and national parties) in Eastern European regions, may have exactly the opposite effect in Western countries, contributing to disseminate the wrong beliefs that not only “Europe” limits national discretion in designing policies to tackle the shock, but even amplifies its effects.

Table 5 adds Sweden to the sample. Sweden is the only other country for which we have data at the NUTS3 level and information on occupation by industry is available as of year 2000. Interestingly, it is also a non-Euro non-Eastern European country. When we do this results are basically unchanged. The first three columns reproduce the estimates shown in Table 4 and the parameters are essentially unaffected. However, the availability of Sweden - a non Euro non-Eastern European country - allows us to separate the two effects that are instead bundled together when we compare Euro area with non-Euro area Eastern-European countries as in Table (1). The two effects – the differential effect on populist consensus arising from the constraints on policies due to the single currency and the effect due to the differential loss of competitiveness after the China shock and the relocations from Western to Eastern Europe– are lumped together when interpreting the results for non-Euro eastern countries, whereas Sweden does not belong to the Euro but has an industry structure that is comparable to that of Western European countries. Hence it is similarly exposed to the China shock and is not a relocation destination. Thus, the difference in the effect of the China shock on populist consensus between Euro area regions and Swedish regions captures the policy impediment effect of belonging to the Euro zone. To quantify this effect we add to the specification an interaction term between a dummy for Sweden and the China shock (and instrument it in the usual way). The result is reported in the fourth column. The import penetration impact in the Euro countries and the Eastern Europeans is exactly the same as in Table 4; the effect of import penetration on Sweden is statistically significant and equal in size to 1.1 (the sum of the interaction effect 28.2 and the direct effect -27.1). This is much lower than the effect on the Euro area countries (6.75). Assuming that relocation from Sweden to Eastern Europe has been as severe as relocation from Euro-area countries, the difference between the two effects can be interpreted as reflecting the effect of the constraints on policy due to the single currency. Hence, the latter accounts for about 84% of the effect of the China shock on populist voting in the Euro area regions.<sup>9</sup>

Table 6 expands the set of countries by including those that have data at the NUTS 3 level but information on sectorial employment is not available for year 2000, though it is available for one of the following years (up to 2005) which we use to approximate pre-sample occupational structure in manufacturing. Table 7 runs the estimates pooling all countries for which we have information and using for each the finest available level of geographical disaggregation (NUTS3, NUTS2 and NUTS1). This allows us to expand the sample and

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<sup>8</sup>See Financial Times, “Questions surround EU relocations”, by Cynthia O’Murchu and Andrew Ward, December 1, 2010

<sup>9</sup>Clearly, the relocation of an Euro area firm to an Eastern European country to benefit of the greater freedom of the policy makers of these countries is attributed to the Euro. The assumption entails that the loss of competitiveness of a Swedish firms after China entry is similar to the loss of an average Euro area firm.

check the robustness of the findings to inclusion of other countries. As it can be seen in both cases the basic result is confirmed. The average effect of the globalization shock on populist voting on European regions is positive but it is the reflection of a strong positive effect in the Euro area countries and an average negative effect in the other countries. The latter is driven by the beneficial economic effect that the entry of China has had on Eastern European countries. The last column adds the interaction between the globalization shock and a dummy for the western-non-Euro countries which now includes also the UK in addition to Sweden. It confirms the findings of Table 5: In regions of western countries that are outside of the euro zone the political impact of the China shock is smaller than in region of Western European countries sharing the Euro and essentially all the difference in impact can be traced back to the constraints arising from single currency.<sup>10</sup>

## 4.2 Populism and the financial crisis

In this section we present the results of the estimates of equation (1) when  $shock_{rt}$  describes the 2008-2009 financial crisis. To capture the effects of the crisis on voting and test whether there was a differential effect in the Euro area, we need to modify slightly the specification in equation (1) and use:

$$v_{crt} = \alpha + \gamma Findep_{rc} + \beta Findep_{rc} \times shock_{rt} + \delta Findep_{rc} \times shock_{rt} \times Eurozone_{ct} + FE_{ct} + X_{rt} + \epsilon_{rt} \quad (2)$$

