

ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ
ΤΜΗΜΑ ΟΙΚΟΝΟΜΙΚΩΝ ΕΠΙΣΤΗΜΩΝ

ΣΕΙΡΑ ΕΡΕΥΝΗΤΙΚΩΝ ΕΡΓΑΣΙΩΝ

**Terrorism and Attitudes Towards Immigration
in Europe**

Athina Economou, Iacovos N. Psarianos, Christos Kollias

No. 14-01

DISCUSSION PAPER SERIES

UNIVERSITY OF THESSALY
DEPARTMENT OF ECONOMICS

Terrorism and Attitudes Towards Immigration in Europe

Athina Economou^a, Iacovos N. Psarianos^a and Christos Kollias^{a,*}

^a Department of Economics, University of Thessaly, 43 Korai str., 38221, Volos, Greece

Abstract

A growing body of literature examines the effects that terrorist incidents have on the formation of individual attitudes and beliefs. This paper examines whether terrorism affects the formation of individual attitudes towards immigration and immigrants. To tackle the issue at hand, the paper utilises data from the European Social Survey for 10 European Union countries for the years 2002, 2004, 2006, 2008 and 2010. In order to capture the multidimensional nature of individual (anti)immigrant sentiment, Polychoric Principal Components Analysis is utilised in order to derive a continuous index of individual immigrant-related sentiment that incorporates various different immigrant-related specific views. We examine the impact of mega-terrorist attacks that have captured world attention with lasting ramifications and occurred before each wave of the European Social Survey. We choose events that involved either western citizens as victims and/or the attributes of the perpetrators such as religion are akin to those that many immigrants in EU countries have. A wide range of individual demographic, economic and labour market characteristics are also controlled for in the analysis.

JEL: J61, P36

Keywords: Terrorism, immigration

* Corresponding Author: Professor Christos Kollias, email: kollias@econ.uth.gr.

1. INTRODUCTION

The impact immigrants have on host countries' economy, labor markets, welfare state as well as on political and social relations especially in inner-city areas where they invariably seek work and dwellings has been the subject of an extensive and often emotive debate (*inter alia*: Borjas, 1995; Benhabib, 1996; Dustmann and Preston, 2006; Epstein and Hilman, 2003; Nannestad, 2007; Dolmas and Huffman, 2004; Ruhs, 2008; Gaston and Rajaguru, 2013; Tesfaye and Mavisakalayan, 2013). Spurred by the increasing flows of international migration, a part of this growing literature focuses onto the economic and non-economic determinants that shape attitudes towards immigration and immigrants in the host countries (*inter alia*: Bilal *et al.* 2003; Meuleman *et al.* 2009; Jolly and Di Giusto, 2013; Citrin *et al.* 1997; Mayda, 2006; Dustmann and Preston, 2007; Esses *et al.* 1998, 2001; Dustmann and Preston, 2001; Francois and Magui-Bertonb, 2013; Facchini and Mayda, 2008, 2009; Espenshade and Hempstead, 1996; Ira *et al.* 2013). As Markaki and Longhi (2013) note, the research and concomitant debate with respect to the factors that influence and determine attitudes of majority populations towards immigrants and ethnic minorities has for a long time been the focus of a plethora of studies from different disciplines of the social sciences. The generated body of literature - both theoretical and empirical - points to a wide range of factors that influence and shape attitudes of the indigenous population vis-à-vis immigrants. The growing empirical findings of studies that test the validity of theoretical predictions and assertions are by no means homogenous. As a consequence, a universal consensus on the issue has yet to emerge. In broad terms, as among many others O'Rourke and Sinnott (2004), Meuleman *et al.* (2009), Markaki and Longhi (2013), Mayda (2006), Nannestad (2007) observe, a number of economic and non-economic, social factors have emerged as explanatory

of individual attitudes towards immigration and immigrants. They include labour market competition and unemployment; educational level with high-skilled individuals being in general less opposed to low-skilled immigrants; country, regional, household and individual specific characteristics such as gender; the percentage of immigrants in an area or region; societal integration, cultural issues and religion; human values, political affiliation and voting behavior; security, neighborhood safety and perceived threat; have all been cited as factors that explain the formation and shaping of stances vis-à-vis immigration and immigrants.

