

Sojka, Aleksandra; Diaz-Lanchas, Jorge; Steinberg, Federico

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The politicization of transatlantic trade in Europe: Explaining inconsistent preferences regarding free trade and the TTIP

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Sojka, A., Díaz-Lanchas, J., Steinberg, F.

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Contact information

Simone Salotti

Edificio Expo, c/Inca Garcilaso 3, 41092 Sevilla (Spain)

Email: jrc-b3-secretariat@ec.europa.eu

Tel.: +34 954488463

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Abstract

The Transatlantic Trade and Investment Partnership (TTIP) generated an unprecedented contestation across Europe. In this paper, we focus on the sources of such backlash and analyze opinions on free trade and the specific agreement. Not accounting for the fact that these preferences are correlated could lead to biased conclusions about their determinants. To remediate this, we construct a set of bivariate probit models and calculate joint probabilities for the different types of preference configurations. We validate that support for free trade and support for the TTIP have similar, but not identical foundations. Inconsistent preferences are rooted in individual values, EU attitudes, and political cues, as well as treaty partner heuristics. Our innovative empirical approach offers an improved understanding of trade attitudes within EU's multilevel context.

The Politicization of Transatlantic Trade in Europe: Explaining Inconsistent Preferences Regarding Free Trade and the TTIP

Aleksandra Sojka^a

Jorge Díaz-Lanchas^{b*+}

Federico Steinberg^c

^a *Department of Social Sciences, Carlos III University in Madrid, Spain*

^b *European Commission, Joint Research Centre, Seville, Spain*

^c *Autonomous University of Madrid & Elcano Royal Institute, Madrid, Spain*

* European Commission, Joint Research Centre (JRC), Edificio Expo, calle Inca Garcilaso, 3, E-41092, Sevilla, SPAIN, Jorge.DIAZ-LANCHAS@ec.europa.eu

+ The views expressed are purely those of the author and may not in any circumstances be regarded as stating an official position of the European Commission.

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1. Introduction

The Transatlantic Trade and Investment Partnership (TTIP) has become the most contentious trade deal ever negotiated by the European Union (EU). Since the launch of the talks, in mid-2013, until their halt in late 2016, when Donald Trump was elected US President, the European public's interest in these negotiations has steadily increased. Supporters of the agreement have argued that it would generate significant economic benefits for both parties.¹ The treaty was also considered an opportunity to revitalize the transatlantic relationship and restore the power of the US and the EU to establish ground rules for the global economy (Hamilton, 2014).

For its detractors, however, the TTIP envisaged a set of regulatory commitments, with the potential to alter the state-market relationship in Europe (De Ville & Siles-Brügge,

¹ According to a study ordered by the European Commission (2013), a broad and ambitious accord could generate as much as €119 billion per year for the EU and €95 billion for the US, which would imply an average additional disposable income for each four-member family of €545 in the EU and €655 in the US. These calculations assumed that the benefits would be evenly spread over the total population and/or that the losers would be compensated.

2017). The main issues of concern for Europeans included the agreement's potentially adverse effects on environmental and food-safety standards and the erosion of sovereignty under the proposed procedures for investment arbitration. The lack of transparency in the negotiations has been a further source of criticism. TTIP's opponents also disputed the estimated gains for European citizens and argued that the agreement would mainly benefit transnational corporations.²

In sum, the TTIP debate did not only entail disagreements over its expected economic impact, but also related directly to the core tenets of Europe's socio-economic model and values, and even the very functioning of its democracy. With the keen politicization of European integration following the Eurozone crisis, these concerns resonated profoundly with the citizens of several member states and stoked unprecedented social mobilization across the EU against the agreement (Caiani & Graziano, 2018).

This paper addresses some of the caveats in existing research on public support for trade liberalization uncovered by the TTIP debate. In particular, one might have expected public support for this trade agreement to be in line with individual support for free trade (FT), but this does not seem to be the case. Indeed, we find that the preferences with respect to the TTIP of one-third of European citizens do not align with their support for or opposition to free trade. Such widespread misalignment in individual trade liberalization preferences provides an opportunity to advance our understanding of public opinion dynamics on issues related to economic globalization and European integration.

The objective of our research is to determine what drives the observed inconsistencies in Europeans' individual preferences on free trade and the specific agreement with the USA. We argue that traditional approaches rooted in the political economy of trade do not account for them. Whatever its potential costs or benefits, the TTIP has come to signify ideas about Europe's social model, democracy, and societal values. Europeans'

² See the internet platform Stop-TTIP (<https://stop-ttip.org/>) for an example of the arguments put forward by the critics of the agreement.

perception of it was deeply affected by their views on EU policy-making and globalization more broadly, as well as by the image of the specific treaty partner. Therefore, any model that purports to explain support for free trade, the TTIP, and inconsistencies in the preferences of individuals with respect to both must take these factors into account.

This approach has already received some support in the existing research. Recent papers argue in favor of a contextual model of public opinion on the TTIP debate and validate it for the case of Germany, the EU member state that has seen the most substantial civil society mobilization against the agreement (Jungherr, Mader, Schoen, & Wuttke, 2018). Others explore the determinants of support specific to the TTIP (Steiner, 2018). We aim to extend this line of inquiry further and thereby account for the sources of incongruence between individual opinions on free trade and the TTIP. We hypothesize that individual preferences on the TTIP, while not equivalent, are not independent of one's general ideas on the concept of free trade more broadly. Therefore, we need to account for this interdependence, as not doing so could lead to biased and misleading conclusions about the determinants of European public opinion on the specific agreement. Finally, we explore the determinants of conflicting views on free trade and the TTIP to understand the mechanisms behind the agreement's contestation in the context of generalized favorability to free trade in Europe.

To accomplish our objective, we propose an empirical approach based on a set of bivariate probit models. This method allows for a joint analysis of individual attitudes toward free trade and the TTIP to assess the determinants of different configurations of preferences concerning trade liberalization. Our study makes an original contribution to the existing literature in that it applies an innovative methodology to the study of attitudes towards trade liberalization. Moreover, by focusing on the antecedents of conflicting preferences, we address an issue that has received little attention in research on trade attitudes in advanced economies. The joint analysis of general free trade attitudes and specific TTIP support as our dependent variable allows us to move beyond the simple study of public opposition or support and sheds new light on the determinants

of the TTIP controversy among the citizens of the European Union. Our findings indicate that individual values and contextual perceptions of the US are driving the observed inconsistencies in trade preferences among Europeans.

1. Support for free trade and the TTIP in the European Union

Both support for free trade and opinions on a prospective trade agreement with the USA are elements of preferences regarding trade liberalization more broadly. The determinants of these preferences at the individual level have been the object of a significant amount of recent research (Ardanaz, Murillo, & Pinto, 2013; Blonigen, 2011; Díez Medrano & Braun, 2012; Jedinger & Schoen, 2018; Jungherr et al., 2018; Mansfield & Mutz, 2009; Scheve & Slaughter, 2001; Steiner, 2018; Tomiura, Ito, Mukunoki, & Wakasugi, 2016, among others). However, existing literature seems to assume that it is possible to determine a general model of trade attitudes formation and little attention has been paid so far to the possibility of diverging individual opinions on different aspects of international trade.

The case of TTIP contestation in the EU illustrates precisely such a possibility of conflicting individual opinions on the liberalization of trade. While Europeans remain predominantly favorable to the idea of free trade (74% in 2016), the backlash to the agreement with the USA indicates that they might not perceive the TTIP as a traditional free trade agreement (FTA). In particular, and given the politicization of European integration (Börzel & Risse, 2018; Maricut-Akbik, 2018) and of the specific agreement with the US (Caiani & Graziano, 2018; De Ville & Siles-Brügge, 2017; Eliasson & Huet, 2018; Hamilton, 2014) we might expect to find a significant share of EU citizens who reject the agreement without rejecting the general idea of free trade. Therefore, our starting point is the assumption that individuals could hold conflicting views within the broader dimension of attitudes toward trade liberalization

Data from the Eurobarometer survey of the 28 EU countries confirm this expectation. While a majority of EU citizens are consistent in their preferences, either supporting both

TTIP and free trade (54 percent in 2016) or rejecting both (15 percent), almost a third of EU citizens reveal individual-level inconsistencies, with 22 percent supporting free trade but rejecting the TTIP, and 9 percent rejecting free trade but supporting of the TTIP (Table 1).

Table 1. Public support for free trade and the TTIP in the EU-28

	Against FT & TTIP	Support FT / Against TTIP	Against FT / Support TTIP	Support FT & TTIP
2014	10.9	16.3	10.3	62.5
2015	13.7	21.1	8.7	56.6
2016	14.6	22.2	9.1	54.1

Data: Eurobarometer studies EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016), data for 28 EU member states. FT – free trade: ‘Could you please tell me, whether the term brings to mind something very positive, fairly positive, fairly negative or very negative? Free trade.’ TTIP - The Transatlantic Trade and Investment Partnership: ‘What is your opinion on each of the following statements? Please tell me, whether you are for it or against it: A free trade and investment agreement between the EU and the USA.’

Note: Entries in the table are percentages.