In this specification  $Findep_{rc}$  is the Rajan-Zingales measure of financial dependence in region  $r$  country  $c$ , and is time invariant;  $shock$  is a dummy =1 for the years after 2008 following the collapse of Lehman brothers; it is meant to capture the first wave of the financial crisis as well as the European sovereign debt crisis.  $Eurozone$  is a dummy =1 for the regions belonging to Eurozone countries. We would expect that regions with industries that are more dependent on external finance are hit harder by a financial crisis, causing more economic insecurity and possibly more support for populist parties - i.e.  $\beta = 0$ . But if the frustration hypothesis is true, then the effect on populist support should be particularly strong for regions in Euro area countries, that is  $\delta > 0$ . This is the key parameter of interest. Table 8 shows the results of OLS estimates of the above equation

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<sup>10</sup>We find that the political backlash has been smaller in the UK regions compared to the regions of other Western European countries of the Euro area. This may appear at odds with the support for "leave" in the Brexit referendum which is typically interpreted as a reaction to the hardship imposed by the the globalization shock in the industrial districts of the UK (Becker et al., 2017). There is however no contradiction. What we are testing is the political consequence of the globalization shock in different regions of Europe whose national policy makers are differentially affected by the constraints on policies imposed by the common currency - while holding constant country-level trends in populist consensus. Our evidence suggests that net of the average effect on populist consensus that the globalization shock has had in the UK and in the Euro area countries, import penetration has had a greater political backlash in a region of a western country that is part of the Euro than in a region of a western country that is not part of the Euro. If the two regions are similarly exposed to the China shock (i.e. have a similar economic structure), than the measured difference is (almost) all traced to the Euro constraints on policy. Extrapolating from this evidence, one could argue that the UK voters support Brexit is (also) the reflection of perceived weaker ability of Euro area countries in dealing with the China shock.

using data at the NUTS3 level. At this geographical level we have data on the employment composition in 14 manufacturing industries and can thus construct an industry-weighted measure of financial dependence. The first column just controls for financial dependence in the region; the correlation with populist voting is positive and statistically significant, but its effect is hard to interpret. The second column adds the interaction between the financial crisis dummy and financial dependence. The effect is strongly positive and statistically very significant, consistent with the idea that the economic insecurity induced by financial crisis, which is stronger in regions with more financially dependent industries, may boost support for populist parties. At the sample mean of financial dependence (0.045) the 2008 financial crisis increases the share of votes to populist parties in a region by 4.7 percentage points ( $0.045 \cdot 104.9$ ), equivalent to 48% of the sample mean. This is a considerable effect. Most importantly, this positive effect stems mostly from the consensus to populist parties in the Eurozone. This is shown in the third column by the large, positive and highly significant effect of  $\delta$  - the differential effect of the crisis on populist voting in the Eurozone regions. When the triple interaction is added as a control, the direct effect of the crisis on populist voting in non-euro regions (the estimated value of  $\beta$ ) is positive but not statistically significant (coefficient size 39.9, standard error 29.6). The effect in the euro-area regions is instead large ( $123.2 = 39.9 + 83.3$ ) and implies an effect of the crisis on populist voting of 5.5 percentage points, 57% of the sample average share of votes. This pattern lends strong support to the frustration hypothesis that predicts that voters support to populist parties arises from disappointment with their national governments inability to react to the crisis, and thus from holding national governments responsible for having tied their hands to the European project and the constraints that this entails.