Although terrorism has been omnipresent throughout history in various forms, shapes and intensity of mega-terrorist attacks such as 9/11 or the 2004 and 2005 Madrid and London bombings and more broadly the emergence of transnational terrorism as a major global security threat have acted as the impetus for a rapidly increasing body of research examining a plethora of diverse issues associated with this phenomenon including its socioeconomic and political determinants and ramifications (*inter alia*: Sandler, 2010, 2013; Enders and Sandler, 2006, 2012; Wemlinger, 2013; Frey *et al.* 2007; Caruso and Schneider, 2011; Caruso and Gavrilova, 2012; Rose and Blomberg, 2010). A body of this wide ranging literature has focused on how terrorist events affect peoples' attitudes, risk perceptions, beliefs and electoral behaviour particularly in countries that have fallen victims to terrorism either in the form of systematic terrorist campaigns or from mega-attacks such as the three defining events mentioned above (*inter alia*: Drakos and Müller, 2011; Huddy *et al.* 2005; Sharvit *et al.* 2010; Hall, 2003; Bassat *et al.* 2012; Turvey *et al.* 2010; Rykkia *et al.* 2011; Montalvo, 2011; Indridason, 2008; Springer *et al.* 2012; Davis and Silver, 2004). As Woods (2011) notes, in broad terms the evidence suggests that, following mega-terrorist attacks, public attitudes and perceptions on numerous social

issues are affected and changed. For instance, Bozzoli and Müller (2011), find that peoples' risk-perceptions and risk-assessment were affected by the 2005 London attacks and that they were more willing to trade-off civil liberties for enhanced security. Hetherington and Suhay (2011) report findings indicating that perceived threats to safety emanating from terrorism leads to the adoption of more restrictive and aggressive policy stands by "average" Americans. Gassebner *et al.* (2011) find that terrorist episodes shorten the incumbent party's stay in government. The results of Berrebi and Klor (2006, 2008) and Kibris (2011) show that electorate choices are sensitive responsive to terrorist events, with significant vote shifts in favour of more conservative right-wing parties.

Within this strand of studies, a number have examined the effects terrorist incidents have on attitudes towards immigration, ethnic minorities and immigrants that have demographic and nativity profiles similar to the perpetrators of terrorist attacks (*inter alia*: Legewie, 2013; Havering, 2013; Echebarria-Echabe and Fernandez-Guede, 2006). For instance, Rabby and Rodgers (2011) trace adverse labour market effects in the case of young Muslim men in the USA following 9/11 but not so in the case of the UK following the 2005 London bombings. The results of a study by Aslund and Rooth (2005), point to an increase of negative views on immigrants in Sweden following the 9/11 mega attacks but no labour market discrimination effects. On the other hand, examining the impact of the 2008 Mumbai attacks on West European public opinion, Finseraas and Listhaug (2013) do not trace a particularly significant effect on policy preferences and a rather mild shift in conservative direction on the left-right scale. Hanes and Machin (2012) report significant increases in hate crimes against Asians and Arabs following these two terrorist incidents. Following the 2004 Madrid attacks, Echebarria-Echabe and

Fernandez-Guede (2006) find that Spanish interview respondents expressed more anti-Arab and conservative attitudes vis-à-vis interviewees before the attack. Broadly similar findings are reported by Legewie (2013) indicating that transnational terrorist events that occur within a country, such as the Madrid bombings in 2004 have a more profound effect on anti-immigrant sentiments vis-à-vis distant events such as the terrorist attack in Bali in 2002. Regional attributes such as the level of unemployment explain observed variations in anti-immigrant attitudes after a terrorist incident (Legewie, 2013). The impact of a single incident, that of the murder of the Dutch film-maker Theo van Gogh in 2004, is the theme of three other studies. Using data from the European Social Survey (ESS), Finseraas *et al.* (2011) find that respondents interviewed after the murder were more positive toward restrictive immigration policies compared to those interviewed before. A negative effect on housing prices in areas of Amsterdam with a high percentage of Muslim inhabitants is reported by Gautier *et al.* (2009). Penninx (2006) addresses issues associated with the effect exerted on Dutch immigration policies by the van Gogh assassination as well as that of the populist politician Pim Fortuyn in 2002.