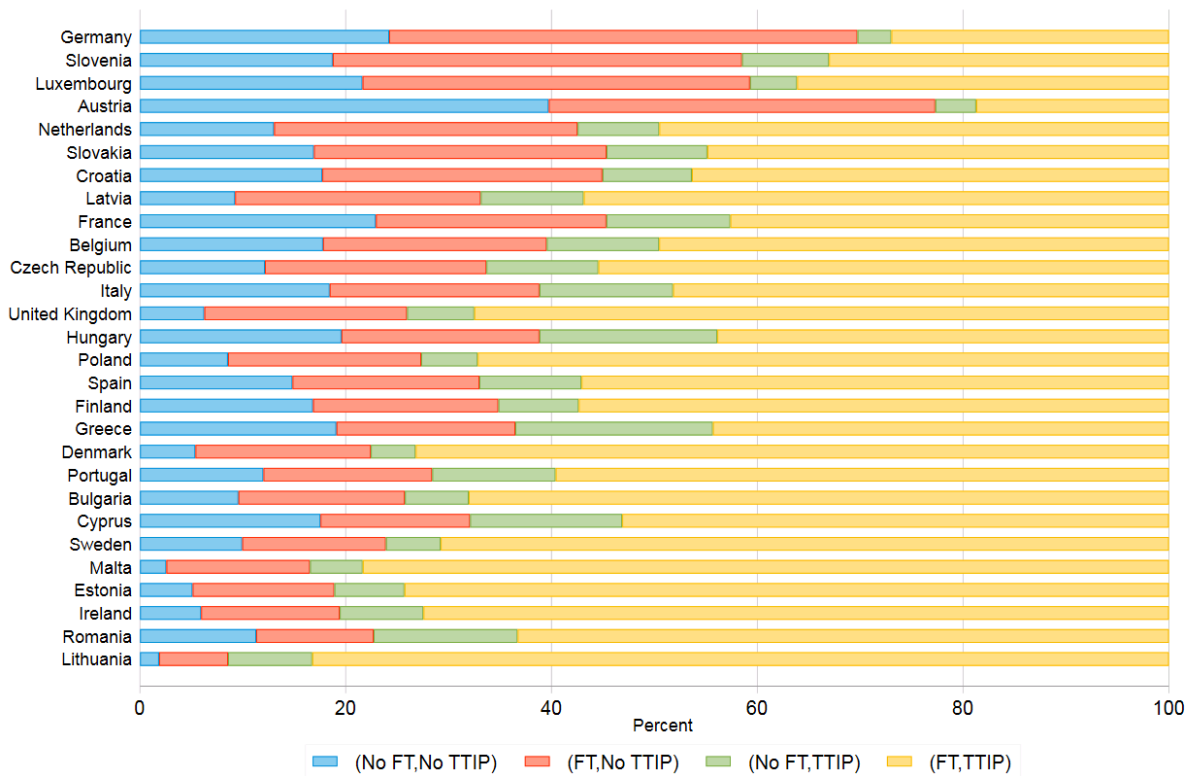
Such relatively widespread misalignment between generalized free trade support and comparatively more entrenched opposition to the specific treaty at the individual level suggests that the factors which explain these preferences, while related are not identical. To better understand the mechanisms, which underpin these varying patterns of support for and opposition to free trade and the TTIP, we divide individuals into four categories according to their preferences:

- A. Those who oppose both free trade and the TTIP (No FT, No TTIP);
- B. Those who support free trade but oppose the TTIP (FT, No TTIP);
- C. Those who oppose free trade but support the TTIP (No FT, TTIP);
- D. Those who support both (FT, TTIP).

We refer to type A (No FT, No TTIP) and type D (FT, TTIP) of individuals as 'consistent' in their preferences, while we consider type B (FT, No TTIP) and type C (No FT, TTIP) as 'inconsistent.' The two latter categories (B and C) are indeed the most interesting ones since they illustrate the fact that the TTIP has some characteristics, which make it substantially different from classical FTAs. Moreover, individuals B, who support free trade but oppose the TTIP (FT, No TTIP), are the ones with the highest spread during the negotiation process (+8 percentage points between 2014 and 2016), whereas the share of individuals C of opposite preferences (No FT, TTIP) remains constant over time (around 9 percent). Such an increase in the percentage of individuals who support free trade but oppose the TTIP during the period of its negotiations, suggests that the growing misalignment in these preferences could be strongly related to the public debate on the specific agreement in Europe.

Such discrepancies are not limited to a few selected EU countries where the anti-TTIP mobilization has been particularly strong. We find all four types of individuals across the EU, although individuals who remain consistent in their support for both free trade and the TTIP (FT, TTIP) are the dominant group in most EU member states (Figure 1). The share of 'consistent' supporters of trade liberalization is particularly high in some of the more recent member states (Lithuania, Malta, Estonia), as well as in Denmark, Ireland, and the United Kingdom. Conversely, in countries such as Germany, Slovenia, Luxembourg, and Austria, and to a lesser degree, the Netherlands, Slovakia and Croatia, we observe a substantial share of 'inconsistent' individuals who reject the TTIP while continuing to support free trade (FT, No TTIP). Austria is the only EU member state where 'consistent' detractors of both free trade and the TTIP constitute the single biggest group (almost 40 percent).

Figure 1. Public support for free trade and the TTIP in the European Union



Note: (No FT, No TTIP): opposed to both free trade and the agreement with the US; (No FT, TTIP): opposed to free trade but supportive of the agreement with the US; (FT, No TTIP): supportive of free trade but opposed to the agreement with the US; (FT, TTIP): supportive of both free trade and the agreement with the US. Countries ordered according to the share of 'inconsistent' individuals, who support free trade but reject the TTIP. Data: EB 85.3 (2016).

Given the substantial and growing discrepancies in the preferences of the European public, we argue that the TTIP debate has uncovered new avenues for research on trade liberalization support. The existence of a significant portion of the European population with inconsistent preferences regarding free trade and this particular FTA provides an opportunity to explore further the determinants of public opinion on economic globalization. However, it should also be noted that the share of people opposing both positions in all of the EU countries is substantial and growing. This indicates a rising politicization of international trade that goes beyond the specific debate on the TTIP (cf. Lamy, 2015; Rodrik, 2018), and remains outside the scope of this paper.

2. Public opinion on trade liberalization: theory and hypotheses

To formulate our hypotheses on the sources of incongruent individual preferences regarding free trade and the TTIP, we look at existing models of support for/opposition to trade liberalization. To account for all potentially relevant factors, we combine insights from both the political economy of trade and social research on attitudes towards economic globalization and European integration.

The literature on the political economy of trade tends to treat ideas and institutions as exogenous variables and concentrates on economic self-interest as the primary driver of individual trade policy preferences. Accordingly, economic analyses assume that individuals, as both producers and consumers, will favor trade policies that maximize their net income. In particular, factor endowment theory suggests that in countries where training is widely available, skilled workers will support free trade, because they expect higher rewards from trade liberalization, whereas the opposite holds for unskilled workers (Jäkel & Smolka, 2017; Mayda & Rodrik, 2005; O'Rourke & Sinnott, 2001; Scheve & Slaughter, 2001). The core variable in economic explanations of attitudes towards trade policy is thus education, a proxy for the skill level.

The importance of education in the structuring of individual attitudes towards trade liberalization is widely acknowledged (cf. Wolfe & Mendelsohn, 2008), nevertheless, more recent studies question its role as a straightforward proxy for labor market attributes (Blonigen, 2011; Hainmueller & Hiscox, 2006) and even challenge the very mechanisms described by economic theory (Díez Medrano & Braun, 2012; Margalit, 2012). From the perspective of our research question, while the effect of education on free trade support tends to be positive, whether because of perceived labor markets/income effects, lower risk-aversion, and labor market vulnerability or because of exposure to specific economic ideas, its effect for preference congruence is ambiguous. On the one hand, higher educated individuals tend to be more supportive of free trade, and we can expect that they will also be more consistent in their opinions. However, in the case of the TTIP, it is also possible that higher education correlates with greater exposure to the debates about

the disadvantages or dangers of the specific agreement. Moreover, education correlates positively with higher income and, therefore, with a more post-materialistic stance. Fears that the TTIP could undermine some aspects of the European social and economic model could cause education to reduce TTIP support. Given these conflicting expectations, we remain agnostic on the effect of skills and education on preference consistency.

We argue that to understand why citizens develop specific sets of preferences on trade liberalization, we must look beyond self-interest, to the underlying attitudes and values (Jungherr et al. 2018; Margalit 2012; Steiner 2018; Wolfe and Mendelsohn 2008). In particular, a possibility put forward in the literature is that economic openness is perceived as part of a broader set of social and cultural changes that occur under globalization (Margalit, 2012). For instance, previous research has shown that individuals might reject trade liberalization because of anxiety over outgroups (Mansfield & Mutz, 2009) or because they perceive it to be part of a broader process of change that affects their cherished values, traditions, or cultural identities (Margalit, 2012). The consideration that factors beyond utilitarian calculations determine trade attitudes is the starting point of our effort to explain the inconsistencies between support for free trade and support for the TTIP in the EU.

As discussed previously, the TTIP negotiations stimulated political debates on different aspects of the European socio-economic model. Consequently, we can expect that citizens' ideology and economic values will have a significant impact on the consistency of their opinions on trade liberalization. In terms of political cues, left-leaning parties and trade unions in several EU countries contributed actively to the politicization of the TTIP. Therefore, we expect that those who position themselves on the left will have a higher probability of expressing inconsistent preferences. The effect of right-wing ideology, on the other hand, is potentially more ambiguous. While mainstream conservative parties tend to support the idea of free trade and have been supportive of the TTIP, extreme right parties tend to be more protectionist and opposed to trade liberalization. We, therefore, expect those who identify as center-right, but not extreme right, to be more

consistent in their opinion. Our hypotheses on the effect of political cues, then, are:

H1.a *Political cues* from the Left will increase preference inconsistency between support for FT and opposition to the TTIP.

H1.b *Political cues* from Centre-Right will reduce preference inconsistency between support for FT and opposition to the TTIP.

In addition to political cues, we must consider the impact of specific values related to the desired socio-economic model under globalization. In particular, its critics have presented the TTIP as an agreement forged by the elites of economic globalization to favor transnational corporations over smaller local businesses. Accordingly, we expect that those with a favorable view of globalization and big corporations will have a lower probability of holding inconsistent opinions. On the other hand, a more positive view of smaller companies and trade unions, while it should not undermine support for free trade, could constitute a predictor of opposition to the trade agreement with the US. Therefore, we expect that values related to the desired economic model could contribute to the inconsistency of opinion on free trade and the TTIP. We formulate the following hypotheses on the expected effects of different views of the economy:

H2.a Favorable view of *Globalization* and big *Corporations* will reduce preference inconsistency between support for FT and opposition to the TTIP.

