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# Understanding Free Trade Attitudes: Evidence from Europe

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## Understanding Free Trade Attitudes: Evidence from Europe\*

### Abstract

Our paper shows that individual preferences for open-market policies are mainly shaped by trust in institutions and not economic self-interest. On the basis of the Eurobarometer, a comprehensive semiannual survey that monitors public opinion in EU Member States, we exploit data on attitudes towards the Transatlantic Trade and Investment Partnership (TTIP), free trade, protectionism, and globalization. We find that preferences for open-market trade policies cannot be sufficiently explained by variables that, according to classical trade theory, typically determine personal advantages. Nevertheless, rational considerations follow expected patterns, in particular when individuals express strong preferences. A spatial analysis at the European NUTS-2 level shows that measures of regional trade exposure and other macroeconomic determinants serve as well-suited predictors for the substantial cross-regional variation in the support for globalization. Country specific narratives are predominant drivers of individual open-market attitudes.

JEL code: F13, F53, F68

Keywords: International political economy, globalization, free trade attitudes

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*“At any rate, the lesson from history seems to be that continued globalization cannot be taken for granted. If its consequences are not managed wisely and creatively, a retreat from openness becomes a distinct possibility.”*

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*“I will argue that we are transitioning from an old world of trade to a new world of trade where trade opening has become a very different game. This transformation has major consequences which will likely - and hopefully - impact the international trading system, be it in terms of principles, policies, and even mandates, as illustrated, for instance, in the recent and turbulent beginning of the so-called Transatlantic Trade and Investment Partnership (TTIP).”*

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# 1 Background and Related Literature

Aggregate economic benefits of free trade are a well-established finding in both theoretical and empirical research. However, a renewed strengthening of protectionist politics has become increasingly popular in many industrialized economies. U.S. President Donald Trump is on the verge of beginning serious trade wars, which would constitute a severe threat to the rules-based global trading system, to support his domestic political agenda. He thereby follows a distinct anti-globalization ideology which already became visible during his election campaign. This is probably the most destructive form of a trend that is certainly not unique to the U.S.: a process of rethinking global economic integration in many advanced economies. The UK's vote to leave the European Union in 2016 was, after all, a plebiscite for national sovereignty at the cost of some degree of economic prosperity. Prior to that, massive protests against the Transatlantic Trade and Investment Partnership (TTIP) especially in German-speaking Europe has already demonstrated that a growing number of people prefers regulatory independence to additional economic gains from trade. Policy debates surrounding the mentioned events reflect a dramatic divergence between public opinions and traditional academic perspectives which entail an overemphasis of advantages of ever increasing international economic integration, thereby neglecting the political economy of these processes.

Dani Rodrik was one of the first to point out the political economy trade-off behind globalization. He became known for what he calls “the political trilemma of the world economy” (Rodrik, 1998).<sup>1</sup> According to Rodrik, societies must choose two out of three objectives; the three objectives are:<sup>2</sup> (1) the nation state in the sense of national sovereignty and legislative autonomy, (2) mass politics in the sense of democratically legitimated decision making<sup>3</sup>, and (3) international economic integration. In a chronological manner, Rodrik elaborates on how each of the possible choices has been implemented during the past century: The first era of globalization, which came to an abrupt end with the beginning of World War I, was characterized by independent nation states maintaining a high degree of international economic integration under the gold standard (in Rodrik's terms “Golden Straitjacket”). The re-establishment of the gold standard after WWI failed mainly due to the resulting high social cost (e.g. unemployment, deflation) which conflicted with the increasing political participation of the working class. This conflict could only be dissolved by the “Bretton-Woods-Compromise” facilitating the coexistence of independent nation states and mass politics. However, this system limited the scope for global economic integration as its functioning required capital controls, for instance.

After its termination in 1973 and a period of weak income growth, a new era began

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<sup>1</sup> Later, these ideas were published in ?.

<sup>2</sup> Note that in later versions, his terminologies have slightly changed.

<sup>3</sup> More precisely, he defines mass politics as politics based on an unrestricted franchise, a high degree of political mobilization, and political institutions that are responsive the mobilized groups.

shifting the political focus towards deep international economic integration. This, in turn, required—given a consensus that mass politics, or better democracy, is non-negotiable—a step by step reduction of national sovereignty. International organizations such as the WTO were set up to administer this process by forming something that Rodrik calls “Global Federalism”. The most ambitious project in this respect was the transformation of the European Community into the European Union following the Maastricht Treaty in 1992. The implementation of a currency union, the realization of the four freedoms in the single market, and the legal supervision by a supra-national court will ultimately lead to a dissolution of the EU’s Member States as nation states in a classical sense. The initially mentioned political events reflect this trade-off between international economic integration and the democratic nation state particularly well.

When it comes to EU trade politics, we observe precisely what Dani Rodrik describes: opponents of Free Trade Agreements (FTAs) refer to the fact that deep and comprehensive trade agreements limit the scope of legislative autonomy. Not every argument they make is worth a closer look; many are exaggerated, or even utterly wrong. However, the strong criticism of investor state dispute settlements highlights legitimate concerns about a valid issue: the loss of legislative autonomy.<sup>4</sup> By this means, the Globalization Trilemma is triggered. The former EU Commissioner for Trade and Director General of the WTO Pascal Lamy underlines similar thoughts by proclaiming a “New World of Trade”. At the risk of simplification, this new world of trade can briefly be described as follows: technical progress turned national production systems into regionally integrated or even global supply networks (Grossman et al., 2006). Formerly, in order to prevent states from manipulating production systems to their national advantage, quotas, tariffs, and subsidies were subject to trade negotiations.

By contrast, recent obstacles to trade are the administration of precaution, including but not limited to security, safety, health, and environmental sustainability. The predominant role of efforts to eliminate non-tariff barriers in recent free trade agreements directly affects policy areas that are sensitive to the broader public. However, increasingly comprehensive FTAs are not only a consequence of “efficiency-obsessed” free traders; the reason for their existence is also related to lobby group interests<sup>5</sup> as well as hidden protectionism<sup>6</sup>. Paradoxically, the complexity of modern FTAs is to some extent due to their opponents.

Pascal Lamy also points out that nowadays patterns of support and disapproval of

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<sup>4</sup> Clearly, proponents would not disagree but would rather stress that this loss of legislative autonomy is desirable as it commits a government to a rule-based order. Hence, proponents and opponents differ in their preferences for legislative autonomy but they share the view that national autonomy is at stake when international investment protection treaties are closed.

<sup>5</sup> For instance, in the EU Japan FTA animal welfare groups insisted making an improvement of animal welfare an explicit goal of the FTA.

<sup>6</sup> Labor unions, e.g. demand for high labor protection standards being part of FTA in order to prevent trade partners from “unfair competition” related to what they call “dumping wages”.

trade liberalization are diametrically opposed to traditional ones: in the past, consumers favored tariff reductions in the hope of lower prices, while domestic producers often disapproved of them fearing increased competition and thereby losing their monopoly rents. What Richard Baldwin (2016) calls “Globalization’s Third Unbundling” is in principle the expansion of trade in services, which adds another facet to this “New World of Trade”. At odds with the formerly observed pattern, producers are now in favor of regulatory convergence because of cost saving while the opposition is formed by consumers, or more precisely, by consumer organizations. Needless to say, as traces of the “Old World” still exist the diverging lines are fluent and exemptions still prove the rule. However, the mere existence of a public debate on recent trade deals, e.g. TTIP in the European, and TPP and NAFTA in the U.S.-American debate, indicates that public interest in trade policy has become increasingly important. Previously difficult to imagine, campaigns against FTAs succeed to form a movement that mobilizes masses and creates influential waves of protest.

In our opinion, a sound understanding of individual preferences for free trade and globalization is of utmost importance in order to assess the democratic legitimacy of open-market policies. This study thus fills the gap between international economics and political economy. It sheds light on drivers, time trends, and correlations of attitudes towards open-market policies in EU member states on the individual, regional, and national levels. For the purpose of this study, we address the following questions:

First, what are the key characteristics that supporters and opponents of international economic integration have in common? Preferences for and against open-markets are shaped via two fundamentally different channels: economic self-interest and values. Exploring the former channel, we can employ observable socio-economic factors that are likely to determine individual economic outcomes of free trade. According to the Heckscher–Ohlin or the Specific Factors model, one would expect correlations between skill levels and preferences for free trade. If, by contrast, individuals care about national identity, independence, or autarky per se they are likely to express open-market attitudes that are based on their values and ergo against their economic self-interest. Our aim is to separate the effect of economic self-interest from value preferences.

Second, as our data allow to break down average attitudes towards globalization to the regional level (NUTS2 or NUTS3<sup>7</sup>) we are interested in explaining the large variation in the support of open-market politics in the EU. Recent strands of the literature following Autor et al. (2013) have emphasized heterogeneous regional effects of trade policy. We examine region-specific fundamentals, e.g. macro variables, that may explain the observed patterns. It stands out that macro variables such as unemployment, regional trade

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<sup>7</sup> The acronym NUTS denotes the "Nomenclature des unités territoriales statistiques", a regional classification used by Eurostat. The numbering indicates the respective level on descending order, e.g. NUTS3 has a higher resolution than NUTS2. For further information, click *here*.



exposure, GDP level, and EU transfers can partly explain the cross-region variation.

Third, we have a closer look at inconsistent responses. For instance, we observe individuals who reject TTIP but are generally in favor of free trade (and vice versa). We can also identify inconsistent group thinking phenomena. For instance, we observe a decline in the support of free trade among older people. However, the support of protectionism declines with age as well. As free trade and protectionism constitute antagonisms, response patterns like these are puzzling and hence worth a closer examination. They could be the result of ignorance, arbitrariness, a misunderstanding about the terms' actual meaning, or of a status-quo bias.

Our paper is closely related to Mayda and Rodrik (2005), who, based on survey data from 23 countries in 1995, find that pro-trade preferences are correlated with individual human capital and trade exposure to the individual sector of employment. They find that high degrees of neighborhood attachment and nationalism is associated with protectionist tendencies. We test their findings based on new data and show some differences indicating that political economy of trade has changed.

Dutt and Mitra (2005) investigate the relation between government ideology and endogenous trade policy; according to their findings, left-wing governments tend to adopt more protectionist trade policies in capital-rich countries and more pro-trade policies in labor-rich economies. Rho and Tomz (2017) challenge the underlying assumption of international political economy of individual policy preferences that reflect economic self-interest. According to them, economic ignorance ultimately causes voting behavior contradicting rational considerations. Moreover, their experiments indicate that individuals express more selfish interests once they learn how trade policies directly affect them. Additionally, the framing of information that is provided to participants substantially matters for the outcome. This is in line with our finding which provides evidence that national narratives of a certain open-market policies are relevant for their acceptance.

Going one step further, Caplan (2007) argues that not “economic ignorance” but four biases (Anti-Market Bias, Anti-Foreign Bias, Make-Work Bias, and Pessimistic Bias) shape individual preferences. Caplan claims that these biases all work against open-market policies. In our setting, these biases may explain why some people favor protectionism although it is in fact disadvantageous for them (e.g. unemployed persons, who do not have a job that can be protected but who would face higher prices). Pitlik (2016) links TTIP approval to distrust in multinational enterprises. According to TTIP opponents, it is these enterprises that would gain the most from this FTA.

Grossman and Helpman (2018) argue theoretically that not only individual outcomes of trade policies shape voters' preferences; also group affiliation determines open-market attitudes to the extent to which the status of the social group is affected by international trade. For our regional analysis, we employ similar measures as Becker et al. (2017) who used a rich set of district-level data in order to analyze Brexit vote outcomes. Dorn et al.

(2016) use a measure for import competition to explain electoral outcomes in the U.S. and find that districts, which are more exposed to import competition display a higher degree of political polarization. In this paper, we also investigate whether import competition directly affects trade attitudes.