Table 9 replicates the estimates using all sample countries and for each one using the finer level of available geographical aggregation (NUTS3 for the vast majority, NUTS2 and NUTS1 when only this level is available). This way we increase the number of observations by 57 units. Results are essentially unchanged: most of the positive effect of the crisis on populist voting is due to the effect in Euro area countries. Table 10 shows estimates when we use a higher (rather than finer) level of geographical aggregation for each country, i.e. either NUTS2 or NUTS1 if NUTS2 is not available. Obviously we lose many observations; but it is important to assess the robustness of the estimates to using variation across larger geographical units. One reason is that the effect of the financial crisis on local firms (and thus on voting) depends on what is the relevant credit market for these firms: if they can borrow from intermediaries located even outside the NUTS3 region where they are located, they can smooth more easily the effects of the crisis. Hence using too small geographical units can understate the economic impact of the crisis and its consequences on voting. The results in the first three columns show that the overall results are unaffected by using the coarser NUTS2 classification instead of the NUTS3. Again, the effect of the crisis on populist consensus is positive on average and of similar magnitude as that estimated in Table 8, and as in Table 8 most of the effect is due to a large positive effect on populist voting in Euro area regions (column 3).

The last two columns of Table 10 test whether the 2010 sovereign crisis has a differential effect compared to the 2008 crisis. Column 4 looks at average effects across all regions by introducing a dummy =1 for the years after 2010 interacted with the financial dependence measure beside. Because the 2008 dummy is equal to 1 for all years after 2008, the coefficient

on this dummy measures the average effect of the 2008 crisis, while the sum of this coefficient and that of the 2010 dummy captures the effect of the latter. This evidence suggests a large average effect of the 2008 crisis (coefficient 156) and a positive but smaller average effect of the 2010 crisis (coefficient  $23.5=156-132.5$ ). The last column allows also for differential effects of the two crisis in the Euro area regions. Though coefficients are not precisely estimated, they are sizeable and their pattern is interesting. The effects of the 2008 and 2010 crisis in the Euro area and non Euro-area regions are summarized in Table 11 (in brackets are the effect on populist vote as a percent of the sample mean). It shows a clear pattern: the 2008 crisis has a very large effect in regions of Euro area countries and a positive but much smaller effect in regions outside the Euro area. The 2010 sovereign crisis has a positive, large effect on populist voting in the Euro area regions but its effect is somewhat less than half of that of the 2008 crisis (77.7 compared to 168.3); the 2010 sovereign crisis has instead a negative effect on populist voting in non-euro area regions.

## 5 Extensions

In the next version we will extend the above results in several ways to dig deeper into the mechanism at work and provide also direct supporting evidence of the frustration hypothesis.

### 5.1 Consumption versus Production Effects of Import Dependence

In Section 2 we have rationalized the heterogeneous effects of import penetration on voting in Euro and non-Euro Eastern European countries as reflecting different industrial structures and production technologies (costs). Chinese manufacturing goods can cause closure of plants in Western countries as they are no longer able to compete with the Chinese firms - a production affect that creates insecurity and translates in consensus to populist parties, as documented in Guiso et al (2017); relocation of these plants to Eastern European can have an opposite effects in the affected regions of Eastern European countries.

- We will extend the results to test some of the predictions of the model, namely that regions of Eastern European countries with lower labor costs attract more relocating firms from Western countries and thus experience a larger negative effect on populist voting. To test this we will collect data on relative manufacturing wages across regions.
- We plan to gather direct evidence of this channel by collecting data on relocations at the regional level.
- One potential source is Orbis: plan to construct measures of plant closures in Western European regions and plant creation in Eastern Europe regions to gauge relocations.

In addition to these “production side” effects there could be a “consumption side” effect that benefits citizens of Eastern European countries more than they benefit citizens of

Western European countries. If Chinese manufactured goods are more closely substitutable for the consumption goods of Eastern Europeans than they are for Western Europeans, the former can benefit greatly from lower consumer prices following the China shock. The benefit is stronger in regions where China goods figure prominently in consumer consumption baskets - a consumption effect. This second effect may translate in support for traditional parties. If consumption effect in non-Euro countries dominates the production effect and vice versa in euro countries, this can also partly explain the differential response that we have documented. We plan to:

- collect data on the consumption structure at the regional level and build an indicator of consumption penetration of China produced goods;
- investigate whether regions whose consumption basket can more easily be replaced with cheaper China produced goods are less supportive of populist parties.