H2.b Favorable view of *Small and Medium Businesses* and *Trade Unions* will increase preference inconsistency between support for FT and opposition to the TTIP.

We also need to take into account the multilevel character of European politics. Trade policy is the exclusive prerogative of the EU, and it was the European Commission (EC) that negotiated the agreement with the US at the supranational level. Therefore, the TTIP could be viewed as furthering the processes of regional integration in Europe. In light of the politicization of EU integration in recent years, we must consider that preferences regarding the TTIP, unlike those regarding free trade, could be primarily

determined by individual attitudes towards the Union. As the TTIP was being negotiated exclusively by the EC at the European level, we expect support for European integration to reduce opinion inconsistency. Furthermore, European identification, an important predictor of support for EU policies (Hooghe and Marks 2004) should also foster opinion consistency in this case. On the other hand, since trade is an area of supranational policy, citizens flatly opposed to their country's membership in the EU would also likely reject the agreement with the US while still upholding their support for free trade, as illustrated by the debates surrounding Brexit. Therefore, we expect that Euroscepticism should increase preference inconsistency. These theoretical expectations related to EU attitudes, lead us to put forward the following hypotheses:

H3.a *Support for European integration and European identity* will reduce preference inconsistency between support for FT and opposition to the TTIP.

H3.b *Euroscepticism* will increase preference inconsistency between support for FT and opposition to the TTIP.

Individual attributes aside, previous research indicates that free trade attitudes are also structured by a country's characteristics and position in the global economy. Rodrik (1998) argues that the increased economic volatility and, thus, the increased economic risk to citizens, associated with opening up the national economy to international trade can be offset by higher social security spending. According to the 'compensation hypothesis,' the willingness of citizens to accept free trade should increase with the size of the welfare state, as the latter will counterbalance the harmful effects of trade liberalization. At the turn of the century, however, with the global economy entering a period of hyper-globalization, the welfare state came to be perceived as being in retreat in many Western countries and citizens might have become less willing to accept compensation in exchange for trade liberalization. Following this logic, Lamy (2015) argues that the traditional coalitions in favor of and against free trade might be changing because of the nature of modern trade agreements, especially in the advanced

economies. He points out that 'deep integration' trade agreements constrain national sovereignty much more than measures implemented at the border, such as tariff cuts. Therefore, traditional free trade supporters in relatively affluent countries might be less willing to accept the marginal increases in income promised by this new generation of trade agreements, especially if they imply the erosion of certain cherished norms or values. Citizens in poorer countries, on the other hand, could see their economic standing further enhanced as a result of removing trade barriers and expanding markets. In sum, the shape and transformation of national economies and welfare spending in a hyper-globalized world might account in part for the incongruous preferences regarding free trade and the TTIP. Therefore, our hypotheses are:

4.a Preference inconsistency between support for FT and opposition to the TTIP will be lower in countries with *higher public spending*.

4.b Preference inconsistency between support for FT and opposition to the TTIP will be higher in countries with *higher GDP*.

Finally, we must consider that the TTIP is geopolitically different from other trade agreements negotiated by the EU. The US, as a hegemonic power, might be perceived as trying to advance its economic and geopolitical interests through these negotiations. Therefore, it is possible that the prevailing image of the US in different countries could affect individual attitudes (Eliasson & García-Duran, 2017), particularly, through the mechanism of treaty-partner heuristics (Steiner, 2018). Previous research shows that support for TTIP is strongly influenced by individual perceptions of the US and by how this country is portrayed in the national context (Jedinger & Schoen, 2018; Steiner, 2018). In this sense, we observe stark differences in perceptions of the US among countries that are traditional proponents of transatlantic cooperation (such as the UK or Central and Eastern European EU member states), and those that are its traditional critics (for instance, France and Germany). Levels of support for the US and perceptions regarding its role in global politics could help explain incongruence between general

support for free trade and rejection of the TTIP. We anticipate that in countries with a prevailing elite and public consensus on a more pro-Atlanticist position, the TTIP should be contested to a lesser extent and, thus, inconsistencies should be reduced. Therefore, we formulate the following hypothesis:

H5. Individual preference inconsistency between support for FT and rejection of TTIP will be reduced in countries with a better *image of the USA*.

In sum, a variety of factors determines individual trade policy preferences. Recent research has been expanding our understanding of public opinion toward trade liberalization, beyond traditional economic models. In line with this, we apply theoretical models from public opinion research and go beyond the consideration of economic self-interest to explain inconsistencies in preferences towards trade liberalization in Europe.

3. Data and research design

Primary data for the empirical analyses come from the Eurobarometer from 2014 to 2016. These studies survey opinion on a free trade agreement with the US and the idea of free trade in general. They also gauge personal views on economics and globalization, the EU, and political ideology. The two questions used to operationalize attitudes toward free trade and the TTIP are:

FT: Could you please tell me for each of the following, whether the term brings to mind something very positive, fairly positive, fairly negative or very negative? Free trade.³

TTIP: What is your opinion on each of the following statements? Please tell me for each statement, whether you are for it or against it: A free trade and investment agreement between the EU and the USA.⁴

We use both items jointly as our dependent variables. The question on an agreement

³ Coded as (0) negative or very negative, (1) positive or very positive.

⁴ Coded as (0) against, (1) in favor.

between the EU and the US is, we think, comprehensible even to respondents who lack detailed knowledge of the TTIP controversy, and sufficiently concrete to serve as a proxy of TTIP preference in the period we analyze (2014-2016).

To construct the explanatory model of preference inconsistency between attitudes toward free trade and the TTIP, we include variables that operationalize the theoretical expectations discussed above. Firstly, given the politicization of the agreement, we verify the effects of political ideology (*Political Cues*). We divide the ideological spectrum into five categories and compare those who identify as left, center-left, center-right, and right with those who position themselves in the center.

The second explanatory dimension is that of individual values related to the preferred socio-economic model under globalization (*Globalization attitudes*). This set of variables includes the individual positive (or negative) views of economic globalization (*Globalization*), large companies (*Corporations*), small and medium companies (*SM Companies*), and the opinion on trade unions (*Trade Unions*). These variables operationalize the different values related to the desired economic model and the general perception of economic processes associated with globalization.

The third dimension of interest accounts for the possible impact of attitudes towards EU integration (*European Attitudes*) and includes several predictors based on the existing research on EU attitudes as a multidimensional concept (Boomgaarden, Schuck, Elenbaas, & de Vreese, 2011). We operationalize EU support by including an item on trust in the institution in charge of the EU's trade policy, the European Commission (*Trust EC*). Furthermore, we consider the perception that national interests are well represented in the EU (*National interest*), as well as the effect of identifying as European (*European identity*). We also account for rejection of the idea of European integration altogether and include a variable, which stands for the idea that one's country would be better outside of the Union (*Euroscepticism*).

Finally, the models include several individual factors relevant for understanding public

opinion on trade liberalization but without formulating a specific expectation about their influence on preference consistency. These controls include the effect of *Education*, in line with its widely recognized importance in studies of public opinion on trade liberalization, as well as negative opinion on immigration (*Anti-immigration*). Furthermore, to account for the debates on the TTIP, we control for the effect of discussing EU politics (*EU Political Debate*) and the level of knowledge of how the EU works (*EU Knowledge*).

Moving to the macro level, we consider several contextual factors that could foster inconsistencies at the individual level. Firstly, we include the share of government expenditure (over GDP) to control for the effect of the size of the *Welfare State*.⁵ To account for the differences in economic development, the models include the GDP per capita, as well as squared GDP per capita. The linear part (*GDP per capita*) should be positively correlated with support for free trade and FTAs, whereas the quadratic term (*GDP per capita sq.*) is expected to be negatively correlated, indicating the decreasing (negative) marginal rate of return on well-being from trade liberalization processes.

On the other hand, we expect *Perceptions of the US* and its role in the world economy and politics to matter for opinion consistency on FT and the specific FTA. While the datasets chosen for the analysis lack questions on this topic, we include a variable that accounts for the aggregate perception of the US among citizens of EU member states from a 2016 Eurobarometer study (EB 86.1). Because we cannot match this data to individual observations in our database, we calculate the share of individuals in each country holding a positive view of the US, to control for the overall perception on the treaty partner in each country.

Finally, we control for a country's level of integration into the global economy by including the KOF indicator (*Economic Globalization*), as well as the GINI index to

⁵ All country-level data from Eurostat.

account for the effects of *Economic Inequality*.⁶ We expect both of these contextual factors to affect support for free trade and the TTIP, but we do not formulate specific hypotheses regarding their effect on opinion inconsistency.

Our empirical strategy focuses on the significant portion of EU citizens exhibiting inconsistency in their preferences regarding the TTIP and free trade. In particular, we cast support for the TTIP or FT, as the probability of being in favor of free trade (FT_i^*) or TTIP ($TTIP_i^*$). In the empirical setup, we use the following two independent probit models, where i refers to individual i , and 1 and 2 identify each equation:

$$FT_{i1}^* = X_{i1}\beta_{i1} + \varepsilon_{i1}, FT_{i1} = 1 \text{ if } FT_{i1}^* > 0, 0 \text{ otherwise} \quad (1)$$

$$TTIP_{i2}^* = X_{i2}\beta_{i2} + \varepsilon_{i2}, TTIP_{i2} = 1 \text{ if } TTIP_{i2}^* > 0, 0 \text{ otherwise} \quad (2)$$

Where,

$$\begin{pmatrix} \varepsilon_{i1} \\ \varepsilon_{i2} \end{pmatrix} | X_1, X_2 \sim N \left[\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix} \right]$$

The critical point in our empirical strategy is the tetrachoric correlation (ρ) between ε_{i1} and ε_{i2} . If $\rho = 0$, Equations (1) and (2) are independent, allowing us to unilaterally estimate the probability for each type of individual by using two independent probit models, as in Jungherr et al. (2018). By contrast, if $\rho \neq 0$, ε_{i1} and ε_{i2} are correlated, and expressions (1) and (2) are dependent; that is to say, individual preferences for FT and TTIP are correlated and jointly determined. Not controlling by this interdependence would lead to biased estimates. In that case, we have to resort to a bivariate probit model (Greene, 2012) to estimate the joint probabilities for both individual preferences simultaneously. These joint probabilities correspond to the four categories of individuals laid out in the previous section and summarized in Table 2 in a 2x2 probability matrix.⁷

⁶ See Table A.1 in the online Annex for a detailed statistical summary of the variables used in our database and regressions.