We acknowledge the fact that certain endogeneity issues, such as omitted variable and reverse causality problems, make it difficult to establish causation. Any assessment of individual attitudes, mostly based on survey data, is inevitably disputable. However, by exploiting a rich set of individual characteristics as well as fixed-effects, our data allow controlling for many potential channels through which omitted variable biases could interfere. In cases, in which we cannot exclude having identified correlations only, we state this explicitly. Other well-established estimation approaches, for example applying time-leads of explanatory variables, may resolve potential endogeneity issues, too. Nevertheless, we believe that conditional correlations, which are a priori not obvious, can be insightful and valuable for the understanding of international political economy. Moreover, our aim is to identify groups of variables that can explain a substantial fraction of the variance of the outcome variables.

The outline of the paper reads as follows: Section 2 provides an overview of our data bases and provides some descriptive statistics in order to motivate our research question. Section 3 derives some theoretical predictions and explains the empirical strategy, which is used to test the aforementioned hypotheses. Subsequently, Section 4 discusses the results at both the individual level (refer to Subsection 4.1) and the regional level (see Subsection 4.2). Section 5 summarizes the main results and concludes.

## 2 Data Description

The Standard Eurobarometer (EB) was established in 1974 in order to monitor opinions of citizens across EU Member States and candidate countries. From the outset, the EB had a strong focus on opinions about the common market, asking for attitudes towards free trade and globalization in general but also addressing concrete policy topics, such as the Transatlantic Trade and Investment Partnership. We exploit this rich data set to better understand the political economy behind international economic integration. The EB survey is one of the world’s largest survey based repeated cross-sections biannually interviewing 1,000 participants in each EU Member State. The interviews take place in each spring (March/April) and fall (October/November).

The question concerning TTIP was first included in the second semester of 2014 and has repeatedly been posed in all waves since then.<sup>8</sup> The corresponding variable is binary (*for* vs. *against*) and, thus, does not need any further preparation. Additionally, we evaluate so-called concept images which are included in the EB: after participants are

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<sup>8</sup> The latest available wave stems from 2017-1.

confronted with simple terms or statements, they are asked to answer “whether the term brings to mind something *very positive*, *fairly positive*, *fairly negative*, or *very negative*”. These concept images are implemented, among others, for the terms *Free Trade*, *Protectionism*, and *Globalization*. A further question asks whether globalization is considered as an opportunity for economic growth; the set of potential answers again comprises 4 possibilities: *totally agree*, *tend to agree*, *tend to disagree*, and *totally disagree*. As long as the concept images and the question concerning globalization as an opportunity serve as dependent variables, they are re-coded into binary variables by combining the two positive response options and the two negative response option, respectively. When we introduce the concept of “strong preferences”, we focus only on those individuals choosing the answers *totally agree* and *totally disagree*. All dependent variables take the value 1 if the individual is in favor of TTIP, Free Trade, Protectionism, or Globalization, respectively. For the sake of simplicity, the variable “globalization as opportunity for economic growth” is called “Globalization Growth” while the concept image of globalization is referred to as “Globalization Image”.

In total, we employ a data set including 166,000 observations. Thus, measurement errors—as long as they are non-systematic—are not expected to bias our results in any direction. The data cover 28 EU Member States plus two additional regions.<sup>9</sup> At the sub-national level, data for most countries are available at the NUTS-2 level.<sup>10</sup> Due to a rich set of socio-economic control variables and other individual characteristics provided by the survey, we are able to identify systematic patterns of correlations which shape open-market attitudes.

In order to stress the strong regional and national heterogeneity observed in the independent variables, Figure 1 shows regional average approval rates with respect to TTIP and Free Trade. At the national level, the lowest TTIP approval rates are found in Austria (on average 27 percent), and the highest in Lithuania (91 percent)<sup>11</sup>. The unweighted European mean is 67.2 percent, the population weighted mean is 63.8 percent. The variation of attitudes towards free trade is remarkably lower, it ranges from only 59 to 91 percent. The correlation between the two variables is positive, the correlation coefficient yields 0.62. It is striking that the public approval rate of TTIP exceeds the approval rate of free trade in only 22 percent of the all regions. At the national level, this is the case in Cyprus, Hungary, Lithuania, and Portugal. With respect to a few countries, a substantial and steeply declining gap between TTIP approval rates and the free trade concept image becomes visible: these countries are Austria, Germany, Luxembourg, and Slovenia. This may be due to different reasons: a public perception that new and comprehensive trade

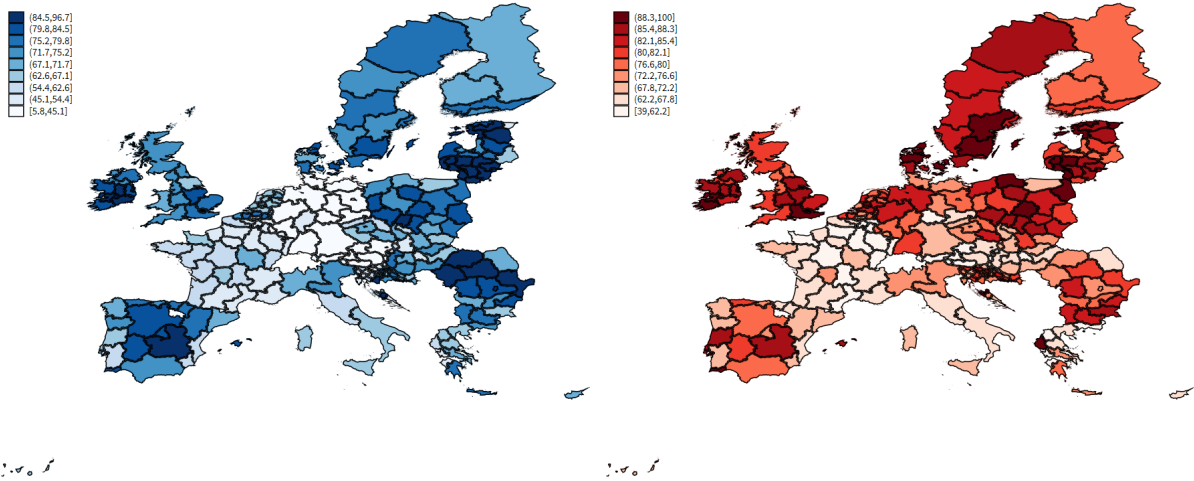
<sup>9</sup> Germany is reported twice (Germany-East and Germany-West). The same applies for the United Kingdom (Great Britain and Northern Island).

<sup>10</sup> For the United Kingdom, Germany, and Italy only NUTS-1 regional data can be employed. For Croatia, Estonia, Latvia, Lithuania and Ireland, higher resolution NUTS-3 level data are available.

<sup>11</sup> unconditional mean.

agreements differ from a conventional understanding of free trade, or general mistrust in conducting free trade with the USA (i.e. anti-Americanism). Also, TTIP is a rather recent treatise and respondents have to evaluate it in an anticipatory manner. Their attitude towards free trade, on the other hand, can be affected by personal experience.

**Figure 1:** Regional attitudes towards TTIP and Free Trade



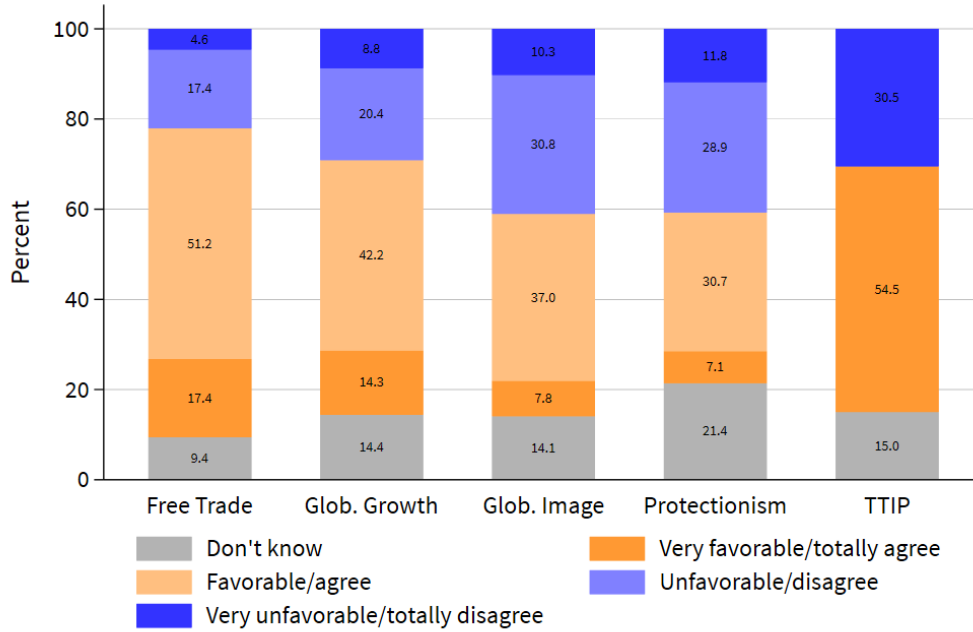
**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The left/right figure illustrate the average support for TTIP/Free Trade in percent in the 247 NUTS regions in Europe. The same figures for the outcome variables globalization image, globalization growth, and protectionism are shown in the Appendix.

Figure 2 illustrates the distribution of different open-market attitudes of European citizens. It also includes non-responses. The following observations are noteworthy: first, Europeans have a strong belief in the benefits of free trade. Roughly 69 percent of the respondents assess free trade as either favorable or very favorable; more than 56 percent believe that globalization is a chance for economic growth. Only 44.8 of the interviewed people are favorable towards globalization. Due to a 14.1 percent share of non-responses, this still constitutes the relative majority. Preferences for protectionism are relatively balanced: for a weak relative majority of 40.7 percent, protectionism is not favorable, while 37.8 percent approve of the idea of protectionism. This is contradictory to the formerly observed response pattern of the free trade concept image. Interestingly, the survey participants chose the answer “don’t know” most frequently in response to the question on protectionism. This may indicate little knowledge on protectionism among the respondents. The responses to the binary question concerning TTIP shows that a vast majority of Europeans is in favor of this FTA. Figure 2 also demonstrates that most individuals do not have what we call strong preferences as they seemingly tend to report preferences for centered responses.

For a better understanding of the data, we want to show a simple variance decomposition. In a panel consisting of  $n$  countries at  $t$  time observations, the outcome variable

**Figure 2:** Distribution of Responses



**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The figure illustrates the response distribution for the variables of interest over all conducted surveys under investigation (2014-2 to 2017-1). Responses are population weighted (country-wise) for the calculation of an European average.

(national mean of any attitude<sup>12</sup>) is obviously a linear combination of  $n$  country and  $t$  time dummy variables. Table 1 disentangles to what extent open-market attitudes differ across countries and within countries over time. It stands out that for all variables the between variance is larger than 90 percent, while the within variance is 4 percent for TTIP and equal or less than 1 percent for all other open-market attitudes.<sup>13</sup>

**Table 1:** Panel Variance Decomposition

	TTIP	Free Trade	Protectionism	Glob. Opportunity	Glob. Image
Between	0.913	0.915	0.956	0.938	0.942
Within	0.039	0.010	0.001	0.009	0.007
Combined	0.952	0.923	0.957	0.947	0.948

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** The table shows the panel variance decomposition for the five dependent variables. The variance is decomposed by the comparison of R-Squares using country vs. time fixed effects. The variance between reflects the variance across countries, the variance within the time-variance within countries.

<sup>12</sup> excluding missings.

<sup>13</sup> Note that this is also driven by the fact that some questions were not asked in every survey wave.