This channel can help address an interesting question. One might ask, after seeing our sharp results on the comparison between Euro and non Eurozone, how do our findings square with the Brexit results of Colantone and Stanig (2017) who documents greater consensus towards Brexit in regions of the UK that are more exposed to China import penetration. The previous discussion can help answer this question. In their paper on Brexit Colantone and Stanig (2017b) find that the *regions* of the UK with a large enough manufacturing sector share and in sub sectors most exposed to China, are the ones where the populists had most traction. But, this comparison, is a comparison between regions of the same country - the UK - hence regions with same institutions, same consumption styles, same status meaning of Chinese products, etc. On the other hand, the comparison that matters the most for our data set is the comparison between a region in Romania (a country outside the Euro area) and a region in Germany (an Eurozone country). Even if such regions have the same import dependence, one is in the euro the other is not, the institutions are different, the consumption patterns are different, the willingness of Germans to buy Chinese products is lower, all things that imply that in Bucharest the consumption effects are greater than in Munich, whereas the production substitution effects are greater in Munich.

## 5.2 Heterogenous effects and the frustration hypothesis

The frustration hypothesis stems from the constraints on national policies coming from Euro area treaties. These constraints are not equally binding for all regions/countries. The 60% limit on the stock of debt from the growth and stability pact is more binding for a country like Italy than for a country like Spain (in 2008). And some regions of Italy may benefit more from an easier fiscal policy. Same argument can be made as far as monetary policy is concerned.

- We plan to construct measures of these constraints and study whether within Euro area countries, regions facing more binding constraints are more supportive of populist parties in response to the financial crisis and to the China shock.

## 6 Conclusions

This paper makes a conceptual contribution and a key empirical contribution in understanding the determinants of populism. The conceptual contribution is realizing that the difficult or perhaps unfeasible policy-making to counter shocks in the Euro zone has a direct first order effect of frustration that brings voters to support populist platforms. The empirical contribution is twofold: (1) the frustration effect is strongly positive in the Euro zone, but surprisingly negative outside the Euro zone; (2) the industrial structure in and out of the euro zone affects the relative role of consumption and production effects of import dependence in a way that helps further rationalize the main empirical finding. In the next draft we will provide further evidence about these results, digging deeper into the mechanism that generates divergent effects.

The broad policy implications of our results concern the European integration process. We have shown that a European Monetary Union without a fiscal and political union creates citizens' frustration for the inability of individual governments to counter shocks, and this may lead to a political derailing of even the existing levels of integration. In other words, either Europe goes forward in the integration process, going towards a United States of Europe, or else populist sentiments of anti-Euro and anti European will pave the way and force Europe backwards. The European disintegration path will not address the globalization and Chinese competition problem, substituting plant relocation to Easter Europe simply with plant closure at home.



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# Tables

Table 1: Summary statistics

	mean	sd	min	max
<b><u>Globalization</u></b>				
<i>Excluding Sweden</i> Table 4				
Populist vote (%)	8.7	15.281	0	73.5
Import dependence (CN)	0.201	0.284	-0.366	1.809
Import dependence (US)	1.073	0.905	-0.111	4.315
Eurozone	0.838	0.368	0	1
<i>Including Sweden</i> Table 5				
Populist vote (%)	8.4	15.030	0	73.5
Import dependence (CN)	0.199	0.280	-0.366	1.809
Import dependence (US)	1.061	0.900	-0.111	4.315
Eurozone	0.803	0.398	0	1
<i>Pre-sample up to 2005</i> Table 6				
Populist vote (%)	8.3	14.845	0	73.5
Import dependence (CN)	0.203	0.277	-0.378	1.726
Import dependence (US)	1.083	0.915	-0.119	4.341
Eurozone	0.783	0.412	0	1
<i>Multilevel</i> Table 7				
Populist vote (%)	8.2	14.625	0	73.5
Import dependence (CN)	0.207	0.281	-0.378	1.726
Import dependence (US)	1.068	0.908	-0.142	4.341
Eurozone	0.770	0.421	0	1
<b><u>Financial Crisis</u></b>				
<i>NUTS3 level</i> Table 8				
Populist vote (%)	9.8	16.707	0	73.5
Eurozone	0.719	0.450	0	1
Financial dependence	0.045	0.027	0.001	0.146
Crisis (2008)	0.014	0.023	0.000	0.121
Eurozone×Crisis (2008)	0.008	0.020	0.000	0.121
<i>Multilevel NUTS3, NUTS2, NUTS1</i> Table 9				
Populist vote (%)	9.8	16.517	0	73.5
Eurozone	0.715	0.452	0	1
Financial dependence	0.044	0.026	0.001	0.146
Crisis (2008)	0.014	0.023	0.000	0.121
Eurozone×Crisis (2008)	0.008	0.019	0.000	0.121
<i>Multilevel NUTS2, NUTS1</i> Table 10				
Populist vote (%)	12.0	16.051	0	65.8
Eurozone	0.594	0.492	0	1
Financial dependence	0.039	0.022	0.001	0.121
Crisis (2008)	0.015	0.022	0.000	0.109
Eurozone×Crisis (2008)	0.008	0.017	0.000	0.081
Crisis (2010)	0.011	0.020	0.000	0.109
Eurozone×Crisis (2010)	0.005	0.013	0.000	0.081