⁷ In the online Annex we provide further details on the empirical models' construction.

Table 2. Probability for each type of preference configuration

	TTIP _i [*] =0	TTIP _i [*] =1
FT _i [*] =0	P (0,0) P (No FT, No TTIP)	P (0,1) P (No FT, TTIP)
FT _i [*] =1	P (1,0) P (FT, No TTIP)	P (1,1) P (FT, TTIP)

Note: FT – free trade, TTIP - The Transatlantic Trade and Investment Partnership.

To estimate these probabilities, we included country (γ_c)⁸ and year (γ_t) fixed-effects in (1) and (2) to obtain the final specifications, as follows:

$$FT_{i1}^* = \alpha_1 + X_{i1}\beta_1 + \gamma_c + \gamma_t + \varepsilon_{i1} \quad (3)$$

$$TTIP_{i2}^* = \alpha_2 + X_{i2}\beta_2 + \gamma_c + \gamma_t + \varepsilon_{i2} \quad (4)$$

The X-vectors X_{i1} and X_{i2} in Equations (3) and (4) do not include the same regressors. As argued previously, we control for all the determinants of opinion on the TTIP specifically. In this way, both X-vectors take the following form, where i refers to individual observations and N to contextual factors:

$$X_{i1} = (X_i^{view}, Z_i, X_N) \quad (5)$$

$$X_{i2} = (X_i^{view}, Z_i, X_N, X_i^{EU}, X_N^{US}) \quad (6)$$

Where X_i^{view} summarizes a set of variables related to individual perceptions (views) of different dimensions of economic globalization, Z_i includes individual controls, and X_N entails controls at the national level. In the probit model for the TTIP (6), we include the same regressors as in (5), and we add the variables accounting for individual European values (X_i^{EU}). Lastly, X_N^{US} takes into account the aggregate image of the USA in different countries.

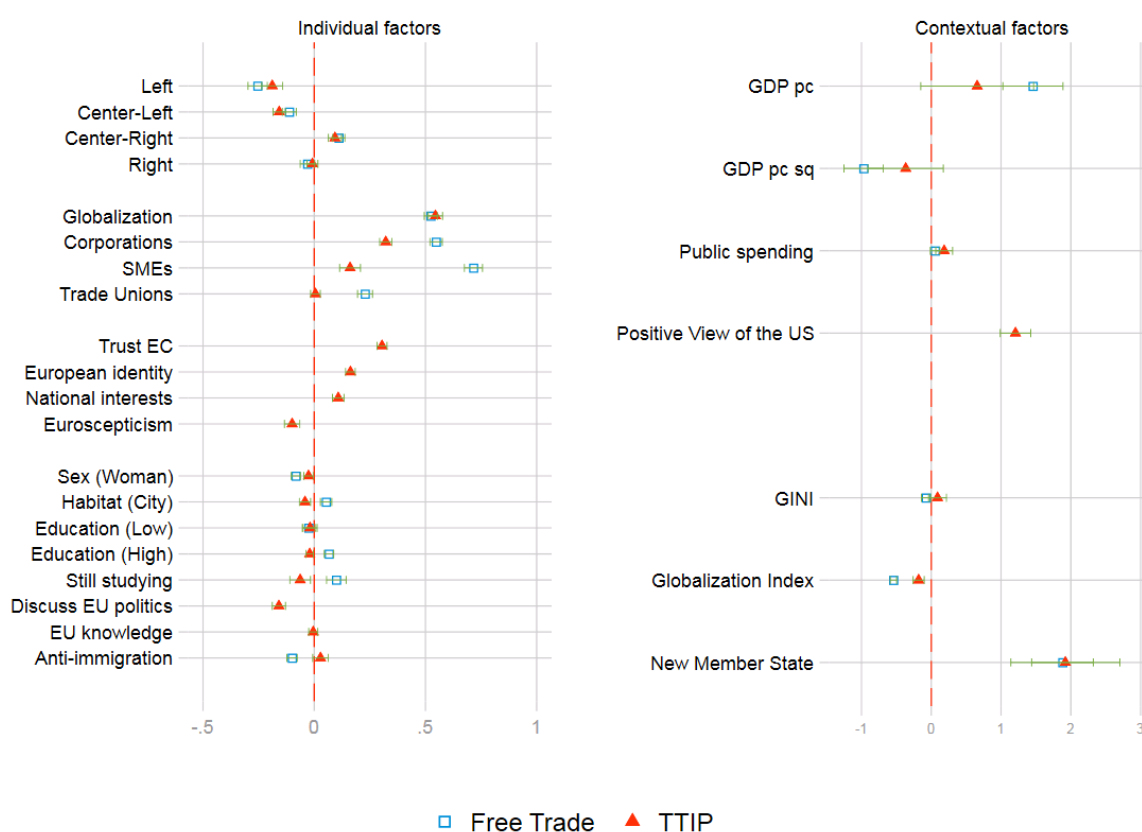
⁸ We do not include individual fixed-effects to avoid an over-identification problem. We also exclude individuals who did not answer both questions.

4. Results

Determinants of support for free trade and the TTIP

We start our analysis by looking at the determinants of support for free trade and the TTIP through the two independent probit estimations as in Equations (1) and (2). Figure 2 shows the beta coefficients for both probits using individual as well as contextual factors (see the online Annex for tables with full results⁹).

Figure 2. Coefficients from the probit models of support for free trade and the TTIP (individual and contextual factors)



Note: Figure represents beta coefficients from the probit estimations, full models can be found in the Annex. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

⁹ Full results with country fixed-effects can be found in Tables A.2 (probit estimations) and A.3 (average marginal effects from the bivariate probit estimations) in the online Annex. We also perform probit (Table A.4) and bivariate probit (Table A.5) regressions without country fixed-effects to show the robustness and consistency of our estimations.

We observe remarkable consistency between the two dependent variables in several respects. Individuals who position themselves at the left and the far left side of the ideological continuum have a significantly higher probability of opposing both free and the TTIP. Individuals on the right of the ideological scale, on the other hand, tend to show greater support for both. However, we do not find any effect for the far-right, as anticipated. Most importantly, individuals with a positive view of globalization, big corporations, and SMEs have a higher probability of supporting both free trade and the TTIP. In particular, the equally strong and positive effects of a favorable view of globalization for both free trade and TTIP support, suggest that positive perceptions of economic globalization relate directly to supporting FTAs, regardless of the specific treaty.

The results also illustrate some interesting differences. In line with previous research, support for FT tends to be stronger among highly educated individuals, and it is weaker among women and individuals with negative views of immigration: But the same does not apply to the TTIP, for which there is no significant effect of either of the former variables. The case of respondents who are still studying is particularly illustrative of the difference in the dynamics of support for free trade and the agreement with the US, as support for the latter tends to be significantly lower among those who are still studying, while the effect of this variable is positive for free trade support.

The geographical location of the individual seems to also matter for asymmetries between FT and TTIP opinions. Individuals living in big cities tend to support FT, but not the TTIP. Even more relevant is whether individuals live in one of the Central Eastern European new member states of the EU, where we find significantly more support for both free trade and the TTIP when compared to individuals living in the rest of the EU-28. These findings broadly follow the pattern of social mobilization against the TTIP in the EU.

The impact of GDP per capita indicates a further difference in how opinion on free trade

and support for the TTIP work. The higher the GDP of a country, the more likely its citizens are to support free trade. This is unsurprising since more educated (and, thus, wealthier) people have traditionally been more cosmopolitan and supportive of greater economic and political openness. However, a lack of similar effect for the TTIP could be explained by the fact that above a certain income threshold, individuals might be less inclined to favor trade liberalization if it conflicts with their social values, as suggested by Lamy (2015). This line of argument is also supported by the negative impact of the squared GDP per capita.