We can conclude that variation over time does not play an important role given the short time span covered by our data (2014-2017). This does not come as a surprise as structural changes related to globalization are long lasting processes and take longer time periods to fully materialize. The decline of the Rustbelt in the U.S.—often considered as one of the reasons for the outcome of the U.S. presidential election in 2016—did not take place within a few years but stretched across decades. Hence, we focus on cross-country and cross-regional variation. Figure 1 illustrates variation across regions and highlights country fixed-effects. Table 2 shows the share of variation across regions which cannot be explained by country fixed-effects.<sup>14</sup> Country fixed-effects can explain the regional TTIP attitudes best. In this way, only 20 percent remain unexplained. When it comes to other open-market attitudes, country fixed-effects can account for less of the variation: 35 percent of the attitudes towards free trade are left unexplained. Protectionism is least explained by nation-wide characteristics, while regional preferences for globalization depend on regional variation by 27 and 35 percent, respectively.

**Table 2:** Variation Across Regions

	TTIP	Free Trade	Protectionism	Glob. Opportunity	Glob. Image
Regional variation	0.199	0.348	0.384	0.268	0.354

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** The table shows the variance across regions within countries for the five dependent variables. The variance is 1 minus the R-Square statistics of a cross-sectional regression that includes only country fixed-effects.

By construction, low numbers of observations and resulting drawbacks related to small-sample regressions are detrimental to the quality of cross-country analysis. In order to increase the number of observations, and to assess regional differences within countries, we implement regional identifiers and calculate attitudes at the regional level. Unfortunately, regional data at the same resolution are not available for all countries. As we do not want to aggregate at the highest level (NUTS-1), we apply regional data at different NUTS levels. For the sake of convenience, we use the term region synonymously for NUTS-1 regions in Germany and the UK, NUTS-3 regions in Croatia, Estonia, Ireland, Latvia, and Lithuania and NUTS-2 regions in all other EU Member States. In total, we arrive 247 European regions.

The macroeconomic variables of interest are taken from Eurostat. We use data from the year 2016 on median age of population, GDP level (in PPPs), unemployment rate, and EU regional transfers. The latter data are made available by Becker et al. (2013)<sup>15</sup>. Our aim is to identify the variables that shape regional attitudes, which are typically formed

<sup>14</sup> Note that we eliminate the time dimension in order to calculate regional means.

<sup>15</sup> We are thankful to Sascha O. Becker, Peter Egger, and Maximilian von Ehrlich for sharing their data.

over a long period of time and remain relatively stable. The aforementioned cross-sectional observations fit this approach as they show only little time variation but large regional variation. By contrast, economic performance measured by current GDP growth is too noisy. Thus, we investigate the effect of GDP growth over the past decade on regional attitudes. Aside from Eurobarometer and Eurostat data at the regional level, we employ regional trade exposure data from Badinger and Reuter (2017)<sup>16</sup>, who provide changes in import and net-export exposure at the NUTS-3-level for the two time spans, namely 1991-2001 and 2001-2011; the regional exposure is calculated following the approach of Autor et al. (2013) and takes the following form:

$$\Delta E_{i_r p t}^M = \sum_{j=1}^J \frac{L_{i_r j t}}{L_{i j t}} \frac{\Delta M_{i j t}^p}{L_{i_r t}} \quad (1)$$

The change in import exposure ( $\Delta E^M$ ) is the change of total imports (M) over period  $t$  in industry  $j$  per employed person (L) in country  $i$ 's region  $r$  coming from partner country  $p$ . Change in imports is then assigned to country  $i$ 's region  $r$  according to its share in country  $i$ 's total employment in industry  $j$ . Total import exposure ( $\Delta E_{i_r p t}^M$ ) of region  $i_r$  from partner country  $p$  is then obtained by summing up the import changes in industry  $j$  assigned to region  $i_r$  over all industries.

Figure 1 shows the variation across European NUTS regions using the example of TTIP and free trade approval rates. Both figures reveal substantial spatial variation that is related to the geographic location displaying the following pattern: lower rates in the core and higher rates in the periphery of the EU. In order to account for this effect, we construct a measure "Distance to Brussels" which is the great-circle distance between the center of a region to Brussels.<sup>17</sup> This measure controls for any structural difference between core and peripheral countries and captures institutional quality, cultural aspects, as well as economic development.

## 3 Hypotheses and Empirical Strategy

### 3.1 Estimation

In order to identify the determinants of individual preferences for open markets, we begin by applying ordinary least square estimates. Due to its linear structure, an interpretation of the magnitude of the reported effects can easily be established. The estimated linear

<sup>16</sup> We are thankful to Harald Badinger and Wolf Heinrich Reuter for sharing their data with us.

<sup>17</sup> For the calculation, the haversine formula is applied. This approach measures the shortest distance between geographic locations, and is thus referred to *as the crow flies*.

probability model takes the following structural form:

$$\mathbb{1}_{i,j} = \alpha_j + \mathbf{X}_i\beta + \zeta_{t(i),j} + \eta_{r(i),j} + \epsilon_{i,j} \quad (2)$$

The indicator variable  $\mathbb{1}$  takes the value one if individual  $i$  has a favorable opinion of the binary dependent variable  $j$ , i.e. “*pro free trade*”, “*pro TTIP*”, “*pro Protectionism*”, “*pro Globalization*”. It is a function of a constant  $\alpha$ , a  $k$ -dimensional vector of explanatory variables  $X_i$ , time and region fixed-effects  $\zeta_{t(i)}$  and  $\eta_{r(i)}$ , respectively, and an error term denoted by  $\epsilon_i$ . The regression coefficients of interest are comprised in the vector  $\beta$ . As robustness checks, we estimate the same model applying standard non-linear models (Probit, Ordered Logit<sup>18</sup>).

As stated earlier, we also aim at identifying, among others, macroeconomic performance variables that are able to explain the large variance across regions. Analogously to our approach to individual attitudes, we distinguish between ideological and macroeconomic drivers. Without a national/regional utility function, a statement on rationality can hardly be made. However, individual rationales (e.g. the effect of age) should also be applicable to the analysis at the regional level; this follows by the aggregation of preferences. Thus, we investigate which regional characteristics shape the average preference at the regional level. For this purpose, we also examine region fixed-effects  $\eta_{r(i)}$  for all variables of interest. This approach allows us to estimate conditional regional averages after controlling for all individual characteristics. We estimate the model:

$$\eta_{r(i),j} = \alpha_j + \mathbf{Z}_r\gamma + \eta_{c(r)} + u_{r,j} \quad (3)$$

The conditional approval rate  $\eta_{r(i)}$  for policy  $j$  in region  $r$  is a function of some constant  $\alpha$ , a vector of regional characteristics  $Z$ , country fixed-effects denoted by  $\eta$  and an error term  $u$ . We are interested in estimated coefficients of vector  $\gamma$  and their contribution to overall fit of the model.

### 3.2 Hypotheses for Individual Preferences

A variety of characteristics shapes individual preferences for open-market policies. We classify variables representing economic self-interest, if a direct link between a certain policy and an individual economic outcome can be established. According to classical trade theory, occupation variables are thought to explain individual gains from trade. As the agricultural sector in the EU is highly protected, an opening of this market is likely to result in losses. Of course, these direct job linkages outweigh indirect effects (price reductions, higher number of available varieties, general equilibrium effects); aggregate gains from trade have to be taken into consideration and typically exceed losses. Whereas gains

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<sup>18</sup> Section 2 on our data explain that four of dependent variables are categorical.



are widespread, individual losses (e.g. job loss) are much more concentrated. Asymmetry in outcomes is one reason why promoting free trade is not straight-forward.

Another matter that is closely linked to occupation variables is human capital, i.e. education. In general, higher education is linked to labor market success. A high endowment with human capital would also lower costs from sector-reallocation in response to trade liberalization. These trade adjustment costs result from, a.o., retraining, temporary unemployment, job search, or relocation. Considering them as fixed costs, younger individuals should be more likely to be in favor of open-market policies as the related costs are distributed over longer life time cycle. Hence, we conjecture a decline for open-market attitudes in age.

The above-stated hypotheses can be categorized as attitudes following economic self-interest. However, as we show later, “soft determinants” play a more important role in shaping individual preferences. The EB provides detailed information on the survey participants’ ideology and beliefs. For instance, respondents are questioned concerning their trust in different national and EU institutions. Without doubt, these soft determinants function either way. However, there are good reasons why trust matters: if trade liberalization is administered in a way that the winners compensate the losers, support for such policies should increase in the reported level of trust. Moreover, trust in the EU which exclusively responsible for the EU’s foreign trade and competition politics is essential for individual preferences (Pitlik, 2016).

The available data allow for a classification of the participants on a standard political left-right scale; one would expect that right-wing individuals to support trade liberalization, free trade and TTIP. Following the Rodrik Trilemma, right-wing individuals are more likely to favor sovereignty which, however, counteracts free trade. We expect left-wing individuals to favor equality and thus to have lower preferences for open-market policies as these typically involve increases in national inequality (Zhu and Trefler, 2005).

Grossman and Helpman (2018) theorize that belonging to a certain social group can determine free trade attitudes beyond individual outcomes if the status of the social group is affected by trade policies. The working class, which is threatened by import competition relatively more than higher social classes, should show less support for open-market politics. Personal well-being, measured in terms of life satisfaction, serves as a control variable to factor in whether survey participants generally provide more positive or negative answers.

### 3.3 Hypotheses for Regional Preferences

Dani Rodrik’s idea of social preferences for the three objectives (sovereignty, democracy, economic integration) can be represented in its most simplistic way as depicted in Figure 8 in the Appendix. Assuming that democracy constitutes the preferred form of gover-

nance in western societies, we reduce the Trilemma to a two-dimensional trade-off by eliminating the democracy dimension. The abscissa of the diagram shows the degree of international economic integration. The ordinate illustrates a utility/cost scale. Increasing international economic integration leads to higher consumption possibilities but comes at the cost of a loss in legislative autonomy. Optimality requires that marginal utility of consumption equals marginal cost of giving up sovereignty. B realizes the optimal level of international economic integration; any chosen form of integration to the left of B (think of North Korea in extremis) is inferior and economic integration would generate net gains. C reflects a situation of over-integration: eventually, Brexit supporters have located the United Kingdom to the right of an optimal degree of integration. This brief exercise demonstrates that GDP maximization does not sufficiently describe the optimal degree of international integration. We conjecture that public support for open-market policies is higher in poorer regions and countries.

Unemployment can affect public opinion about open-markets via two opposing channels: people from regions which experience high unemployment rates could blame this fact on globalization; this is the case when attitudes are shaped by looking back. Consequently, open-market policies are opposed. Contrarily, individuals from those regions could also be in favor of trade liberalization if open markets are considered as a chance to catch up; in this case, people's attitudes are shaped by looking forward. Hence, the direction of the effect is *ex ante* ambiguous. The effect of EU regional transfers, however, should be unambiguous: the amount of EU structural funds should weaken negative trade adjustment costs and thus increase support for open-market attitudes. As EU structural funds are not assigned randomly but depend on the GDP level, a useful estimation requires the inclusion of the GDP level. Recent research examines changes in import-exposure measures in order to assess the impact of globalization on regions. We assume that higher import-exposure materializes in less support for open-markets. Higher export-exposure, by contrast, should have the opposite effect. All other variables included in the regional preference regressions follow a similar pattern as the variables that are used to estimate individual preferences.

## 4 Discussion of Results

The subsequent section presents our main findings with respect to the above-stated hypotheses. For the sake of clarity, we present the results for individual (Subsection 4.1), and regional attitudes (Subsection 4.2) separately.

### 4.1 Individual Attitudes

#### Baseline

Explaining how individual attitudes towards open-market policies are shaped, we classify four sets of explanatory variables. The first set includes variables informing about people’s trust in certain institutions. The second set of variables provides information on individual ideology and political stance; the third contains socio-economic characteristics that might shape attitudes towards open-market policies, e.g. social class, age, gender, education and occupation. These sets of variables are shown in descending order with respect to their contribution in explaining individual attitudes. Our baseline specification in Table 3 also comprises an interaction of region and time fixed effects.