Table 2: List of Countries - Globalization

ISO	Country	Eurozone	NUTS level	Full Sample (Table 5)	Large Sample (Table 6)	Multilevel (Table 7)
AT	Austria	Yes	3	2002	2002	2002
AT	Austria	Yes	3	2006	2006	2006
AT	Austria	Yes	3	2008	2008	2008
BE	Belgium	Yes	2	.	.	2003
BE	Belgium	Yes	2	.	.	2007
BE	Belgium	Yes	2	.	.	2010
CZ	Czech Republic	No	3	.	2002	2002
CZ	Czech Republic	No	3	.	2006	2006
CZ	Czech Republic	No	3	.	2010	2010
DE	Germany	Yes	3	2002	2002	2002
DE	Germany	Yes	3	2005	2005	2005
EL	Greece	Yes	3	2004	2004	2004
EL	Greece	Yes	3	2007	2007	2007
EL	Greece	Yes	3	2009	2009	2009
EL	Greece	Yes	3	2012	2012	2012
ES	Spain	Yes	3	2004	2004	2004
ES	Spain	Yes	3	2008	2008	2008
ES	Spain	Yes	3	2011	2011	2011
FI	Finland	Yes	3	.	2003	2003
FI	Finland	Yes	3	.	2007	2007
FI	Finland	Yes	3	.	2011	2011
FR	France	Yes	3	2002	2002	2002
IT	Italy	Yes	3	2008	2008	2008
IT	Italy	Yes	3	2013	2013	2013
NL	Netherlands	Yes	3	2002	2002	2002
NL	Netherlands	Yes	3	2003	2003	2003
NL	Netherlands	Yes	3	2006	2006	2006
NL	Netherlands	Yes	3	2010	2010	2010
NL	Netherlands	Yes	3	2012	2012	2012
PL	Poland	No	3	2001	2001	2001
PL	Poland	No	3	2005	2005	2005
PL	Poland	No	3	2007	2007	2007
RO	Romania	No	3	2004	2004	2004
RO	Romania	No	3	2008	2008	2008
RO	Romania	No	3	2012	2012	2012
SE	Sweden	No	3	2002	2002	2002
SE	Sweden	No	3	2006	2006	2006
SE	Sweden	No	3	2010	2010	2010
SK	Slovakia	No	3	2002	2002	2002
SK	Slovakia	No	3	2006	2006	2006
SK	Slovakia	Yes	3	2010	2010	2010
UK	United Kingdom	No	1	.	.	2001
UK	United Kingdom	No	1	.	.	2005
UK	United Kingdom	No	1	.	.	2010

Table 4 uses the *full sample* without Sweden.