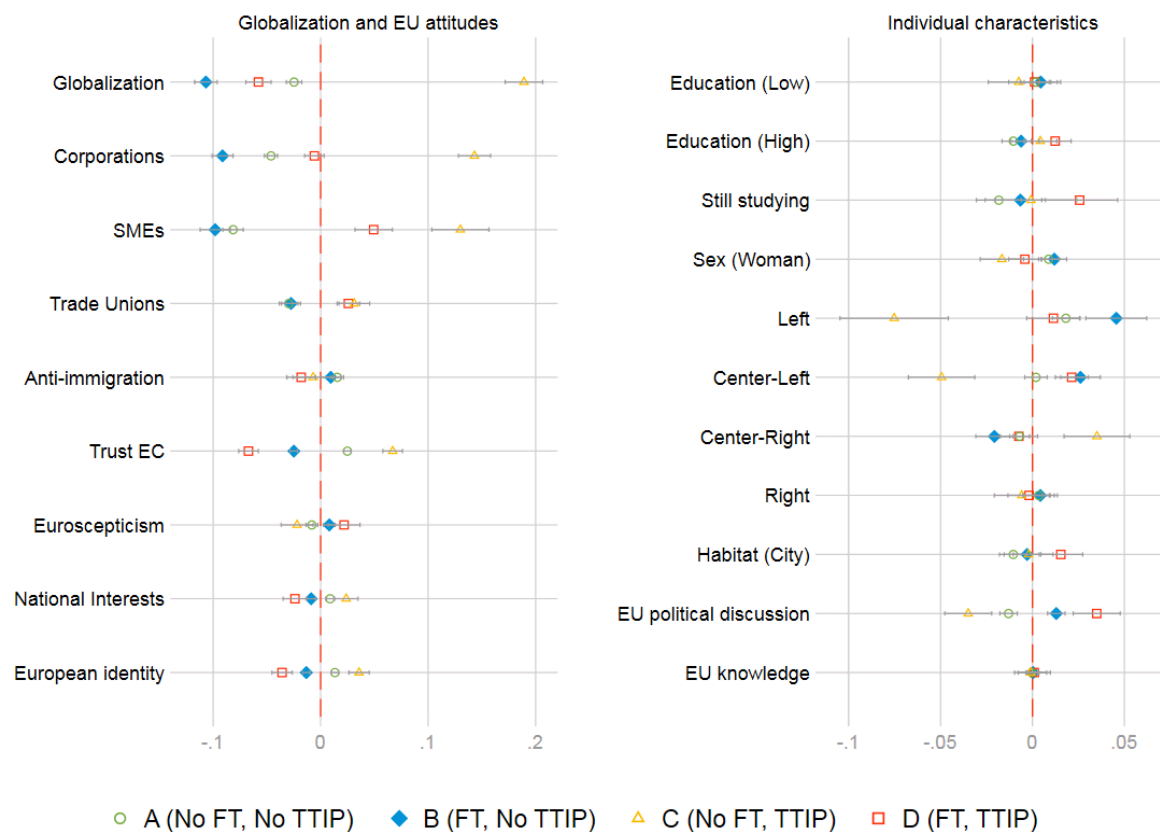
Furthermore, the negative effect of the economic globalization index indicates that in highly integrated economies, even deeper trade liberalization could entail more (perceived) costs than economic benefits. The strong and positive impact of the dummy variable for the Central and Eastern European countries further reinforces this point. The latter are the less economically developed members of the EU with much higher expectations of economic dividends from opening national markets to international trade. We do not, however, find support for the 'compensation hypothesis' in the data. Support for trade openness is not stronger in countries with higher levels of government spending (usually associated with welfare policies), while support for the TTIP is only slightly higher in these countries and the coefficient is not statistically significant.

Finally, we must note that the ρ coefficient (*rho*) is positive and significant (Table A.2 in the online Annex) for all the models. This coefficient indicates that the probability of support for free trade is not independent of the likelihood of support for the TTIP. Indeed, both attitudes have a much stronger positive relationship than previously accounted for in the literature (Jungherr et al., 2018). Moreover, this signals the correlation between Equations (1) and (2), which leads us to use the bivariate-probit estimation in Equations (3) and (4), as not accounting for this correlation would result in biased estimations (cf. Greene, 2012).

Determinants of preference consistency

To disentangle further the determinants of trade liberalization preferences, we plot the average marginal effects from the bivariate probit estimation for the four types of individual preference configurations. As we are predominantly interested in the determinants of the inconsistency between supporting free trade and rejecting the TTIP, that is type B of preference configuration (FT, No TTIP); we focus on these results primarily in our discussion. To facilitate the interpretation of the results in this sense, we differentiate individuals B (blue diamond) against all other types (Figures 3-4).

Figure 3. Marginal effects of individual factors on opinion consistency (globalization, EU attitudes and individual characteristics)



Note: Marginal effects calculated from the bivariate probit estimation of free trade and TTIP support, full models can be found in the online Annex. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

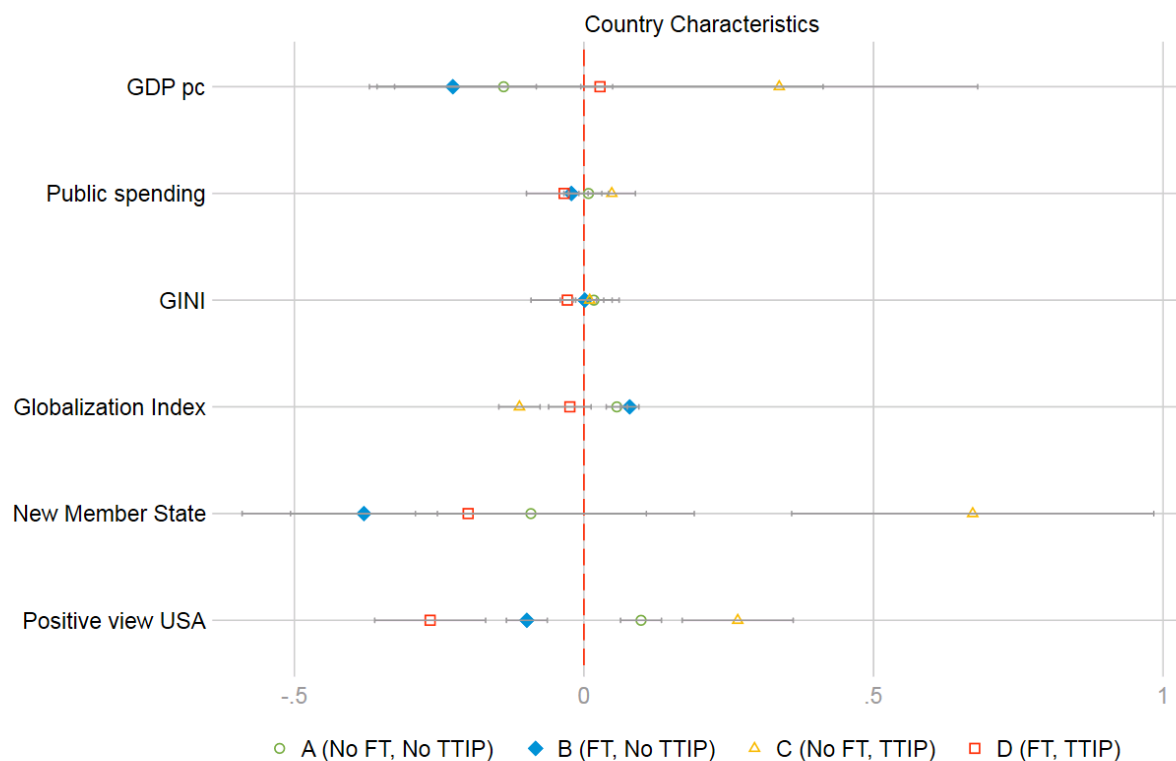
As far as *Globalization attitudes* are concerned, a positive view of globalization reduces preference inconsistency between support for FT and opposition to the TTIP (FT, No TTIP) (Figure 3). The effect of viewing favorably big corporations is also negative; however, it is very small and not statistically significant. On the other hand, positive views of SMEs and trade unions significantly increases the probability of supporting FT and rejecting the TTIP. These observations are largely in line with our initial hypotheses 2.a and 2.b and indicate that individual ideas about economic globalization and the desired socio-economic model indeed matter for the consistency of opinion on trade liberalization.

In terms of the impact of *European attitudes* (also Figure 3), trusting the European Commission, considering that one's national interest is well represented at the EU level, and identifying as European all reduce the probability of supporting free trade and rejecting the TTIP (FT, No TTIP). On the other hand, and in line with our expectation of a link between preference inconsistency and EU policy attitudes, rejecting EU membership, increases the probability of holding inconsistent views (FT, No TTIP). We can conclude, therefore, that attitudes towards European integration affect opinion consistency on trade liberalization, validating hypotheses 3.a, and 3.b. The impact of trust in the EC is especially strong for reducing preference inconsistency. Therefore, we find convincing evidence that perceptions of the multilevel character of economic governance in the EU are highly relevant for understanding preferences concerning trade liberalization in Europe.

A third important element of the explanatory model is *Political Cues* (also Figure 3). In line with our expectations, we find that opinion inconsistency on FT and the TTIP is much more widespread on the left, while right-wing ideology (although, only in its more moderate form) is associated with less probability of inconsistent opinion. These findings validate our hypotheses 1.a and 1.b. We thus conclude that ideological differences are relevant in predicting opinion inconsistency on trade liberalization, especially on the left, where we find the strongest probability of conflicting views on free trade and the TTIP. Among the other control variables, we find some additional interesting results (Figure 3).

Being a student, discussing EU politics frequently, and living in a big city are all predictors of opinion inconsistency, with a significantly higher probability of both supporting free trade and rejecting the TTIP at the same time (FT, No TTIP). These results broadly illustrate the patterns of TTIP contestation across Europe.

Figure 4. Marginal effects of contextual factors on opinion consistency (country characteristics)



Note: Marginal effects calculated from the bivariate estimation of free trade and TTIP support, full models can be found in the online Annex. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

Our last set of theoretical expectations referred to the impact of contextual factors (see Figure 4). We do not find any effect of the economic factors, neither the GDP per capita (linear or squared), the amount of public spending, nor the level of income inequality or degree of economic globalization seem to matter for inconsistent preferences on trade liberalization. On the other hand, being a national of a Central Eastern European member state (Figure 4) reduces the probability of being inconsistent (FT, No TTIP) in one's opinion on free trade and the TTIP (the effect is not statistically significant). In terms of

the treaty partner heuristics, on the other hand, the impact of the variable that operationalizes the prevailing opinion about the US is highly significant (Figure 4). In countries where a positive image of the US prevails, the probability of holding an inconsistent view on free trade and the TTIP is sharply reduced. These findings lead us to reject hypotheses 4.a and 4.b, regarding the effect of the economic variables, and support our hypothesis 5. Overall, this indicates that the TTIP controversy was strongly influenced by pro- and anti-American sentiments that contributed to the growth of inconsistent opinions on trade liberalization, rather than the differences in economic development between EU member states. This further reinforces that argument that the TTIP controversy was driven by concerns related to individual values and perceptions of the treaty partner, rather than by the utilitarian concerns over its economic impact.