Hoping to contribute to this expanding literature, the issue of whether terrorism affects the formation of individual attitudes towards immigration and immigrants is also taken up. In particular, the paper utilises data from the *European Social Survey* for 10 European Union countries for the years 2002, 2004, 2006, 2008 and 2010. In order to capture the multidimensional nature of individual (anti)immigrant sentiment, Polychoric Principal Components Analysis is utilised in order to derive a continuous index of individual immigrant-related sentiment that incorporates various different immigrant-related specific views. We examine the impact of mega-terrorist attacks that have captured worldwide attention with lasting

ramifications and have occurred shortly before each wave of the *European Social Survey*. In particular, we choose events that involved either western citizens as victims and/or the attributes of the perpetrators such as religion are akin to those that many immigrants in EU countries have (*inter alia*: Hall, 2003; Echebarria-Echabe and Fernandez-Guede, 2006; Springer *et al.* 2012; Hanes and Machin, 2012; Rabby and Rodgers, 2011). Hence, such terrorist attacks have a greater probability to influence the formation of immigrant-related sentiments in the European populations in a cross-country comparison setup. A wide range of individual demographic, economic and labour market characteristics are also controlled for in the analysis that follows.

2. DATA, METHODOLOGY AND FINDINGS

Methodology

Given that as studies have shown (Ben-David, 2009; Leiken, 2004; Sartori, 2012), Muslims are the vast majority of non-European immigrants in Europe we limit our analysis to terrorist events that were carried out by Islamic terrorist groups. As previous papers have shown, but with much narrower samples vis-à-vis the one used here, attitudes towards immigrants with demographic and nativity profiles similar to the perpetrators of terrorist attacks are negatively affected following such events (*inter alia*: Hall, 2003; Gautier *et al.* 2009; Echebarria-Echabe and Fernandez-Guede, 2006; Hanes and Machin, 2012; Rabby and Rodgers, 2011). The data utilized are drawn from the five available waves of the *European Social Survey*, namely for the years 2002, 2004, 2006, 2008, 2010. Only countries for which there is available information for all the above mentioned waves are included in the empirical analysis, since we need to exploit the time dimension of the dataset, if we wish to examine the impact of terrorist attacks that occurred in different years. We also include only

countries with available information for the main variables of interest. Based on these two exclusion criteria, 10 countries are included in the final sample, namely Belgium, Denmark, Finland, Germany, Netherlands, Poland, Slovenia, Spain, Sweden and the United Kingdom. Only citizens and citizens not belonging in ethnic minority groups are included in the sample of each country.

The main available indicators in the survey that capture the (anti) immigrant sentiments of respondents in each country are derived from the following six questions:

"Allow many/few immigrants of same race/ethnic group as majority"

"Allow many/few immigrants of different race/ethnic group as majority"

"Allow many/few immigrants from poorer countries outside Europe"

"Immigration bad or good for country's economy"

"Country's cultural life undermined or enriched by immigrants"

"Immigrants make country worse or better place to live"

The responses are classified in four scale points (1: allow many to come and live in the country - 4: allow none) for the first three questions and in eleven scale points (1: positive immigrant views - 11: negative immigrant views) for the next three questions. The shaping of an individual's feelings and attitudes towards immigrants is a multidimensional and complex process (*inter alia*: Ceobanu and Escandell, 2008; Mughan and Paxton, 2006; O'Rourke and Sinnott, 2004; Hainmueller and Hiscox, 2010; Meuleman *et al.* 2009; Markaki and Longhi, 2013).

The majority of studies examining the factors that affect the formation of immigrant-related sentiments among native populations, focus on one or two of the indices for immigrant related sentiments. For the purposes of the investigation conducted here we try to obtain a proxy for the overall individual, subjective belief regarding immigrants. That is, to incorporate many different facets of individual

attitudes and beliefs in one multidimensional index of immigrant related sentiments. Thus, the common variation of the available facets is expected to reflect in a more objective and coherent manner the true state of the individual immigrant-related attitude. To this end, a composite continuous index is constructed, that approximates the individual's subjective overall (anti)immigrant sentiment, since this index accommodates the multiple dimensions (facets) of individual immigrant-related values.