Table 3: List of Countries - Financial Crisis

ISO	Country	Eurozone	NUTS level	Year
AT	Austria	Yes	3,2	2002
AT	Austria	Yes	3,2	2006
AT	Austria	Yes	3,2	2008
BE	Belgium	Yes	2	2003
BE	Belgium	Yes	2	2007
BE	Belgium	Yes	2	2010
BG	Bulgaria	No	3,2	2009
BG	Bulgaria	No	3,2	2013
BG	Bulgaria	No	3,2	2014
CZ	Czech Republic	No	3,2	2002
CZ	Czech Republic	No	3,2	2006
CZ	Czech Republic	No	3,2	2010
DE	Germany	Yes	3,2	2002
DE	Germany	Yes	3,2	2005
EE	Estonia	Yes	3	2011
EL	Greece	No	3,2	2000
EL	Greece	Yes	3,2	2004
EL	Greece	Yes	3,2	2007
EL	Greece	Yes	3,2	2009
EL	Greece	Yes	3,2	2012
ES	Spain	Yes	3,2	2000
ES	Spain	Yes	3,2	2004
ES	Spain	Yes	3,2	2008
ES	Spain	Yes	3,2	2011
FI	Finland	Yes	3,2	2003
FI	Finland	Yes	3,2	2007
FI	Finland	Yes	3,2	2011
HU	Hungary	No	3,2	2010
IT	Italy	Yes	3,2	2008
IT	Italy	Yes	3,2	2013
LV	Latvia	No	3	2010
LV	Latvia	No	3	2011
NL	Netherlands	Yes	3,2	2002
NL	Netherlands	Yes	3,2	2003
NL	Netherlands	Yes	3,2	2006
NL	Netherlands	Yes	3,2	2010
NL	Netherlands	Yes	3,2	2012
NO	Norway	No	3,2	2013
PL	Poland	No	3,2	2001
PL	Poland	No	3,2	2005
PL	Poland	No	3,2	2007
PL	Poland	No	2	2011
RO	Romania	No	3,2	2000
RO	Romania	No	3,2	2004
RO	Romania	No	3,2	2008
RO	Romania	No	3,2	2012
SE	Sweden	No	3,2	2002
SE	Sweden	No	3,2	2006
SE	Sweden	No	3,2	2010
SK	Slovakia	No	3,2	2002
SK	Slovakia	No	3,2	2006
SK	Slovakia	Yes	3,2	2010
UK	United Kingdom	No	1	2005
UK	United Kingdom	No	1	2010

Table 4: Globalization and populist vote: western Euro-area and eastern non-Euro countries

	(1)	(2)	(3)
	Populist vote (%)	Populist vote (%)	Populist vote (%)
Import dependence (CN)	1.858*** (0.713)	4.198** (1.743)	-27.06** (12.70)
Eurozone×Import dependence (CN)			33.81*** (12.71)
Obs.	1427	1389	1389
adj. $R^2$	0.917	0.916	0.912
Cluster SE	NUTS3	NUTS3	NUTS3
FE	Country×Year	Country×Year	Country×Year
NUTS level	3	3	3
<b>First stages</b>			
Endogeneous: Import dependence (CN)			
Import dependence (US)		0.144*** (0.00729)	0.0385*** (0.00973)
Eurozone×Import dependence (US)			0.146*** (0.0122)
Endogeneous: Eurozone×Import dependence (CN)			
Import dependence (US)			-0.000 (0.000)
Eurozone×Import dependence (US)			0.185*** (0.00743)
Kleibergen-Paap F-Statistic		388.7	7.819

Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Countries included in the regressions: Austria, Germany, Greece, Spain, France, Italy, The Netherlands, Poland, Romania and Slovakia.

Table 5: Globalization and populist vote: western Euro-area and eastern non-Euro countries (adding Sweden)