5. Discussion and conclusions

Citizens of the EU remain overwhelmingly supportive of free trade, why did we then witness a significant public opinion backlash against the trade agreement negotiated with the US, the Transatlantic Trade and Investment Partnership? Our research aims to provide a better understanding of the dynamics of public opinion controversy on the TTIP. The main objective of this paper is to determine what drives the observed inconsistencies in individual preferences of Europeans who support free trade but object to the specific free trade agreement.

The research presented in this paper makes an original contribution to the literature by not focusing on simple support or opposition to free trade or free trade agreements. Rather, we seek to account for the determinants of inconsistencies in individual preferences with regard to different aspects of trade liberalization. In the context of the TTIP debate, an increasing share of EU citizens opposed the agreement with the US while continuing to support the idea of free trade. To the best of our knowledge, the sources of such growing incongruence in individual preferences have not been explored in previous research. We argue that traditional approaches rooted in the political economy of trade

are not enough to explain these misalignments. By analyzing opinions on free trade and the TTIP jointly, we show that, beyond the evaluation of its potential cost/benefits, conflicting individual preferences on trade liberalization can be explained to a great extent by individual values and attitudes towards economic globalization, European integration, political cues, as well as treaty partner heuristics.

However, we must also note some limitations to the study. Most importantly, we are unable to test whether the contestation of the TTIP is indicative of a broader politicization of further trade liberalization in the context of European integration, or whether the widespread controversy over the TTIP was due to the deep-integration character of the treaty with the hegemon of global economy and politics. That the US often constitutes the European 'other' might explain why the TTIP has sparked such an intense debate over the European social model, its democracy, and societal values. In any case, we show that perceptions of the TTIP have been deeply affected by views on EU policy-making and globalization more broadly, as well as by the image of the specific treaty partner. Ideally, future research will be able to further test our model for preference consistency between support for free trade and other such EU agreements.

The present research is relevant to current political debates in Europe and beyond. With multilateral trade negotiations stalled for the foreseeable future, and in the context of Brexit and Trump's protectionist discourse, preferential trade agreements could constitute the future of international trade liberalization. Thus, by exploring the sources of incongruities between attitudes towards the idea of free trade and support for a specific trade agreement, our research provides a timely contribution to the growing field of public opinion on globalization. It is also complementary to existing studies, which focus on either free trade attitudes or support for FTAs, and offers an innovative way to analyze public opinion attitudes on trade liberalization in a rapidly globalizing world. What is more, it opens the door to future research on the role of individual attitudes and values, which might trigger conflicting preferences regarding increasingly complex global processes.

6. References

- Ardanaz, M., Murillo, M. V., & Pinto, P. M. (2013). Sensitivity to Issue Framing on Trade Policy Preferences: Evidence from a Survey Experiment. *International Organization; Cambridge*, 67(2), 411–437.
- Blonigen, B. A. (2011). Revisiting the evidence on trade policy preferences. *Journal of International Economics*, 85(1), 129–135.
- Boomgaarden, H. G., Schuck, A. R., Elenbaas, M., & de Vreese, C. H. (2011). Mapping EU attitudes: Conceptual and empirical dimensions of Euroscepticism and EU support. *European Union Politics*, 12(2), 241–266.
- Börzel, T. A., & Risse, T. (2018). From the euro to the Schengen crises: European integration theories, politicization, and identity politics. *Journal of European Public Policy*, 25(1), 83–108.
- Caiani, M., & Graziano, P. (2018). Europeanisation and social movements: The case of the Stop TTIP campaign. *European Journal of Political Research*, 57(7), 1031–1055.
- De Ville, F., & Siles-Brügge, G. (2017). Why TTIP is a game-changer and its critics have a point. *Journal of European Public Policy*, 24(10), 1491–1505.
- Díez Medrano, J., & Braun, M. (2012). Uninformed citizens and support for free trade. *Review of International Political Economy*, 19(3), 448–476.
- Eliasson, L. J., & García-Duran, P. (2017). Why TTIP is an unprecedented geopolitical game-changer, but not a Polanyian moment. *Journal of European Public Policy*, 24(10), 1522–1533.
- Eliasson, L. J., & Huet, P. G.-D. (2018). TTIP negotiations: interest groups, anti-TTIP civil society campaigns and public opinion. *Journal of Transatlantic Studies*, 16(2), 101–116.
- European Commission (2013). FAQ on the EU-US Transatlantic Trade and Investment Partnership (TTIP). Brussels. Available at

http://trade.ec.europa.eu/doclib/docs/2013/may/tradoc_151351.pdf. Last accessed on May 5th, 2016.

Greene, W. H. (2012). *Econometric analysis*. Harlow, UK: Pearson Education.

Hainmueller, J., & Hiscox, M. J. (2006). Learning to Love Globalization: Education and Individual Attitudes Toward International Trade. *International Organization*, 60(2), 469–498.

Hamilton, D. S. (2014). Transatlantic Challenges: Ukraine, TTIP and the Struggle to be Strategic. *JCMS: Journal of Common Market Studies*, 52(S1), 25–39.

Jäkel, I. C., & Smolka, M. (2017). Trade policy preferences and factor abundance. *Journal of International Economics*, 106, 1–19.

Jedinger, A., & Schoen, A. (2018). Anti-Americanism and Public Attitudes toward Transatlantic Trade. *German Politics*, 27(3), 317–338.

Jungherr, A., Mader, M., Schoen, H., & Wuttke, A. (2018). Context-driven attitude formation: the difference between supporting free trade in the abstract and supporting specific trade agreements. *Review of International Political Economy*, 25(2), 215–242.

Lamy, P. (2015). *Looking ahead: The New World of Trade (Jan Tumlir Lecture)*. Presented at the ECIPE Conference, Brussels. Retrieved from <https://ecipe.org/wp-content/uploads/2015/02/PLamy-Speech-09.03.15.pdf>

Mansfield, E. D., & Mutz, D. C. (2009). Support for Free Trade: Self-Interest, Sociotropic Politics, and Out-Group Anxiety. *International Organization*, 63(3), 425–457.

Margalit, Y. (2012). Lost in Globalization: International Economic Integration and the Sources of Popular Discontent. *International Studies Quarterly*, 56(3), 484–500.

Maricut-Akbik, A. (2019). EU politicization beyond the Euro crisis: immigration crises and the politicization of free movement of people. *Comparative European Politics*, 17(3), 380–396.

Mayda, A. M., & Rodrik, D. (2005). Why are some people (and countries) more protectionist than others? *European Economic Review*, 49(6), 1393–1430.

- O'Rourke, K. H., & Sinnott, R. (2001). The Determinants of Individual Trade Policy Preferences: International Survey Evidence. *Brookings Trade Forum*, 2001(1), 157–196.
- Rodrik, D. (2018). Populism and the economics of globalization. *Journal of International Business Policy*, 1(1), 12–33.
- Scheve, K. F., & Slaughter, M. J. (2001). What determines individual trade-policy preferences? *Journal of International Economics*, 54(2), 267–292.
- Steiner, N. D. (2018). Attitudes towards the Transatlantic Trade and Investment Partnership in the European Union: The treaty partner heuristic and issue attention. *European Union Politics*, 19(2), 255–277.
- Tomiura, E., Ito, B., Mukunoki, H., & Wakasugi, R. (2016). Individual Characteristics, Behavioral Biases, and Trade Policy Preferences: Evidence from a Survey in Japan. *Review of International Economics*, 24(5), 1081–1095.
- Wolfe, R., & Mendelsohn, M. (2008). Values and Interests in Attitudes towards Trade and Globalization: The Continuing Compromise of Embedded Liberalism. In J. G. Ruggie (Ed.), *Embedding global markets an enduring challenge*. Aldershot: Ashgate.

Annex

Table A.1 Summary of variables included in the models

Variable	n	Mean	SD	Min.	Max.
Dependent					
Support for free trade	75,699	0.77	0.42	0	1
Support for the TTIP	70,934	0.67	0.47	0	1
Independent					
Ideology					
Left	79,823	0.09	0.28	0	1
Center-left	79,823	0.16	0.37	0	1
Center	79,823	0.35	0.48	0	1
Center-right	79,823	0.15	0.36	0	1
Right	79,823	0.25	0.43	0	1
A positive view of...					
Globalization	69,262	0.66	0.47	0	1
Big corporations	75,077	0.62	0.49	0	1
Small and medium enterprise	75,078	0.87	0.33	0	1
Trade Unions	72,888	0.61	0.49	0	1
EU attitudes					
Trust in European Commission	66,986	0.50	0.50	0	1
European identification	79,116	0.68	0.47	0	1
National interest well-represented in the EU	74,575	0.45	0.50	0	1
Country better outside the EU (Euroscepticism)	72,009	0.35	0.48	0	1
Individual controls					
Sex (Woman)	79,823	0.54	0.50	0	1
Habitat (Big city)	79,823	0.27	0.44	0	1
Education (Low)	79,823	0.15	0.36	0	1
Education (Medium)	79,823	0.43	0.50	0	1

Education (High)	79,823	0.34	0.47	0	1
Education (Still studying)	79,823	0.06	0.24	0	1
EU political discussion	79,429	0.16	0.36	0	1
EU knowledge	77,213	0.61	0.49	0	1
Anti-immigration	75,146	0.66	0.47	0	1

Research design – complementary information

The log-likelihood function for Equations (1) and (2) in the main text can be expressed in the following way:

$$\log L = \sum_{i=1}^2 \log \Phi_2 \left[\begin{array}{c} (2FT_i - 1)\beta_1 X_{i1} \\ (2TTIP_i - 1)\beta_2 X_{i2} \\ (2FT_i - 1)(2TTIP_i - 1)\rho \end{array} \right] = \sum_{i=1}^2 \log \Phi_2 [q_{i1}\beta_1 X_{i1}, q_{i2}\beta_2 X_{i2}, q_{i1}q_{i2}\rho]$$

Where $\log L$ refers to the log-likelihood function where $q_{i1} = (2FT_i - 1) = -1$ if $FT_i^* = 0$ and $q_{i1} = +1$ if $FT_i^* = 1$; $q_{i2} = (2TTIP_i - 1) = -1$ if $TTIP_i^* = 0$ and $q_{i2} = +1$ if $TTIP_i^* = 1$.