To start with, in order to examine the association between the variables that will be used to construct the composite index, we use Kendall Tau-b and Spearman's rank correlation coefficients that are considered more appropriate when data are ordinal. Based on both tests, all six indicators present a positive and statistically significant (at the 1% level) association between them. The lowest correlation coefficient is observed between *"Allow many/few immigrants of different race/ethnic group as majority"* and *"Country's cultural life undermined or enriched by immigrants"* with the Kendall Tau-b correlation coefficient being 32% and the Spearman correlation coefficient 39%. The highest correlation coefficient is observed between *"Allow many/few immigrants of same race/ethnic group as majority"* and *"Allow many/few immigrants of different race/ethnic group as majority"* with the Kendall Tau-b correlation coefficient being 70% and the Spearman correlation coefficient being 74%.

In order to derive the composite continuous index of (anti)immigrant sentiment, the Polychoric Principal Component Analysis (P-PCA) as suggested by Kolenikov and Angeles (2004, 2009) is used. Principal Component Analysis (PCA) is widely used for the dimensionality reduction of many available variables, aiming at capturing the common information (variance) of these variables and it is considered a

valuable tool in order to model an underlying continuous multifaceted variable such as wealth, individual socioeconomic status and overall health status (Erdogan-Ciftci *et al.*, 2008; Filmer and Pritchett, 2001; Moser and Felton, 2007). Furthermore, it is considered more appropriate than the construction of a composite index through simple summation of different sub-indices' scores since it provides more accurate weights (Moser and Felton, 2007). However, in the case of ordinal variables such as the ones in our case, P-PCA is considered more appropriate since it is designed to accommodate categorical variables and it relies on polychoric and polyserial correlations (Branisa *et al.*, 2010; Kolenikov and Angeles, 2004, 2009). The main advantages of P-PCA over regular PCA analysis is that it can accommodate both discrete and continuous data and its coefficients are more accurate (Moser and Felton, 2007). From P-PCA we extract the First Principal Component which reflects the common information shared by the observed indicators, namely individual anti-immigrant sentiment (Branisa *et al.*, 2010). The eigenvalue of the first eigenvector is the only one exceeding unity (3.917) and it explains around 65% of the total variance, which is quite satisfactory. A wide range of indicators is also included as independent variables in order to limit the unobserved heterogeneity in (anti)immigrant sentiment formation. Therefore, demographic information, socio-economic status indicators, political values, social networking, past experience of being assaulted and area of residence are also included in the analysis. More information on these variables is reported in Table 1.

The basic independent variable of interest is the terrorist attacks that occurred at the international level. The impact of these attacks is approximated by the number of casualties (fatalities and injuries) they caused. The main criterion of their inclusion in the sample was that these attacks were undertaken by Islamic groups and they were

drawn from the Enders and Sandler (2012) mass-casualty terrorist attacks list. Specifically, the attacks are: the 1983 explosions in Lebanon, the airplane bombings in 1985 in Canada, in 1988 in the UK, and in 1989 in Nigeria, the explosions in Kenya and Tanzania in 1998, the 9/11 attacks, the 2002 hostage situation in Russia, the 2004 bombings in Spain and the hostage taking in Russia, the 2005 bombings in the UK and finally, the 2008 bombings in India. In addition, we attempt to differentiate the effect these attacks have on the formation of immigrant related attitudes in countries included in the sample. It is expected that, at the country level, the impact (and the subsequent values' formation) of a terrorist attack would be more intense among the natives when the attack causes victims of the same nationality. Usually, one of the first information reported by the media when a terrorist attack occurs is whether natives are included in the casualties or not. This emphasizes that when nationals are included in the victims' lists, then the effect on the public opinion will be more pronounced and ethnic national feelings might be even more intense. Therefore, in order to examine whether the impact on the (anti)immigrant sentiment differs on the basis of the origin of the victims, we construct two different terrorism events indices. The first includes all victims regardless of nationality while the second includes only the number of victims that are citizens of European countries. The terrorism index is constructed using the methodology of Sandler *et al.* (2011). In detail, the terrorism index takes the value of the number of fatalities plus the weighted value of the number of injured individuals. The weight that is assigned is proposed by Sandler *et al.* (2011) who calculated that every injury corresponds to 0.57 deaths. Unfortunately, specific detailed information on the nationality of the victims for each terrorist attack is difficult to trace. Information is mainly drawn from media (newspapers, journals) publications and internet information (Wikipedia, memorial

websites etc). Still, the information mostly covers only the nationality of the fatalities. In order to approximate the number of injured Europeans we calculate the proportion on the total number of injured individuals based on the proportion of the fatalities' nationalities, for example if 10% is the number of *ith*-nationality fatalities in a certain terrorist attack then we attribute 10% of the total injured individuals to the number of *ith*-nationals injured in this specific terrorist attack². The terrorist attacks included in the study and the associated casualties are presented in Table 2. The use of the composite, continuous index of individual (anti)immigrant sentiment allows us to utilise OLS regression techniques. Once the scores for the (anti)immigrant sentiment index are obtained from the P-PCA, the following OLS model is estimated:

$$\text{Anti-Immigrant Sentiment}_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + u_i \quad (1)$$