	(1)	(2)	(3)	(4)
	Populist vote (%)	Populist vote (%)	Populist vote (%)	Populist vote (%)
Import dependence (CN)	1.867*** (0.707)	4.130** (1.705)	-20.55** (9.376)	-27.063** (12.712)
Eurozone×Import dependence (CN)			27.30*** (9.413)	33.813*** (12.740)
Sweden×Import dependence (CN)				28.1798** (12.718)
Obs.	1490	1452	1452	1452
adj. $R^2$	0.918	0.917	0.914	0.915
Cluster SE	NUTS3	NUTS3	NUTS3	NUTS3
FE	Country×Year	Country×Year	Country×Year	Country×Year
NUTS level	3	3	3	3
<b>First stages</b>				
Endogeneous: Import dependence (CN)				
Import dependence (US)		0.144*** (0.00716)	0.0467*** (0.00947)	0.0385*** (.0097)
Eurozone×Import dependence (US)			0.138*** (0.0120)	0.146*** (0.0123)
Sweden×Import dependence (US)				0.122*** (0.0155)
Endogeneous: Eurozone×Import dependence (CN)				
Import dependence (US)			(.)	(.)
Eurozone×Import dependence (US)			0.185*** (0.00743)	0.185*** (0.00744)
Sweden×Import dependence (US)				(.)
Endogeneous: Import dependence (CN)×Sweden				
Import dependence (US)				omitted
Eurozone×Import dependence (US)				omitted
Sweden×Import dependence (US)				0.1604*** (0.012)
Kleibergen-Paap F-Statistic		404.9	12.14	5.203

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Countries included in the regressions: Austria, Germany, Greece, Spain, France, Italy, The Netherlands, Poland, Romania, Sweden and Slovakia.

Table 6: Globalization and populist vote: western Euro-area and eastern non-Euro countries (adding Sweden), broader definition of pre-sample

	(1)	(2)	(3)
	Populist vote (%)	Populist vote (%)	Populist vote (%)
Import dependence (CN)	2.017*** (0.737)	4.286*** (1.619)	-15.96** (7.238)
Eurozone×Import dependence (CN)			22.86*** (7.309)
Obs.	1550	1512	1512
adj. $R^2$	0.917	0.916	0.914
Cluster SE	NUTS3	NUTS3	NUTS3
FE	Country×Year	Country×Year	Country×Year
NUTS level	3	3	3
<b>First stages</b>			
Endogeneous: Import dependence (CN)			
Import dependence (US)		0.147*** (0.00705)	0.0550*** (0.00933)
Eurozone×Import dependence (US)			0.132*** (0.0119)
Endogeneous: Eurozone×Import dependence (CN)			
Import dependence (US)			0.000*** (0.000)
Eurozone×Import dependence (US)			0.187*** (0.00734)
Kleibergen-Paap F-Statistic		434.7	17.39

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Countries included in the regressions: Austria, Czech Republic, Germany, Greece, Spain, Finland, France, Italy, The Netherlands, Poland, Romania, Sweden and Slovakia.



Table 7: Globalization and populist vote: western Euro-area and eastern non-Euro countries (adding Sweden), broader definition of pre-sample, multilevel analysis

	(1)	(2)	(3)	(4)
	Populist vote (%)	Populist vote (%)	Populist vote (%)	Populist vote (%)
Import dependence (CN)	2.584*** (0.769)	4.717*** (1.584)	-15.61** (6.998)	-19.71** (9.033)
Eurozone×Import dependence (CN)			22.95*** (7.072)	27.04*** (9.072)
Western(non-€)×Import dependence (CN)				19.82** (9.080)
Obs.	1617	1567	1567	1567
adj. $R^2$	0.913	0.911	0.909	0.908
Cluster SE	NUTS3,2,1	NUTS3,2,1	NUTS3,2,1	NUTS3,2,1
FE	Country×Year	Country×Year	Country×Year	Country×Year
NUTS level	3,2,1	3,2,1	3,2,1	3,2,1
<b>First stages</b>				
Endogeneous: Import dependence (CN)				
Import dependence (US)		0.151*** (0.00721)	0.0565*** (0.00933)	0.048*** (0.0096)
Eurozone×Import dependence (US)			0.135*** (0.0120)	0.144*** (0.0123)
Western(non-€)×Import dependence (US)				0.123*** (0.016)
Endogeneous: Eurozone×Import dependence (CN)				
Import dependence (US)			-0.000 (0.000)	-0.000*** (0.000)
Eurozone×Import dependence (US)			0.192*** (0.00762)	0.192*** (0.00762)
Western(non-€)×Import dependence (US)				0.000 (0.000)
Endogeneous: Import dependence (CN)×Western(non-€)				
Import dependence (US)				-0.000*** (0.000)
Eurozone×Import dependence (US)				0.000*** (0.000)
Western(non-€)×Import dependence (US)				0.171*** (0.0124)
Kleibergen-Paap F-Statistic		437.0	18.32	8.323

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Countries included in the regressions: Austria, Belgium, Czech Republic, Germany, Greece, Spain, Finland, France, Italy, The Netherlands, Poland, Romania, Sweden, Slovakia and United Kingdom.