Table 3 shows the determinants of individual attitudes towards the 5 dependent variables. The first set, trust in institutions, reveals our first main finding: trust in institutions is a very dominant driver of individual attitudes. In particular, “Trust in the EU” impacts open-market attitudes between 12 and 19 percent; protectionism, a policy area for which the EU is exclusively responsible is less affected. Certainly, a causal relation could work in both direction, e.g. individuals who are in favor of closed economies may have less trust in institutions which traditionally support international economic liberalization. However, it is worth keeping in mind that the new anti-free trade movement is not an isolated phenomenon but is associated to a more general trust crisis.

The second set of independent variables includes measures that account for individual ideology and political stance. Being politically more informed cannot be clearly attributed to more positive or negative open-market attitudes. The negative sign for TTIP, despite a small magnitude (-0.5 percentage points), is consistent with our perception of a biased public debate about TTIP, i.e. an anti-TTIP campaign that became visible in some countries.<sup>19</sup> We discuss these country-specific campaigning effects below. For the interpretation of the variables on political stance, please note that the group “center” is left out due to multicollinearity. Hence, all coefficients need to be interpreted relative to centrist preferences. In line with our priors, leftists are less likely to approve TTIP by around 9 percentage points. The effects on attitudes towards free trade and the globalization point

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<sup>19</sup> Interestingly and in line with Pascal Lamy’s proclamation of the new world of trade, these campaigns focused mainly on precaution related issues and circumvent standard arguments for protectionism (job losses in certain industries).

in the same direction, even if the magnitudes become slightly smaller. Moving along the political spectrum to the right, support for open-markets is u-shaped. It increases to the center-right and declines for far right. This might be due to distinct preferences for national autarky. The results for protectionism are particularly striking: leftists and center-leftists tend to disapprove protectionism. This is at odds with our priors, as typically left-wing parties tend to favor protectionist measures. The effect of political stance is shown graphically in Figure 3. Overall, ideological variables seem to follow expected pattern.

Life satisfaction is positively correlated to all outcome variables. In the first place, a clear economic relationship between life satisfaction and open-market attitudes may not be obvious. However, from a behavioral perspective, happier individuals tend to give more positive answers in general, no matter the which topic. To eliminate this bias, we include the life satisfaction. It increases the likelihood of positive answers in our baseline specification by 2.9 to 4.5 percentage points. Including a variable for education<sup>20</sup> shows negative effects on the outcome variables, two of which are statistically significant. Mean education time is 19.4 years and its standard deviation yields 5.1 years; one standard deviation increase in education decreases the support for TTIP, *ceteris paribus*, by 1 percentage point. High skilled individuals are typically considered to adjust more easily to trade shocks, while low-skilled workers might suffer relatively more. The opposite result is another indication that the political economy of trade has changed, and that open-market attitudes cannot sufficiently be explained economically.

There is no gender specific deviation with respect to TTIP attitudes. However, male and female respondents show different preferences for free trade and protectionism. Except for their image of globalization, men's support of open markets rates higher than women's. As for the effect of age on the outcome variables, we allow for non-linearity; this is discussed in more detail later. Social class is categorical, has five realizations<sup>21</sup> and increases in the status of the self-reported class. Accordingly, the difference in support between the highest and the lowest class equals five times the reported coefficient. An increase in social class goes along with an increase in the probability of being in favor of open markets: TTIP increases by 0.8 percentage points at the margin, free trade by 1.2, protectionism decreases by 1 percentage point (not statistically significant), and globalization attitudes increase by 1.9 and 1.7 percentage points, respectively. Living in rural regions has no effect on attitudes towards TTIP, protectionism, and the image of globalization, but entails a slightly negative impact on the approval of free trade and the globalization opportunity variable. According to our estimates, occupation is a poor predictor for the support of to open-market policies. We can identify a negative effect

<sup>20</sup> This variable provides information on the age of respondents when finishing their education. Thus, it increases in the level of education.

<sup>21</sup> Working class, lower middle class, middle class, upper middle class, and higher class.

for farmers and fishermen on TTIP (-6.3 percentage points) and globalization as an opportunity for economic growth (-2.9 percentage points), no effect of being self-employed on any of the variables, and a substantially higher support for protectionism among blue collar workers (4.4 percentage points). White collar workers do not show any differences in their preferences, and unemployed individuals show significantly lower approval rates for free trade, and globalization as opportunity for economic growth. Note that the reference group consists of inactive individuals, i.e. students and retired persons). Similar to the occupation variables, other variables that are available in the Eurobarometer survey have no effect on the individual attitudes. These include, amongst others, information on private wealth.

**Table 3:** Individual Open-Market Attitudes

	TTIP		Free Trade		Protectionism		Glob. Opportunity		Glob. Image	
	(1)		(2)		(3)		(4)		(5)	
Trust European Union	14.76***	(1.38)	12.04***	(1.19)	5.33***	(1.03)	18.94***	(1.47)	18.20***	(1.08)
Trust Political Parties	0.77	(1.11)	0.96	(0.64)	8.00***	(1.58)	1.83***	(0.56)	7.70***	(0.98)
Trust Nat. Government	2.38*	(1.25)	3.49***	(0.70)	2.43*	(1.37)	3.25***	(0.72)	3.02***	(1.00)
Trust Nat. Parliament	0.18	(0.85)	2.13***	(0.57)	2.71**	(1.14)	2.12***	(0.56)	2.68***	(0.82)
Political Interest	-0.51*	(0.29)	0.25	(0.30)	-0.98*	(0.48)	0.69**	(0.26)	0.13	(0.33)
Left	-9.30***	(1.83)	-8.17***	(1.39)	-2.75*	(1.48)	-4.87***	(1.05)	-3.56**	(1.35)
Center-Left	-5.10***	(1.00)	-3.65***	(0.80)	-4.64***	(0.89)	-2.55***	(0.60)	-3.40***	(0.65)
Center-Right	2.43**	(0.89)	1.59***	(0.56)	-1.36	(0.83)	-0.86	(1.00)	-1.09	(0.88)
Right	0.72	(1.52)	-0.91	(0.93)	2.08	(1.26)	-2.83**	(1.32)	-0.32	(1.36)
Life Satisfaction	2.90***	(0.42)	3.88***	(0.45)	2.19***	(0.62)	4.41***	(0.32)	4.46***	(0.47)
Education (finish age)	-0.17***	(0.05)	-0.06	(0.05)	-0.52***	(0.11)	-0.00	(0.03)	-0.09	(0.07)
Male	0.51	(0.72)	1.88***	(0.34)	-4.75***	(0.91)	0.22	(0.49)	-0.96*	(0.49)
Age	-0.19**	(0.07)	-0.28***	(0.08)	-1.06***	(0.12)	-0.40***	(0.08)	-0.92***	(0.12)
Age squared x 100	0.14**	(0.06)	0.20***	(0.07)	0.79***	(0.12)	0.25***	(0.08)	0.69***	(0.11)
Social Class	0.83**	(0.33)	1.24***	(0.38)	-0.96	(0.73)	1.91***	(0.40)	1.70***	(0.38)
Rural	0.39	(0.74)	-0.97	(0.66)	-0.16	(0.81)	-0.82	(0.52)	-0.98	(0.72)
Farmer and Fisherman	-6.33***	(2.23)	-2.46	(2.78)	0.79	(3.12)	-2.87*	(1.41)	-1.85	(2.11)
Self-Employed	-0.64	(0.65)	1.37	(0.99)	-1.47	(1.18)	-0.54	(0.85)	0.54	(0.81)
Blue Collar Worker	0.64	(0.59)	-0.17	(0.40)	4.45***	(1.11)	0.17	(0.56)	0.34	(0.67)
White Collar Worker	0.86	(0.51)	0.21	(0.87)	-0.88	(0.82)	0.18	(0.56)	0.59	(0.74)
Unemployed	-1.18	(0.72)	-1.70**	(0.69)	-0.56	(1.17)	-1.52*	(0.75)	-0.12	(0.75)
Observations	92664		64640		42009		92666		61745	
R <sup>2</sup>	0.19		0.13		0.16		0.19		0.18	

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** Ordinary least square estimates, standard errors in parentheses. All specifications include region-time fixed-effects. Standard errors are clustered at the country level. \*\*\*, \*\* and \* indicate statistical significance levels for p-val. < 0.01, p-val. < 0.05, and p-val.< 0.1.

This correlation exercise exemplifies that determinants beyond economic self-interest shape preferences for open-market policies. Thus, the data support Lamy’s (2015) and Rodrik’s (1998) description of attitudes: if in the new world of trade, precaution—and not protection—is for sale, it is not far-fetched that trust in the relevant institutions matters much more than individual labor market outcomes. At the same time, higher education and high-paid jobs do not strengthen open-market attitudes indicating that potential winners in economic terms prefer non-economic objectives over additional income. Our findings illustrate that the classical antagonism between left and right cannot consistently explain attitudes towards open-markets at the individual level. Clearly, even the inclusion of a very rich set of explanatory variables that covers various potential channels determining open-market sentiments cannot explain individual preferences comprehensively. This is reflected by R-Square statistics below 20 percent. An explanation for the weak performance of our model might be arbitrariness, or simply a misunderstanding of the survey questions by the participants. Related literature shows that surveys participants tend to favor center responses rather than extremes. This is often referred to as central tendency bias.<sup>22</sup> Accordingly, the next subsection focuses on strong preferences which allows us make much better predictions concerning individual attitudes.

### Strong Preferences

For the sake of a clear notation, we consider individuals having strong preferences if they are either *very much in favor* or *very much against* certain politics. Hence, we restrict our analysis on a sub-sample of answers. In doing so, we lose the question on TTIP, which is non-categorical. Results are shown in Table 4. The fit of the model increases quite substantially up to more than 45 percent. Accordingly, most of the reported coefficients increase in absolute values. It is striking that occupation variables do not carry much weight here as well. Altogether, we don not find evidence that classical trade theory provides a useful frame of reference for the political economy of trade.

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<sup>22</sup> For an overview on the effects of central tendency bias and related literature cf. Allred et al. (2016).

**Table 4:** Individual Open-Market Attitudes – strong preferences

	Free Trade		Protectionism		Glob. Opportunity		Glob. Image	
	(1)		(2)		(3)		(4)	
Trust European Union	14.83***	(2.17)	5.84***	(1.54)	27.60***	(3.36)	25.27***	(2.40)
Trust Political Parties	1.38	(1.24)	11.68***	(2.76)	1.38	(1.27)	9.76***	(1.77)
Trust Nat. Government	4.45***	(1.44)	2.67	(1.86)	4.20**	(1.57)	6.54***	(2.13)
Trust Nat. Parliament	2.19*	(1.08)	3.13	(1.86)	3.95***	(0.98)	3.76**	(1.67)
Political Interest	0.86*	(0.44)	-0.62	(0.55)	1.05***	(0.32)	0.45	(0.48)
Left	-10.53***	(2.47)	-1.71	(1.98)	-5.51***	(1.40)	-5.02***	(1.63)
Center-Left	-3.41***	(1.12)	-2.82*	(1.40)	-2.67***	(0.94)	-3.21**	(1.42)
Center-Right	1.63*	(0.80)	-2.03	(1.28)	-0.00	(1.57)	-0.46	(1.65)
Right	-2.58	(1.75)	1.73	(1.71)	-2.45	(2.13)	-0.39	(1.97)
Life Satisfaction	4.11***	(0.75)	1.55*	(0.83)	5.37***	(0.58)	4.73***	(0.98)
Education (finish age)	-0.18*	(0.09)	-0.55***	(0.14)	0.09*	(0.05)	-0.06	(0.12)
Male	1.56**	(0.64)	-5.58***	(1.56)	1.49**	(0.71)	-0.84	(0.71)
Age	-0.42***	(0.12)	-1.18***	(0.25)	-0.51***	(0.14)	-1.14***	(0.17)
Age squared x 100	0.33***	(0.11)	0.82***	(0.22)	0.35**	(0.13)	0.84***	(0.17)
Social Class	2.19***	(0.50)	-0.17	(0.96)	2.73***	(0.39)	1.99**	(0.74)
Rural	-0.47	(1.48)	0.02	(1.62)	-1.01	(0.74)	0.19	(1.20)
Farmer and Fisherman	-10.00**	(3.82)	-1.89	(4.28)	-2.62	(3.24)	-0.77	(3.56)
Self-Employed	2.80*	(1.50)	-1.13	(1.78)	0.00	(1.31)	-0.71	(1.36)
Blue Collar Worker	-0.41	(0.74)	3.03*	(1.57)	-0.50	(0.67)	0.71	(1.19)
White Collar Worker	1.33	(1.37)	-1.64	(1.60)	1.14	(0.75)	1.48	(1.39)
Unemployed	-1.09	(1.53)	-2.46	(1.67)	-0.54	(1.40)	0.51	(1.61)
Observations	16020		11303		25351		13298	
R <sup>2</sup>	0.32		0.39		0.45		0.47	

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** Ordinary least square estimates, standard errors in parentheses. All specifications include region-time fixed-effects. Standard errors are clustered at the country level. \*\*\*, \*\* and \* indicate statistical significance levels for p-val. < 0.01, p-val.<0.05, and p-val. < 0.1.