Let $w_{i1} = \rho_{i1} X_{i1} \beta_1$ and $w_{i2} = \rho_{i2} X_{i2} \beta_2$. Thus, the probabilities that enter into the previous log-likelihood function are:

$$Prob(FT_{i1}^* = FT_{i1}, TTIP_{i2}^* = TTIP_{i2} | X_{i1} X_{i2}) = \Phi_2(w_{i1}, w_{i2}, q_{i1}, q_{i2}) \quad (A.1)$$

Equation (A.1) represents the probability function to be estimated through the econometric specifications in (1) and (2).

Probit and bivariate probit estimations – complete results

To help the reader, probit regressions in Table A.2 are displayed following different combinations of equations, so results for free trade should be read vis-à-vis results for the TTIP; that is, models (1) and (4), (2) and (5), and (3) and (6) must be analyzed jointly. The preferred and most complete specifications are models (3) and (6). Also, note that ρ coefficients are displayed for each pair of regressions. These coefficients are positive and significant, suggesting that the bivariate probit estimations are correct (Table A.3). Finally, regressions in Tables A.2 and A.3 include country fixed effects, whereas models presented in tables A.4 and A.5 are without country fixed effects, we include the latter as a robustness check.

Table A.2 Probit model estimations for Free Trade and TTIP, with fixed effects

	Pr (FT=1 X)			Pr (TTIP=1 X)		
	(1)	(2)	(3)	(4)	(5)	(6)
Individual factors						
Political cues (reference category: Center)						
Left	-0.260***	-0.267***	-0.255***	-0.033	-0.245***	-0.189***
	-0.043	-0.045	-0.043	-0.026	-0.053	-0.047
Center-left	-0.109***	-0.119***	-0.112***	-0.034	-0.203***	-0.157***
	-0.03	-0.032	-0.031	-0.024	-0.029	-0.028
Center-right	0.111***	0.115***	0.111***	0.65	0.109***	0.093***
	-0.026	-0.028	-0.027	-0.621	-0.034	-0.029
Right	-0.038	-0.034	-0.03	-0.356	-0.012	-0.008
	-0.031	-0.033	-0.033	-0.417	-0.026	-0.025
Economic and globalization values						
Positive view of...						
Globalization	0.508***	0.443***	0.524***	0.045**	---	0.545***
	-0.028	-0.029	-0.029	-0.02		-0.032
Corporations	0.549***	0.498***	0.548***	-0.037	---	0.322***
	-0.025	-0.026	-0.028	-0.031		-0.027
SMEs	0.717***	0.691***	0.716***	-0.022	---	0.161***
	-0.041	-0.038	-0.041	-0.029		-0.047
Trade Unions	0.226***	0.246***	0.228***	0.003	0.088***	0.005
	-0.032	-0.034	-0.034	-0.018	-0.024	-0.022
EU attitudes						
Trust EC					0.410***	0.305***
					-0.025	-0.022
National interest represented					0.210***	0.108***
					-0.031	-0.026
European identity					0.241***	0.163***
					-0.022	-0.022

Euroscepticism					-0.114***	-0.099***
					-0.036	-0.034

Controls

Sex (Woman)	-0.086***	-0.083***	-0.083***	0.093***	-0.023	-0.026
	-0.022	-0.021	-0.021	-0.03	-0.022	-0.021
Habitat (City)	0.042*	0.052**	0.053**	0.134	-0.054*	-0.042*
	-0.024	-0.026	-0.026	-0.109	-0.029	-0.025
Education (Low)	-0.032	-0.029	-0.025	-0.017	-0.026	-0.019
	-0.028	-0.029	-0.029	-0.021	-0.035	-0.032
Education (High)	0.056***	0.070***	0.066***	-0.248***	-0.024	-0.02
	-0.02	-0.022	-0.021	-0.051	-0.018	-0.017
Still studying	0.082*	0.109**	0.099**	-0.147***	-0.027	-0.063
	-0.042	-0.044	-0.044	-0.025	-0.048	-0.046
EU Political Discussion					-0.181***	-0.159***
					-0.028	-0.03
EU knowledge					0.064***	-0.005
					-0.021	-0.02
Anti-immigration	-0.097***	-0.113***	-0.100***	-0.005	0.005	0.028
	-0.023	-0.025	-0.023	-0.044	-0.036	-0.035

Country-level variables

GDP per capita	1.311***	1.454***	1.456***	0.145	0.612	0.658
	-0.461	-0.426	-0.43	-0.115	-0.827	-0.808
GDP per capita sq.	-0.853***	-0.966***	-0.969***	-0.640***	-0.339	-0.366
	-0.301	-0.279	-0.282	-0.096	-0.551	-0.539
Welfare state (Public spending % of GDP)	0.055	0.051	0.055	1.801***	0.171	0.185
	-0.07	-0.07	-0.068	-0.571	-0.121	-0.121
Economic	-0.029	-0.08	-0.075	-0.233***	0.014	0.09

inequality (GINI)	-0.073	-0.069	-0.067	-0.051	-0.111	-0.128
Economic globalization (KOF index)	-0.542***	-0.544***	-0.541***	-0.322***	-0.268***	-0.181**
	-0.047	-0.046	-0.045	-0.058	-0.079	-0.08
CEE countries	1.821***	1.860***	1.881***	0.045**	1.692**	1.921**
	-0.47	-0.443	-0.442	-0.02	-0.794	-0.781
Positive USA image					1.119***	1.206***
					-0.221	-0.219
Year (Reference: 2014)						
2015	-0.078***	-0.093***	-0.094***	-0.037	-0.209***	-0.222***
	-0.022	-0.025	-0.024	-0.031	-0.052	-0.051
2016	-0.166***	-0.178***	-0.180***	-0.022	-0.297***	-0.318***
	-0.028	-0.028	-0.027	-0.029	-0.067	-0.065
Model information						
Rho Coefficient	0.352***	0.307***	0.329***	0.352***	0.307***	0.329***
n	53,174	44,556	44,556	53,174	44,556	44,556
N	28	28	28	28	28	28
Country FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: Table presents robust Standard Errors, clustered by country. Significance Levels: *p<0.10; **p<0.05; ***p<0.01. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

Table A.3 Average marginal effects from bivariate probit estimations, with fixed effects

	(No FT, No TTIP)	(FT, NoTTIP)	(No FT, TTIP)	(FT, TTIP)
	P(0,0)	P(1,0)	P(0,1)	P(1,1)
Individual factors				
Political cues (reference category: center)				
Left	0.046***	0.011	0.018***	-0.075***
	-0.008	-0.007	-0.004	-0.015
Center-left	0.026***	0.021***	0.002	-0.049***
	-0.005	-0.005	-0.003	-0.009
Center-right	-0.021***	-0.007	-0.007**	0.035***
	-0.005	-0.005	-0.003	-0.009
Right	0.004	-0.002	0.003	-0.006
	-0.005	-0.006	-0.004	-0.008
Globalization values				
Positive view of ...Globalization	-0.107***	-0.058***	-0.025***	0.189***
	-0.005	-0.006	-0.004	-0.009
...Corporations	-0.091***	-0.006	-0.046***	0.143***
	-0.005	-0.005	-0.003	-0.008
...SMEs	-0.098***	0.049***	-0.081***	0.130***
	-0.007	-0.009	-0.005	-0.014
...Trade Unions	-0.027***	0.026***	-0.030***	0.031***
	-0.005	-0.005	-0.004	-0.007
EU attitudes				
Trust EC	-0.025***	-0.067***	0.025***	0.067***
	-0.002	-0.005	-0.002	-0.005
Euroscepticism	0.008***	0.022***	-0.008***	-0.022***
	-0.003	-0.008	-0.003	-0.008

National interests	-0.009***	-0.024***	0.009***	0.024***
	-0.002	-0.006	-0.002	-0.006
European identity	-0.013***	-0.036***	0.013***	0.036***
	-0.002	-0.005	-0.002	-0.005

Controls:

Sex (Ref.: Woman)	0.012***	-0.004	0.009***	-0.017***
	-0.003	-0.004	-0.003	-0.006
Habitat (Ref.: Big city)	-0.003	0.015**	-0.010***	-0.002
	-0.004	-0.006	-0.004	-0.007
Education (Low)	0.005	0.001	0.002	-0.007
	-0.005	-0.007	-0.004	-0.008
Education (High)	-0.006**	0.012***	-0.010***	0.004
	-0.003	-0.004	-0.003	-0.005
Still studying	-0.007	0.026**	-0.018***	-0.001
	-0.007	-0.011	-0.006	-0.013
EU Political Discussion	0.013***	0.035***	-0.013***	-0.035***
	-0.002	-0.007	-0.002	-0.007
EU knowledge	0	0.001	0	-0.001
	-0.002	-0.004	-0.002	-0.004
Anti-immigration sentiment	0.010*	-0.018***	0.015***	-0.007
	-0.005	-0.007	-0.003	-0.01

Country-level variables

GDP per capita	-0.226***	0.028	-0.139	0.337*
	-0.074	-0.196	-0.096	-0.175
GDP per capita sq.	0.145***	-0.034	0.098	-0.209*
	-0.05	-0.129	-0.062	-0.118
Welfare state	-0.022***	-0.034	0.008	0.048**

(Public spending % of GDP)	-0.007	-0.033	-0.018	-0.021
Economic inequality (GINI)	0.001	-0.029	0.017	0.01
	-0.01	-0.032	-0.016	-0.026
Economic globalization (KOF index)	0.079***	-0.024	0.057***	-0.111***
	-0.008	-0.019	-0.009	-0.018
CEE countries	-0.380***	-0.2	-0.092	0.671***
	-0.065	-0.199	-0.102	-0.16
Positive USA image	-0.099***	-0.266***	0.099***	0.266***
	-0.018	-0.049	-0.018	-0.049