Table 8: Financial crisis and populist vote

	(1)	(2)	(3)
	Populist vote (%)	Populist vote (%)	Populist vote (%)
Financial dependence	28.27*** (6.363)	-4.153 (3.211)	-4.153 (3.212)
Crisis (2008)		104.9*** (13.96)	39.94 (29.57)
Eurozone×Crisis (2008)			83.34** (33.39)
Obs.	1,849	1,849	1,849
adj. $R^2$ .	0.934	0.938	0.939
Cluster SE	NUTS3	NUTS3	NUTS3
FE	Country×Year	Country×Year	Country×Year
NUTS level	3	3	3

Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Countries included in the regressions: Austria, Bulgaria, Belgium, Czech Republic, Germany, Estonia, Greece, Spain, Finland, Hungary, Italy, Latvia, The Netherlands, Norway, Poland, Romania, Sweden and Slovakia.

Table 9: Financial crisis and populist vote, multilevel analysis

	(1)	(2)	(3)
	Populist vote (%)	Populist vote (%)	Populist vote (%)
Financial dependence	30.16*** (6.376)	-2.147 (3.333)	-2.147 (3.334)
Crisis (2008)		104.5*** (13.82)	39.319 (29.17)
Eurozone×Crisis (2008)			83.75** (32.99)
Obs.	1,906	1,906	1,906
adj. $R^2$	0.931	0.935	0.935
Cluster SE	NUTS3,2,1	NUTS3,2,1	NUTS3,2,1
FE	Country×Year	Country×Year	Country×Year
NUTS level	3,2,1	3,2,1	3,2,1

Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Countries included in the regressions: Austria, Belgium, Bulgaria, Belgium, Czech Republic, Germany, Estonia, Greece, Spain, Finland, Hungary, Italy, Latvia, The Netherlands, Norway, Poland, Romania, Sweden, Slovakia and United Kingdom.

Table 10: Financial crisis and populist vote, multilevel analysis (only NUTS1 and NUTS2)

	(1)	(2)	(3)	(4)	(5)
	Populist vote (%)	Populist vote (%)	Populist vote (%)	Populist vote (%)	Populist vote (%)
Financial dependence	27.48 (16.69)	-1.225 (13.28)	-1.225 (13.30)	-1.225 (13.30)	-1.225 (13.33)
Crisis (2008)		69.18*** (25.51)	-40.88 (26.01)	156.0*** (47.98)	9.386 (36.55)
Eurozone×Crisis (2008)			160.6*** (44.73)		158.9*** (60.30)
Crisis (2010)				-132.5*** (47.27)	-54.90 (39.52)
Eurozone×Crisis (2010)					-35.65 (68.23)
Obs.	520	520	520	520	520
adj. $R^2$	0.917	0.918	0.920	0.919	0.920
Cluster SE	NUTS2,1,	NUTS2,1,	NUTS2,1,	NUTS2,1,	NUTS2,1,
FE	Country×Year	Country×Year	Country×Year	Country×Year	Country×Year
NUTS level	2,1	2,1	2,1	2,1	2,1

Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Countries included in the regressions: Austria, Belgium, Bulgaria, Belgium, Czech Republic, Germany, Estonia, Greece, Spain, Finland, Hungary, Italy, Latvia, The Netherlands, Norway, Poland, Romania, Sweden, Slovakia and United Kingdom.

Table 11: Effects of the 2008 and 2010 crises: Euro/non-Euro area

	Euro	Non Euro
2008	168.3 (87%)	9.4 (2%)
2010	77.7 (40%)	-45.5 (-9%)