## The Effect of Political Stance

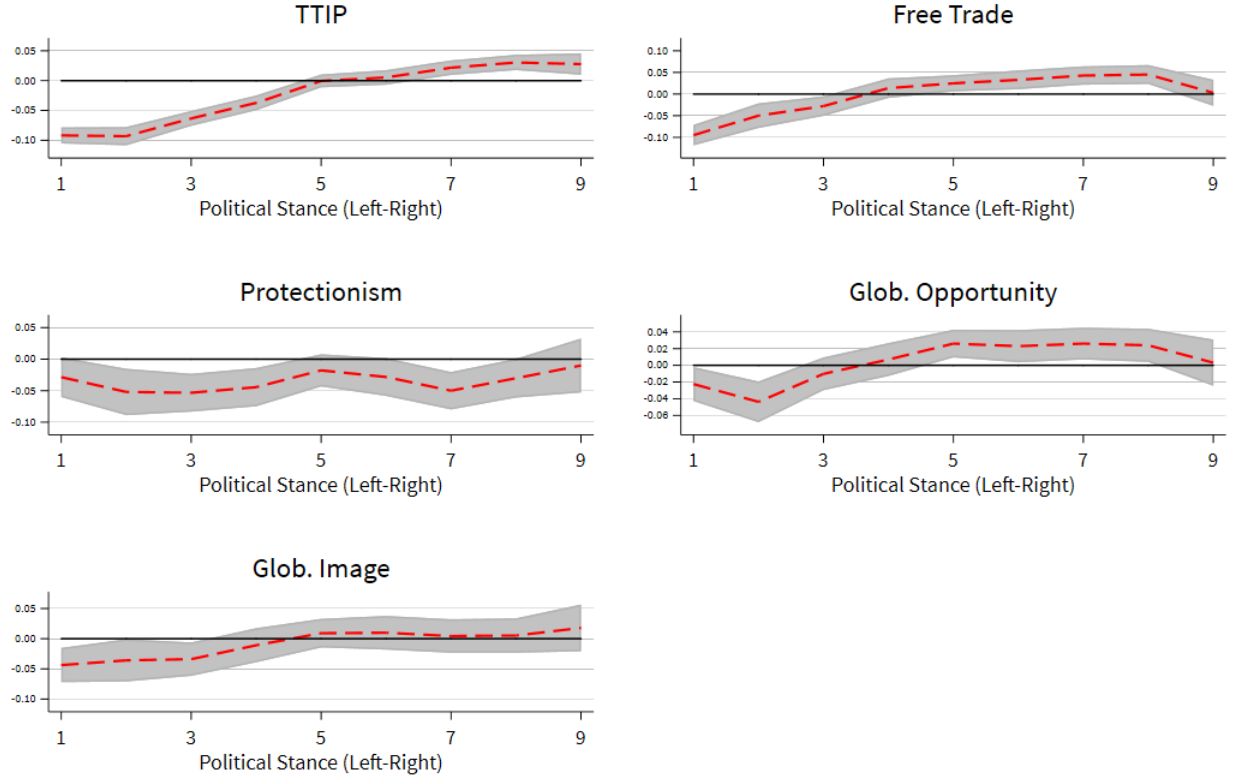
For the following, we extend the specification shown in Table 4:<sup>23</sup> survey respondents can locate themselves on a left-right scale (1 to 10), for which we estimate different coefficients. Due to multi-collinearity, the 10<sup>th</sup> regressor is left out and serves as reference point. Coefficients need to be interpreted relative to this (far-right) group. The results are graphically illustrated in Figure 3.

We observe distinct differences for left and right individuals with respect to TTIP and free trade with increasing support for these policies. As for protectionism and globalization attitudes, ideological stance shows no systematic pattern that allows us to draw conclusions. Thus, we deduce that the typical left-right antagonism plays only a minor role in explaining individual open-market attitudes.

<sup>23</sup> For the effect of political stance on attitudes towards TTIP, we employ the specification as shown in Table 3.



**Figure 3:** The Effect of Political Ideology on Open-Market Attitudes



**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The figure illustrates the effect of political stance on a scale between 1 (very left) and 10 (very right) on the the five variables of interest. Category 10 is left out for multicollinearity reasons. Regressions are specified as in Table 3 and 4.

## The Effect of Political Interest

Political interest is a variable that accounts for self-reported interest in and knowledge about political issues. The variable is categorical and has four realizations. From this variable, we can deduct how individual attitudes are determined in the context of national public debates. If—all else equal—politically more informed individuals report above-average approval rates of TTIP in country A and below-average approval rates in country B, we can identify certain country-specific narratives surrounding our outcome variables. Hence, we interact political interest with country fixed-effects. Apart from that, estimations are specified as in Table 4.<sup>24</sup>

Results of this exercise are shown in the Appendix. Note that for the sake of clarity, significant coefficients are marked colored. With respect to TTIP, the most negative narratives are found in the Netherlands, Germany, Luxembourg, Spain, Sweden and Slovakia. In Italy, Greece, Cyprus and most of the eastern European Member States,

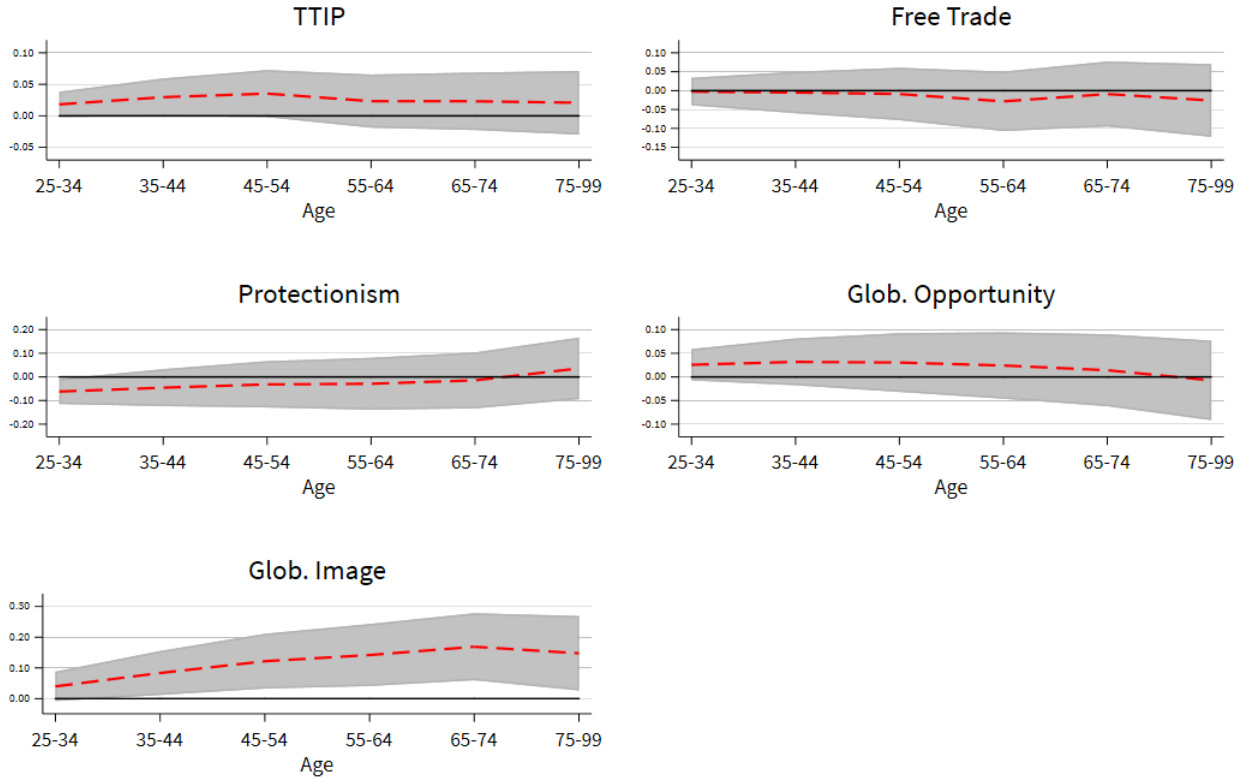
<sup>24</sup> For TTIP, we use the specification as shown in Table 3.

politically more informed individuals approve free trade significantly more. In Italy and Bulgaria, increasing political interest is also related to higher approval rates for protectionism. Globalization is seen as an opportunity for economic growth particularly among politically informed individuals in Luxembourg and Northern Ireland. Political knowledge increases favorable opinions about globalization in only half of the EU's Member States. This provides evidence for the presence of country-specific debates on open-market policies. Positive open-market attitudes dominate public debates primarily in northern and eastern European countries whereas the opposite holds true for central European and Mediterranean countries.

### **The Effect of Age**

Tables 3 and 4 indicate an inverted u-shape relationship between age and open-market attitudes. This non-linearity is best illustrated graphically. Figure 4 shows different age effects for different age groups. Except for the globalization image, age effects are statistically not significantly different from those of the reference group (age 15-24). Thus, we reject the non-linearity hypothesis and interpret our results in favor of Lamy's (2015) argument (*sale of precaution*): if individuals care about consumer protection (and not individual labor market outcome as our results suggest), there is no variation in the effect of age on open-market policies to be expected. the concept image concerning globalization constitutes the "broadest" question and does not address a concrete policy but a general attitude towards globalization. Surprisingly, a skeptical rethinking of globalization is prevalent among younger individuals.

**Figure 4:** The Effect of Age on Open-Market Attitudes



**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The figure illustrates the effect of age groups on the the five variables of interest. The youngest group (15-24) is left out for multicollinearity reasons. Regressions are specified as in Table 3 and 4.