Where the composite index of (anti)immigrant sentiment is explained in terms of individual demographic and various socioeconomic indicators (X_1, X_2, \dots, X_n). White robust heteroskedasticity standard errors are reported for the regression models.

The analysis is repeated for five sub-groups of countries based on their welfare state regime as proposed by Arts and Gelissen (2002). As Facchini and Mayda (2009) argue, the welfare state of the country of destination affects significantly the impact of immigration upon native groups and consequently, it affects individual stance on immigration. The typical welfare state regimes as presented in Arts and Gelissen (2002) are the Scandinavian (represented by Denmark, Finland, Sweden in our dataset), the Liberal (only UK appears in this welfare scheme based on the availability of data), the Continental (Belgium, Germany and the Netherlands) and recently

²We sincerely thank Todd Sandler for this insightful suggestion. Nevertheless, the exclusion of the number of injured individuals from the terrorism index does not alter the findings of the study. Hence, for reasons of brevity here we present the estimated effects with the proxy for the injured individuals included in the terrorism dummy.

expanded with the Southern Welfare state (only Spain in our sample due to limited data on the remaining countries of Southern Europe). We expand these welfare regimes with the Eastern Welfare state (Poland and Slovenia).

The econometric modelling is identical across all five welfare state regimes in order to proceed in comparisons among the groups of countries with similar institutional and social policy frameworks. The analysis is also disaggregated by gender in order to trace any gender related differences as recent studies have done (Francois and Magni-Bertonb, 2013; Wemlinger, 2013). Finally, as a robustness check, the analysis is repeated for the total sample of the ten European countries.

3. RESULTS

Summary Statistics

The summary statistics for each one of the six indicators in the cross-country analysis, indicates that the citizens of each country report similar rankings (values) for all six indicators, thus a uniformity is observed in individual values between these six indicators at the country level. For the first indicator - *"Allow many/few immigrants of same race/ethnic group as majority"*- the lowest mean value (1.75) indicating positive beliefs regarding immigrants is observed in Sweden while the highest mean value (2.41) indicating more negative beliefs for immigrants is observed in Spain. While 91% of the citizens in Sweden answered *"allow many/allow some"* in the above statement, the respective percentage among Spanish citizens is 53%. Regarding the second indicator - *"Allow many/few immigrants of different race/ethnic group as majority"*- the lowest mean value (1.84) is again observed for Sweden where about 86% answered *"allow many/allow some"*, while the highest mean value is observed for Finland (2.62) where only 40% answered *"allow many/allow some"* in the statement referring to immigrants of same ethnic groups. The third indicator - *"Allow*

many/few immigrants from poorer countries outside Europe" - also provides a similar picture where Sweden reports the lowest mean value (1.86) and about 86% of its respondents answered "allow many/allow some" whereas the highest mean value is observed again for Finland (2.70) where only 34% of the respondents answered "allow many/allow some" on this statement. Regarding the statement "Immigration bad or good for country's economy", the lowest mean value (indicating positive beliefs) is again observed for Swedish respondents (5.50) where 73% of them ranked themselves being between "1" (good) and "6" (neither good nor bad). The highest mean value is observed for the UK (6.57) where the respective percentage of respondents is 54%. For the statement "Country's cultural life undermined or enriched by immigrants" the picture remains pretty much the same with Finland reporting the lower mean value (3.82) closely followed by Sweden while the UK reported the highest mean value (6.17). The respondents who are more positive or neutral towards immigrants (that is ranked their preferences between "1" and "6") are 93% in Finland and 56% in the UK. Finally, for the last indicator - "Immigrants make country worse or better place to live"- values remain uniform with Sweden presenting the lowest mean value (4.77) and the UK presenting the highest mean value (6.56), whereas the respective percentages of citizens who are either neutral or positive towards immigrants with respect to the above statement, are 84% for Sweden and 54% in the UK. The summary statistics of the variables included in the analysis, by welfare regime, is presented in Table 1. Overall, the higher values for the composite index of anti-immigrant sentiment are observed for the UK respondents and for Spanish respondents. The lower values are observed for the Scandinavian countries welfare regime group, comprised by Denmark, Finland and Sweden. In general, this

picture follows the spirit met when examining each index of immigrant-related attitudes separately for each country.