Year (Reference: 2014)

2015	0.029***	0.038***	-0.006	-0.061***
	-0.005	-0.011	-0.005	-0.012
2016	0.047***	0.049***	-0.002	-0.094***
	-0.007	-0.014	-0.005	-0.016

Model information

N	44556	44556	44556	44556
Country FE	Yes	Yes	Yes	Yes

Note: Robust Standard Errors, clustered by country. Significance Levels: *p<0.10; **p<0.05; ***p<0.01. The subscript *i* refers to variable at the individual level; *N* subscript refers to variable at the national level. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

Table A.4 Probit model estimations for Free Trade and TTIP – No fixed effects

	Pr (FT=1 X)			Pr (TTIP=1 X)		
	(1)	(2)	(3)	(4)	(5)	(6)
Individual factors						
Political cues (reference category: Center)						
Left	-0.244***	-0.253***	-0.241***	-0.212***	-0.230***	-0.175***
	-0.041	-0.043	-0.042	-0.051	-0.051	-0.046
Center-left	-0.099***	-0.113***	-0.105***	-0.135***	-0.193***	-0.149***
	-0.029	-0.03	-0.03	-0.024	-0.026	-0.025
Center-right	0.129***	0.134***	0.128***	0.126***	0.119***	0.101***
	-0.028	-0.031	-0.03	-0.033	-0.036	-0.031
Right	-0.027	-0.024	-0.021	-0.01	-0.002	0
	-0.03	-0.033	-0.032	-0.03	-0.032	-0.03
Economic and globalization values						
Positive view of...						
...Globalization	0.530***	0.465***	0.546***	0.650***		0.514***
	-0.031	-0.03	-0.032	-0.033		-0.038
...Corporations	0.550***	0.496***	0.547***	0.369***		0.309***
	-0.028	-0.028	-0.03	-0.033		-0.031
...SMEs	0.715***	0.684***	0.716***	0.176***		0.189***
	-0.042	-0.039	-0.041	-0.042		-0.044
...Trade Unions	0.230***	0.254***	0.233***	0.031	0.068**	-0.024
	-0.035	-0.038	-0.037	-0.027	-0.028	-0.025
EU attitudes						
Trust EC					0.384***	0.280***
					-0.025	-0.02
National interest represented					0.168***	0.071**
					-0.036	-0.032
European identity					0.199***	0.118***
					-0.03	-0.03

Euroscepticism					-0.115***	-0.101***
					-0.037	-0.035

Controls

Sex (Ref.: Woman)	-0.088***	-0.086***	-0.085***	-0.024	-0.031	-0.033
	-0.021	-0.02	-0.02	-0.023	-0.023	-0.022
Habitat (Ref.: City)	0.035*	0.042*	0.044**	-0.061*	-0.043	-0.033
	-0.021	-0.022	-0.022	-0.032	-0.028	-0.028
Education (Low)	-0.051**	-0.047**	-0.044*	-0.061**	-0.053	-0.057
	-0.024	-0.024	-0.023	-0.031	-0.043	-0.04
Education (High)	0.099***	0.116***	0.110***	0.072	0.037	0.034
	-0.026	-0.027	-0.026	-0.047	-0.04	-0.039
Still studying	0.088**	0.119***	0.108**	0.027	0	-0.035
	-0.043	-0.044	-0.044	-0.043	-0.049	-0.046
EU Political Discussion					-0.166***	-0.145***
					-0.033	-0.034
EU knowledge					0.079***	0.012
					-0.026	-0.028
Anti-immigration sentiment	-0.095***	-0.113***	-0.098***	-0.054*	0.004	0.031
	-0.025	-0.027	-0.025	-0.032	-0.031	-0.03

Country-level variables

GDP per capita	0.121	0.131	0.104	0.103	0.066	-0.064
	-0.174	-0.174	-0.166	-0.267	-0.299	-0.327
GDP per capita sq.	-0.088	-0.1	-0.082	-0.168	-0.117	-0.025
	-0.117	-0.117	-0.112	-0.188	-0.205	-0.22
Welfare state (Public spending % of GDP)	-0.111**	-0.111**	-0.111***	-0.018	0.007	0.006

	-0.044	-0.044	-0.043	-0.082	-0.059	-0.061
Economic inequality (GINI)	0.033	0.026	0.022	0.228***	0.171***	0.164***
	-0.046	-0.046	-0.044	-0.076	-0.056	-0.062
Economic globalization (KOF index)	0.002	0.004	0.002	0.167*	0.091	0.097
	-0.038	-0.035	-0.035	-0.091	-0.065	-0.068
CEE countries	0.136	0.135	0.118	0.118	0.078	0.022
	-0.137	0	0	0	0	0
Positive USA image					0.185***	0.170***
					-0.062	-0.064

Year (Reference: 2014)

2015	-0.057***	-0.068***	-0.069***	-0.207***	-0.192***	-0.203***
	-0.02	-0.023	-0.023	-0.041	-0.047	-0.046
2016	-0.115***	-0.123***	-0.125***	-0.260***	-0.248***	-0.261***
	-0.019	-0.02	-0.02	-0.041	-0.053	-0.053

Model information

Rho Coefficient	0.370***	0.321***	0.343***	0.370***	0.321***	0.343***
n	53174	44556	44556	53174	44556	44556
N	28	28	28	28	28	28
Country FE	No	No	No	No	No	No

Note: Robust Standard Errors, clustered by country. Significance Levels: *p<0.10; **p<0.05; ***p<0.01. The subscript *i* refers to variable at the individual level; *N* subscript refers to variable at the national level. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

Table A.5 Average marginal effects from bivariate probit estimations – No fixed effects

	(No FT, No TTIP)	(FT, NoTTIP)	(No FT, TTIP)	(FT, TTIP)
	P(0,0)	P(1,0)	P(0,1)	P(1,1)
Individual factors				
Political cues (reference category: center)				
Left	0.043***	0.011	0.018***	-0.072***
	-0.007	-0.009	-0.004	-0.015
Center-left	0.025***	0.021***	0.002	-0.048***
	-0.005	-0.005	-0.003	-0.008
Center-right	-0.024***	-0.008	-0.009***	0.040***
	-0.006	-0.006	-0.003	-0.01
Right	0.003	-0.003	0.003	-0.003
	-0.005	-0.008	-0.005	-0.008
Globalization values				
Positive view of ...Globalization	-0.109***	-0.053***	-0.030***	0.191***
	-0.009	-0.007	-0.004	-0.01
...Corporations	-0.091***	-0.006	-0.047***	0.144***
	-0.006	-0.006	-0.004	-0.01
...SMEs	-0.101***	0.042***	-0.080***	0.140***
	-0.007	-0.01	-0.006	-0.014
...Trade Unions	-0.026***	0.033***	-0.033***	0.026***
	-0.005	-0.007	-0.005	-0.009
EU attitudes				
Trust EC	-0.024***	-0.064***	0.024***	0.064***
	-0.002	-0.004	-0.002	-0.004
Euroscepticism	0.009***	0.023***	-0.009***	-0.023***
	-0.003	-0.008	-0.003	-0.008
National interests	-0.006**	-0.016**	0.006**	0.016**

	-0.003	-0.007	-0.003	-0.007
European identity	-0.010***	-0.027***	0.010***	0.027***
	-0.003	-0.007	-0.003	-0.007

Controls

Sex (Ref.: Woman)	0.013***	-0.002	0.009***	-0.019***
	-0.003	-0.005	-0.003	-0.006
Habitat (Ref.: Big city)	-0.002	0.013*	-0.009**	-0.002
	-0.004	-0.007	-0.004	-0.007
Education (Low)	0.010**	0.008	0.001	-0.019*
	-0.005	-0.009	-0.004	-0.01
Education (High)	-0.016**	0.005	-0.012***	0.023*
	-0.006	-0.007	-0.003	-0.012
Still studying	-0.01	0.021**	-0.017***	0.007
	-0.008	-0.01	-0.006	-0.013
EU Political Discussion	0.012***	0.033***	-0.012***	-0.033***
	-0.003	-0.008	-0.003	-0.008
EU knowledge	-0.001	-0.003	0.001	0.003
	-0.002	-0.006	-0.002	-0.006
Anti-immigration sentiment	0.009*	-0.019***	0.016***	-0.006
	-0.005	-0.006	-0.003	-0.009

Country-level variables

GDP per capita	-0.007	0.027	-0.019	-0.001
	-0.041	-0.067	-0.026	-0.088
GDP per capita sq.	0.012	-0.004	0.009	-0.017
	-0.028	-0.045	-0.016	-0.06
Welfare state	0.013	-0.015	0.015***	-0.014
(Public spending % of GDP)	-0.009	-0.012	-0.006	-0.017
Economic inequality (GINI)	-0.016**	-0.035**	0.011	0.040**

	-0.008	-0.014	-0.007	-0.017
Economic globalization (KOF index)	-0.008	-0.022*	0.008*	0.023
	-0.009	-0.013	-0.004	-0.019
CEE countries	-0.016	0.009	-0.014	0.021
	-0.029	-0.057	-0.025	-0.064
Positive USA image	-0.014***	-0.039***	0.014***	0.039***
	-0.005	-0.014	-0.005	-0.014

**Year
(Reference:2014)**

2015	0.025***	0.038***	-0.008*	-0.056***
	0	0	0	0
2016	0.037***	0.045***	-0.005	-0.077***
	-0.006	-0.011	-0.004	-0.014

Model information

n	44556	44556	44556	44556
N	28	28	28	28
Country FE	No	No	No	No

Note: Robust Standard Errors, clustered by country. Significance Levels: *p<0.10; **p<0.05; ***p<0.01. The subscript *i* refers to variable at the individual level; *N* subscript refers to variable at the national level. Data: EB 82.3 (2014), EB 84.3 (2015), EB85.3 (2016).

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