## R-Squared Decomposition

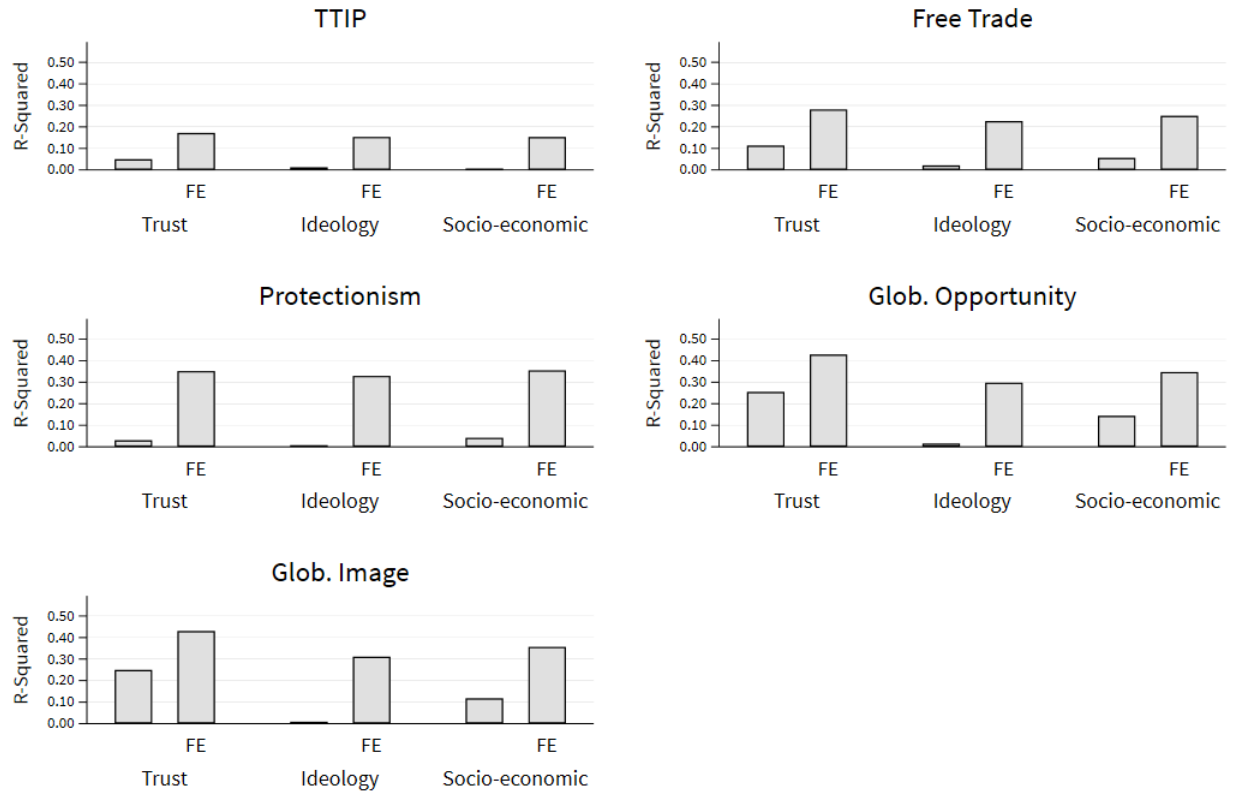
To better illustrate the share of variance that is explained by different sets of explanatory variables, we graphically show their contribution to the R-Squared statistics. The estimations follow the structure of Table 4.<sup>25</sup> For all independent variables, regressions with and without region-time fixed effects are shown. It stands out that a relatively large share of variance is accounted for by fixed-effects.

The inclusion of trust variables leads to a higher increase in the model fit than the inclusion of the political ideology variables and the socio-economic characteristics. The only exception is protectionism; in this case the overall fit of the model highly depends on region-time fixed-effects. Ideology does not seem to play an important role for any of the variables of interest. Socio-economic determinants have some impact particularly on globalization attitudes. For those the overall fit of the model is highest and trust variables alone explain up 25 percent of the total variance. Therefore, even if effects of ideology and some other variables points towards the expected directions, their contribution to an

<sup>25</sup> For TTIP, we use the specification as shown in Table 3.

explanation of open-market attitudes is negligible.

**Figure 5: R-Squared Contribution**



**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The figure shows R-Squared statistics based on results from Table 3 and 4. The bars indicate the explanatory power of the respective set of independent variables. FE specifications include region-time fixed effects.

## Robustness Checks

In order to provide evidence that our findings remain qualitatively unchanged when applying a different model, we run our baseline specification also using Probit and Ordered Logit models. In the latter, the outcome variables include all four realizations as discussed in Section 2. The results are summarized in Table 8 and 9. Given the non-linear structure of Probit and logistic regressions, a comparison of coefficients is not straight-forward. Nonetheless, both models support all findings from the linear specifications. Coefficients point in the same direction, their magnitudes remain relative to other coefficients roughly the same, and the effects are robust with respect to statistical significance.

## 4.2 Attitudes across European Regions

Individual attitudes may be shaped not only by respondents' personal experiences with open-market policies; they may also be based on a region's overall experience with economic shocks. This does not necessarily require altruistic preferences but can be justified by some sort of self-interest: regions facing high import competition might fall behind, the regional population could shrink, which in turn causes a lower provision of public goods. Hence, a person even if not negatively affected by an import shock directly is still subject to the indirect consequences.

Section 2 already stresses the importance of country and region fixed-effects. More specifically, we highlight that large heterogeneity between geographical units is present for all outcome variables. This sub-section aims at abstracting from individual preferences and shifting the focus towards the variance across European regions. Please note that as described in Section 3, we estimate the fixed-effect coefficients that result from individual regressions. Hence, we estimate conditional regional averages. Our final sample comprises 247 regions but we have to exclude 5 regions due to missing values in a covariate (change in population). Regressions that include the shift-share instrument on trade exposure contain less observation as this data is only available for EU15 Member States. The shift-share measure also takes into account changes in trade exposure due to the EU eastern enlargement. Table 5 shows summary statistics of the coefficients which are pre-multiplied with 100 percent.

**Table 5:** Summery Statistics: Region Fixed-Effects

	Observations	Mean	Standard Deviation	Minimum	Maximum
TTIP	247	66.5	16.7	5.8	96.7
Free Trade	247	76.3	10.8	39	100
Protectionism	247	44.9	16.4	0	100
Glob. Opportunity	247	66.1	13.8	17.1	93.3
Glob. Image	247	51.9	14	10.9	85.6

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** The table shows the coefficients of region fixed-effects following our baseline estimation according to estimation 2. The region, in which all individuals have a positive view on protectionism is Cantabria, in the north of Spain. In Zadar and Dubrovnik (both Croatia), all respondents are against protectionism and pro free trade, respectively.

Table 6 shows the results when regressing conditional regional approval rates for TTIP on the aforementioned covariates (Column 1). Results of Column 2 and 4 include country fixed-effects. In specification 3 and 4, the shift-share measures for import and net-import exposure are included. Column 5 to 12 repeat the results when repeating this exercise for free trade and protectionism. Table 7 does the same for the globalization variables.

Again, it is trust variables that matter the most: a one percentage point increase

in average trust in the EU generates 0.43 percentage points higher TTIP approval rates (Column 2). Trust in the EU has a positive effect on four pro open-market attitudes (there is no effect on protectionism). Trust in national institutions has sizable effects on pro open-market preferences as well. Unemployment merely has a positive effect on TTIP and protectionism and only in specifications without fixed-effects. This might indicate low within-country variation in unemployment rates. The effect is larger for western European countries. Income level has no significant effects in most of the specifications. For western European countries (Column 3, 4, 7, and 8 in Table 7) higher income is positively associated with a more positive attitude towards globalization. Effects of population change over the last 15 years are not very robust. Obviously, distance to Brussels does not vary heavily within EU Member States; hence, it does not come as surprise that we do not find a significant effect in the fixed-effect specifications. However, the farther away from Brussels (in 100 kilometers), the larger is the support for TTIP, free trade, protectionism, and globalization. The effect of median age is not entirely clear, the sign flips (negative effects on TTIP, positive effects on free trade). The effects of trade exposure apply to western European countries only and disappear once country fixed-effects are included. It stands out that import exposure lowers approval rates of all five outcome variables. In the case of protectionism this is puzzling. We do not include EU regional transfers in the regressions as it would further reduce the number of observations by 37 regions. Effects of regional transfers are statistically not distinguishable from zero.

**Table 6:** Open-Market Attitudes 1/2

	TTIP				Free Trade				Protectionism			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Trust in National Institutions	-0.28* (0.15)	-0.10 (0.26)	0.02 (0.29)	0.01 (0.28)	0.23* (0.13)	-0.18 (0.28)	0.69*** (0.24)	-0.41 (0.36)	-0.26* (0.16)	0.05 (0.38)	-0.40* (0.22)	0.08 (0.48)
Trust in EU	0.52*** (0.09)	0.42*** (0.09)	0.55*** (0.18)	0.40** (0.16)	0.26*** (0.06)	0.27*** (0.07)	0.12 (0.11)	0.37*** (0.13)	0.14 (0.08)	0.19 (0.13)	0.32** (0.13)	0.25 (0.22)
Unemployment	0.31 (0.20)	-0.22 (0.24)	0.77** (0.36)	-0.29 (0.27)	-0.01 (0.15)	0.39 (0.25)	0.26 (0.25)	-0.05 (0.25)	0.50** (0.23)	0.31 (0.40)	0.81*** (0.29)	0.81* (0.46)
Ln GDP per capita (PPP)	1.06 (0.69)	-1.04 (0.67)	-1.83 (1.30)	-0.04 (0.95)	-0.13 (0.57)	-1.03 (0.70)	0.43 (1.17)	-0.11 (1.01)	1.82** (0.74)	1.75 (1.22)	-0.76 (1.06)	-0.27 (1.55)
$\Delta$ population	-1.88 (1.54)	0.89 (1.88)	5.32 (3.50)	-0.56 (2.47)	-0.52 (1.20)	3.57* (1.85)	3.14 (3.18)	2.32 (2.59)	8.13*** (1.79)	1.92 (2.52)	4.96 (3.50)	1.22 (3.03)
Distance to Brussels	0.65*** (0.18)	0.01 (0.26)	-0.26 (0.36)	0.16 (0.34)	0.26* (0.14)	0.15 (0.29)	-0.07 (0.25)	0.47 (0.36)	0.75*** (0.21)	-0.18 (0.35)	-0.18 (0.35)	0.22 (0.51)
Median Age	-1.54*** (0.37)	0.66 (0.40)	-0.35 (0.60)	0.86* (0.44)	-0.33 (0.29)	1.18** (0.49)	-0.03 (0.55)	0.65 (0.44)	0.82* (0.47)	0.94 (0.63)	0.35 (0.60)	1.16* (0.69)
$\Delta$ Import Exposure			-1.03*** (0.26)	0.69 (0.58)			-0.61** (0.27)	1.01** (0.48)			-0.72** (0.36)	0.33 (0.60)
$\Delta$ Net-Import Exposure			0.77* (0.44)	0.26 (0.36)			0.15 (0.23)	0.13 (0.18)			0.49** (0.23)	0.45** (0.22)
Observations	242	242	134	134	242	242	134	134	242	242	134	134
R <sup>2</sup>	0.40	0.83	0.36	0.87	0.20	0.64	0.26	0.71	0.23	0.63	0.44	0.67
Country FE		✓		✓		✓		✓		✓		✓

**Source:** Eurobarometer, 2017. Badinger and Reuter (2017). Own calculations.

**Note:** Ordinary least square estimates, heteroskedasticity robust standard errors in parentheses. \*\*\*, \*\* and \* indicate statistical significance levels for p-val. < 0.01, p-val. < 0.05, and p-val. < 0.1.

**Table 7:** Regional Open-Market Attitudes 2/2

	Glob. Opportunity				Glob. Image			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trust in National Institutions	0.70*** (0.13)	-0.06 (0.26)	0.96*** (0.23)	-0.26 (0.33)	0.60*** (0.12)	0.06 (0.29)	0.69*** (0.23)	-0.44 (0.40)
Trust in EU	0.47*** (0.07)	0.43*** (0.09)	0.35*** (0.11)	0.38** (0.19)	0.52*** (0.07)	0.52*** (0.10)	0.56*** (0.13)	0.66*** (0.23)
Unemployment	0.10 (0.18)	0.35 (0.24)	-0.19 (0.25)	-0.23 (0.23)	0.12 (0.19)	0.62** (0.29)	-0.18 (0.28)	0.33 (0.35)
Ln GDP per capita (PPP)	-0.11 (0.62)	-0.08 (0.81)	1.95* (1.12)	2.11** (1.05)	0.80 (0.58)	0.46 (0.90)	1.50 (1.01)	2.32* (1.23)
$\Delta$ population	0.60 (1.39)	0.83 (1.75)	5.30 (3.35)	3.33 (2.26)	2.96** (1.31)	1.58 (1.89)	5.95* (3.13)	3.11 (2.77)
Distance to Brussels	-0.19 (0.16)	0.25 (0.27)	-0.24 (0.27)	0.20 (0.38)	0.44*** (0.16)	0.35 (0.35)	0.47 (0.29)	0.50 (0.47)
Median Age	0.20 (0.32)	0.68 (0.46)	0.29 (0.56)	0.53 (0.51)	0.31 (0.32)	0.99** (0.46)	0.39 (0.53)	1.08* (0.55)
$\Delta$ Import Exposure			-0.95*** (0.26)	0.79 (0.65)			-0.84*** (0.21)	0.78 (0.73)
$\Delta$ Net-Import Exposure			0.08 (0.24)	0.17 (0.30)			0.12 (0.17)	0.37 (0.28)
Observations	242	242	134	134	242	242	134	134
R <sup>2</sup>	0.38	0.72	0.57	0.80	0.39	0.65	0.55	0.75
Country FE		✓		✓		✓		✓

**Source:** Eurobarometer, 2017. Badinger and Reuter (2017). Own calculations.

**Note:** Ordinary least square estimates, heteroskedasticity robust standard errors in parentheses. \*\*\*, \*\* and \* indicate statistical significance levels for p-val. < 0.01, p-val.< 0.05, and p-val. < 0.1.

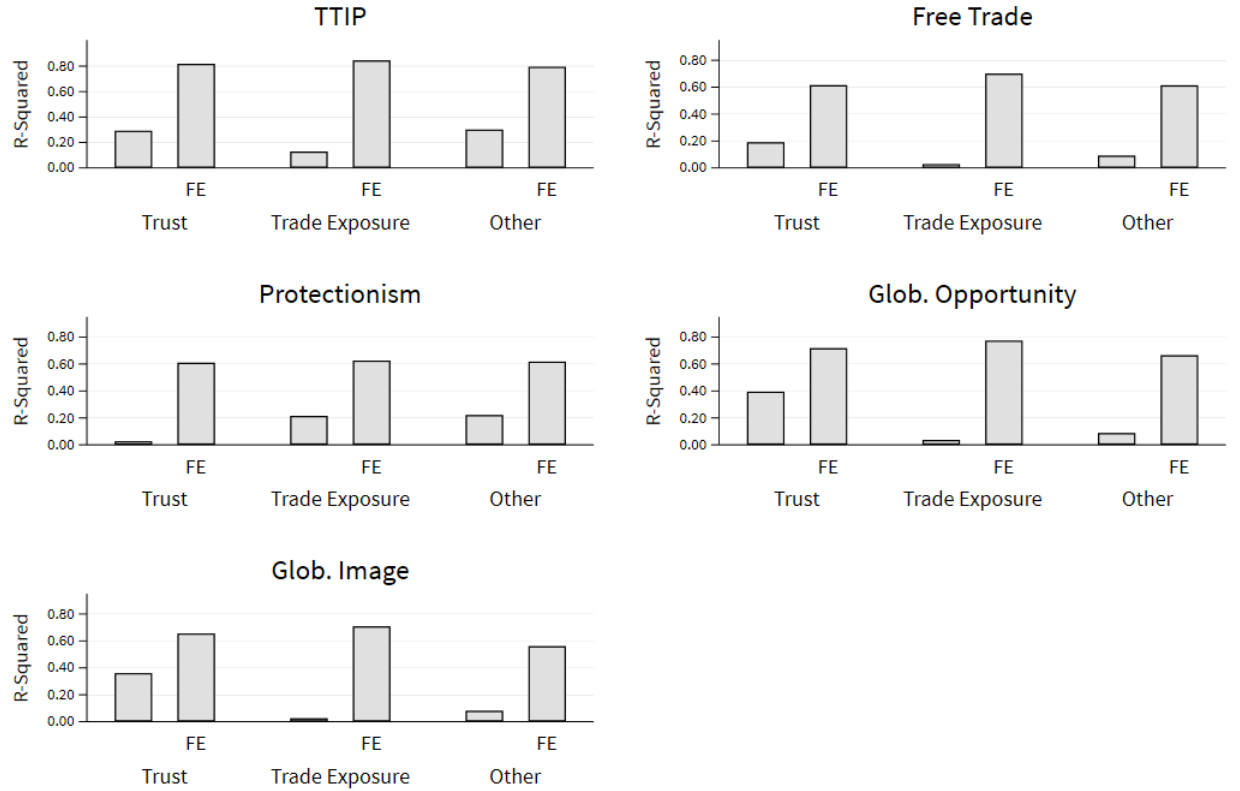
## R-Squared Decomposition

This Subsection repeats the R-Squared decomposition for individual analysis. Estimations follow the structure of Table 6 and 7. For all specifications, regressions with and without country-fixed effects are shown. It is noteworthy that a relatively large share of variance is explained by the fixed-effects.

The average trust variables alone explain between 19 and 40 percent of the total variance; merely with respect to protectionism, trust has a negligible effect. By contrast, trade exposure matters for regional attitudes towards protectionism (22 percent); it has a smaller effect on TTIP (13 percent) and is irrelevant for the other open-market attitudes. The remaining covariates can explain TTIP (30 percent) and protectionism (22 percent) best.



**Figure 6:** R-Squared Contribution



**Source:** Eurobarometer, 2017. Badinger and Reuter (2017). Own illustration.

**Note:** The figure shows R-Squared statistics based on results from Table 6 and 7. The bars indicate the explanatory power of the respective set of independent variables. FE specifications include country fixed-effects.

## 5 Conclusion

Our paper shows that the political economy of globalization is predominantly driven by determinants which go beyond economic self-interest. The *new world of trade* (?) is characterized by distinct individual preferences that do not follow classical economic theory. In fact, people often respond according to their self-interest but the explanatory power is very little. Criticism of globalization and open markets is phenomenon that is related to a trust crisis. Perhaps as long-term consequence of the 2008 Financial Crisis, individuals with little trust in institutions show lower approval for open-market policies. Our model performs particularly well in predicting attitudes of individuals who express strong preferences. At the regional level, higher import exposure typically leads to lower preferences for open-markets, while the reverse effect of export exposure is lower. Moreover, EU transfers do not impact attitudes. For all outcome variables, we find large cross-country heterogeneity which can only be partially explained by different national trade related

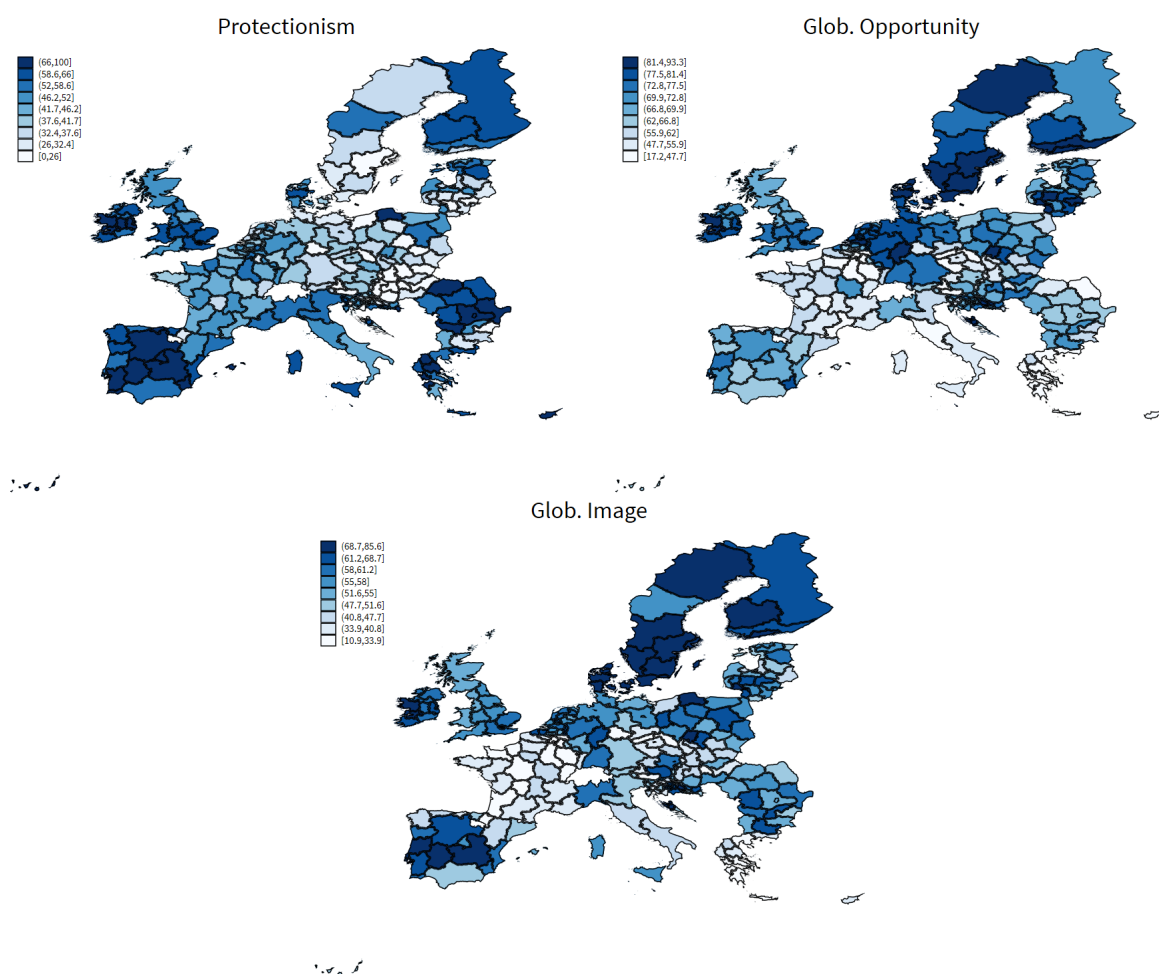
public narratives.

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## Appendix Chapter 3

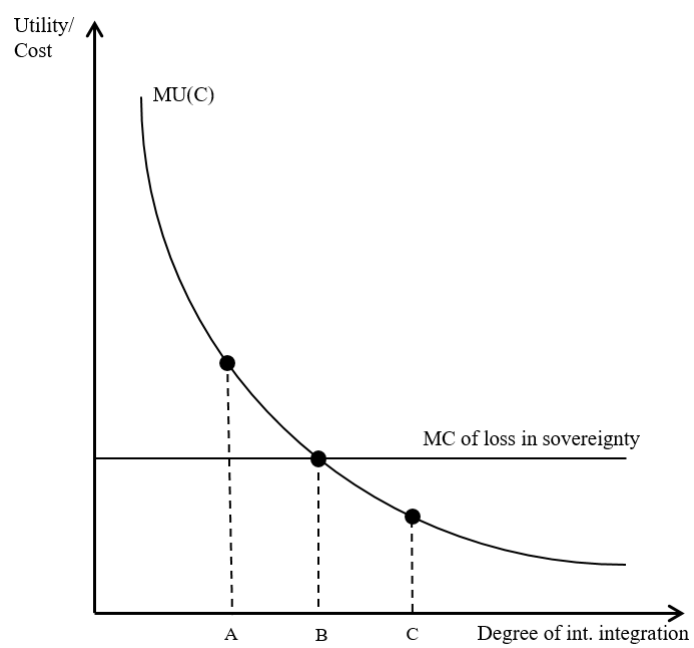
**Figure 7:** Regional Attitudes towards Globalization and Protectionism



**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The figures illustrate average approval rates for protectionism and the two globalization attitudes in 247 NUTS regions across Europe.

**Figure 8:** Optimal Economic Integration



**Source:** Own illustration based on ?.

**Table 8:** Individual Open-Market Attitudes – Probit

	TTIP		Free Trade		Protectionism		Glob. Opportunity		Glob. Image	
	(1)		(2)		(3)		(4)		(5)	
Trust European Union	0.47***	(0.04)	0.45***	(0.04)	0.15***	(0.03)	0.60***	(0.03)	0.52***	(0.03)
Trust Political Parties	0.03	(0.04)	0.06***	(0.02)	0.23***	(0.05)	0.10***	(0.02)	0.25***	(0.03)
Trust Nat. Government	0.08**	(0.04)	0.15***	(0.03)	0.07*	(0.04)	0.11***	(0.02)	0.09***	(0.03)
Trust Nat. Parliament	0.00	(0.03)	0.08***	(0.02)	0.08**	(0.03)	0.07***	(0.02)	0.07***	(0.02)
Political Interest	-0.02	(0.01)	0.01	(0.01)	-0.03**	(0.01)	0.02**	(0.01)	0.00	(0.01)
Left	-0.29***	(0.05)	-0.28***	(0.05)	-0.08*	(0.04)	-0.16***	(0.03)	-0.11***	(0.04)
Center-Left	-0.16***	(0.03)	-0.14***	(0.03)	-0.13***	(0.02)	-0.08***	(0.02)	-0.10***	(0.02)
Center-Right	0.09***	(0.03)	0.08***	(0.03)	-0.04	(0.02)	-0.03	(0.03)	-0.03	(0.03)
Right	0.03	(0.05)	-0.02	(0.04)	0.07*	(0.04)	-0.09**	(0.04)	-0.01	(0.04)
Life Satisfaction	0.09***	(0.01)	0.13***	(0.02)	0.07***	(0.02)	0.13***	(0.01)	0.13***	(0.01)
Education (finish age)	-0.01***	(0.00)	-0.00	(0.00)	-0.02***	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Male	0.02	(0.02)	0.07***	(0.01)	-0.14***	(0.03)	0.01	(0.02)	-0.03**	(0.01)
Age	-0.01***	(0.00)	-0.01***	(0.00)	-0.03***	(0.00)	-0.01***	(0.00)	-0.03***	(0.00)
Age squared x 100	0.01***	(0.00)	0.01***	(0.00)	0.02***	(0.00)	0.01***	(0.00)	0.02***	(0.00)
Social Class	0.03**	(0.01)	0.04***	(0.01)	-0.03	(0.02)	0.06***	(0.01)	0.05***	(0.01)
Rural	0.01	(0.02)	-0.04	(0.02)	-0.00	(0.02)	-0.03*	(0.02)	-0.03	(0.02)
Farmer and Fisherman	-0.21***	(0.07)	-0.09	(0.10)	0.02	(0.09)	-0.10**	(0.05)	-0.07	(0.06)
Self-Employed	-0.02	(0.02)	0.05	(0.04)	-0.05	(0.03)	-0.02	(0.03)	0.02	(0.02)
Blue Collar Worker	0.02	(0.02)	-0.01	(0.01)	0.13***	(0.03)	0.00	(0.02)	0.01	(0.02)
White Collar Worker	0.03	(0.02)	0.01	(0.03)	-0.03	(0.02)	0.01	(0.02)	0.02	(0.02)
Unemployed	-0.04*	(0.02)	-0.06***	(0.02)	-0.02	(0.03)	-0.05**	(0.02)	-0.00	(0.02)
Observations	91921		64181		41855		92420		61651	
Pseudo-R <sup>2</sup>	0.15		0.12		0.12		0.16		0.15	

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** Standard errors in parentheses. All specifications include region-time fixed-effects. Standard errors are clustered at the country level. \*\*\*, \*\* and \* indicate statistical significance levels for p-val. < 0.01, p-val. < 0.05, and p-val. < 0.1.

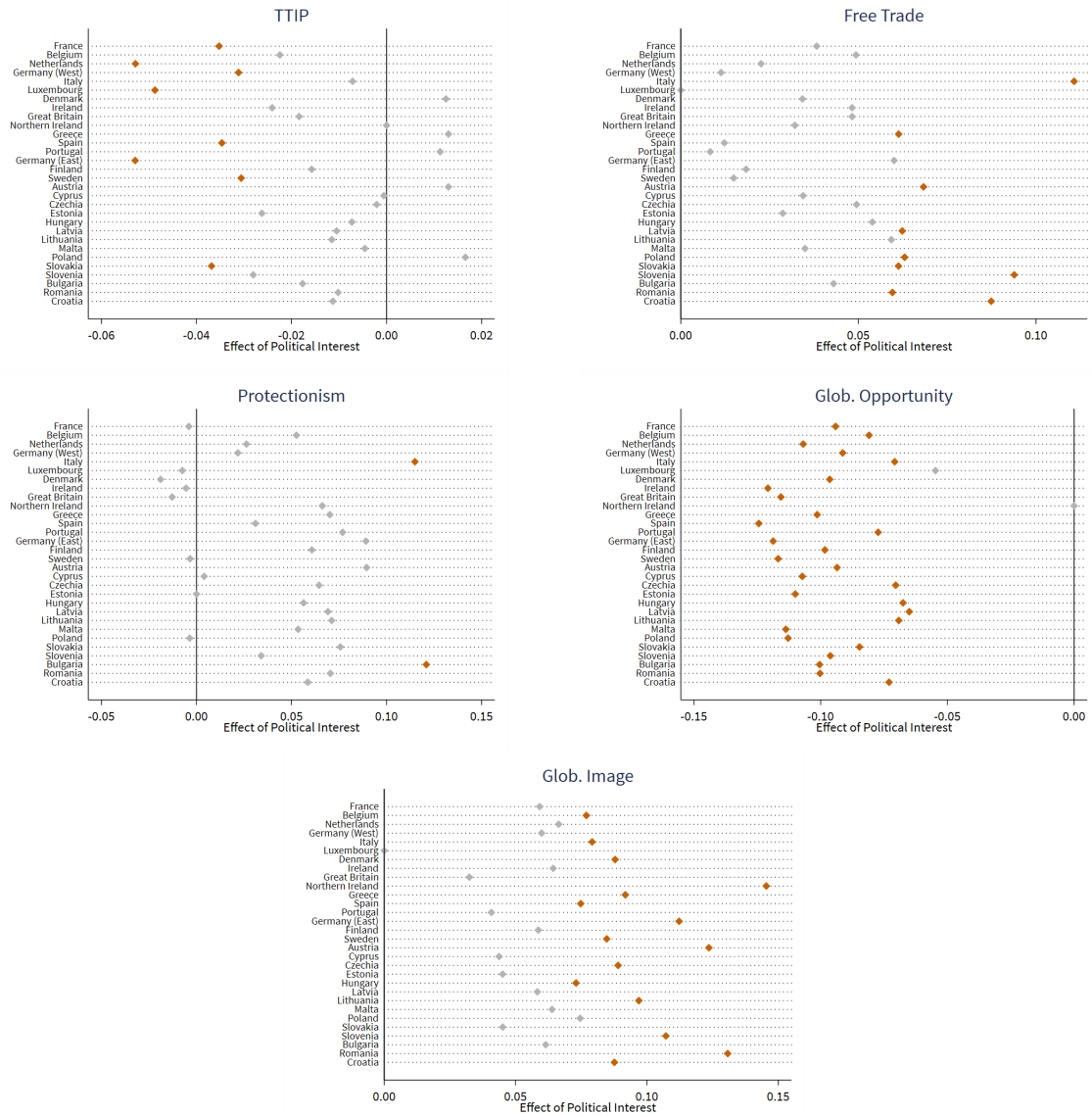
**Table 9:** Individual Open-Market Attitudes – Ordered Logit

	Free Trade		Protectionism		Glob. Opportunity		Glob. Image	
	(1)		(2)		(3)		(4)	
Trust European Union	0.62***	(0.06)	0.21***	(0.04)	0.80***	(0.05)	0.89***	(0.05)
Trust Political Parties	0.10***	(0.03)	0.36***	(0.07)	0.37***	(0.04)	0.15***	(0.03)
Trust Nat. Government	0.18***	(0.06)	0.10*	(0.06)	0.14***	(0.05)	0.13***	(0.05)
Trust Nat. Parliament	0.07*	(0.04)	0.12**	(0.05)	0.09**	(0.04)	0.11***	(0.04)
Political Interest	0.05***	(0.02)	-0.04**	(0.02)	0.00	(0.01)	0.05***	(0.01)
Left	-0.34***	(0.07)	-0.09	(0.06)	-0.19***	(0.06)	-0.21***	(0.06)
Center-Left	-0.17***	(0.04)	-0.17***	(0.04)	-0.15***	(0.03)	-0.11***	(0.03)
Center-Right	0.20***	(0.06)	-0.06	(0.04)	-0.03	(0.04)	-0.00	(0.05)
Right	0.16**	(0.06)	0.09	(0.06)	-0.02	(0.08)	-0.04	(0.08)
Life Satisfaction	0.23***	(0.03)	0.11***	(0.03)	0.23***	(0.03)	0.25***	(0.02)
Education (finish age)	-0.01***	(0.00)	-0.02***	(0.00)	-0.00	(0.00)	0.00*	(0.00)
Male	0.16***	(0.03)	-0.20***	(0.04)	-0.05**	(0.02)	0.09***	(0.03)
Age	-0.02***	(0.00)	-0.05***	(0.01)	-0.04***	(0.01)	-0.02***	(0.00)
Age squared x 100	0.02***	(0.00)	0.03***	(0.01)	0.03***	(0.00)	0.01***	(0.00)
Social Class	0.08***	(0.02)	-0.03	(0.03)	0.09***	(0.02)	0.11***	(0.02)
Rural	-0.07**	(0.03)	-0.01	(0.04)	-0.04	(0.03)	-0.06***	(0.02)
Farmer and Fisherman	-0.26**	(0.12)	-0.02	(0.09)	-0.04	(0.08)	-0.12**	(0.05)
Self-Employed	0.14***	(0.05)	-0.08	(0.05)	0.05	(0.05)	0.00	(0.04)
Blue Collar Worker	-0.05**	(0.02)	0.16***	(0.05)	0.03	(0.03)	-0.01	(0.03)
White Collar Worker	0.00	(0.04)	-0.04	(0.03)	0.01	(0.03)	-0.01	(0.03)
Unemployed	-0.09***	(0.04)	-0.06	(0.06)	0.02	(0.04)	-0.05	(0.04)
cut1	-4.57***	(0.19)	-4.48***	(0.24)	-4.03***	(0.17)	-3.15***	(0.11)
cut2	-2.58***	(0.15)	-2.45***	(0.21)	-1.81***	(0.14)	-1.36***	(0.11)
cut3	0.34**	(0.13)	-0.03	(0.18)	0.92***	(0.13)	1.31***	(0.11)
Observations	64640		42009		61745		92666	
Pseudo-R <sup>2</sup>	0.08		0.09		0.10		0.10	

**Source:** Eurobarometer, 2017. Own calculations.

**Note:** Standard errors in parentheses. All specifications include region-time fixed-effects. Standard errors are clustered at the country level. \*\*\*, \*\* and \* indicate statistical significance levels for p-val. < 0.01, p-val. < 0.05, and p-val. < 0.1.

Figure 9: Country-specific Narratives



**Source:** Eurobarometer, 2017. Own illustration.

**Note:** The figures illustrate the effect of political interest on the outcome variables. Coefficients vary across countries and exemplify the existence of different country narratives. Significant coefficients ( $p\text{-val} < 0.1$ ) are drawn in color. All else is equal to estimations in Table 4.