Results by Welfare Regime

Table 4 presents the findings of the regressions examining the determinants of (anti)immigrant sentiment formation for each of the five welfare regime states. The main variables of interest are the two terrorism indices, the first incorporating all victims of the terrorist attacks under examination, while the second includes only victims of European countries.

The overall terrorism index is positive and statistically significant for all five welfare sub-groups. This finding indicates that terrorist attacks exert a significant impact upon the formation of immigrant-related values and they tend to increase negative beliefs for immigrants. The larger impact is observed for the Eastern countries, namely Poland and Slovenia, followed by the Continental countries (Belgium, Germany and the Netherlands). The weaker quantitative impact is observed for the Scandinavian welfare regime group. The notable exception here is Spain, where the occurrence of a terrorist attack seems to decrease anti-immigrant sentiment, in contrast to the picture observed for the rest of the countries. This finding may be attributed to unobserved heterogeneity. It is possible that there might exist several individual characteristics (for instance, personality traits and family background) as well as cultural, labour market, legislative differences at the country level that affect the formulation of (anti)immigrant values through the variable of the terrorism index. Unfortunately however, such characteristics could not be controlled for in this study due to lack of relevant information.

The terrorism index with European victims also seems to exert a negative impact on the formation of (anti)immigrant attitudes for the majority of the country groups examined. For the Scandinavian, Continental and Eastern welfare regimes, the onset of a terrorist attack is significantly and positively associated with the composite index of individual anti-immigrant sentiment. The impact is again less intense for the countries belonging to the Scandinavian welfare regime in comparison to the rest. In this case, the stronger impact is observed for the respondents in countries under the Continental welfare regime. An interesting finding is the comparison of the quantitative effects of the Overall and the European victims index. It seems that the effect of the terrorism index that includes only the European victims is appreciably much stronger in comparison to the impact caused by the terrorism index incorporating all victims regardless of nationality. This means that the impact of terrorism attacks upon public opinion formation is partly affected by absence of (national) identification with the victims of the attack. The impact of terrorism upon anti-immigrant sentiment appears to be negative, thus weakening anti-immigrant attitudes, in the case of Spain and the UK. Again, these findings may reflect the existence of unobserved heterogeneity that could affect the estimated coefficients.

As expected, several other individual and socioeconomic characteristics affect individual formation of (anti)immigrant sentiments. Most of these characteristics are quite robust with respect to the welfare state sub-group examined. The components of individual socioeconomic status (namely, income, educational level and occupational status) seem to uniformly affect the formation of immigrant-related values among the sub-groups. In particular, individual income is one of the strongest determinants of immigrant related sentiment and an increase in income is associated with more positive attitudes towards immigrants for all the sub-samples examined. The same

finding is yielded in the case of educational level. Individuals of middle and higher educational level have more positive attitudes and beliefs towards immigrants in comparison to individuals of lower occupational status. The weaker effects are observed for the countries belonging to the Eastern and Scandinavian welfare regimes. Similarly, employed respondents in Scandinavian, Continental and Eastern welfare regimes also hold more positive attitudes regarding immigrants in comparison to the unemployed. Inactive respondents also seem to adopt less negative attitudes in comparison to the unemployed in all sub-groups except for the Liberal welfare sub-group (represented here by the UK).

Political beliefs also play an important role in the formation of anti-immigrant sentiment. As expected, individuals of center and right political self-placement are more opposed to immigration (adopting more negative attitudes) in comparison to individuals of left political self-placement. This finding is very robust for all the welfare schemes examined. Once again, the weaker effects are observed for the countries belonging to the Eastern and Scandinavian welfare regimes. Individual perceptions of one's economic positions also exert a significant effect on the formation of anti-immigrant sentiment with the exception of Spain. Specifically, being able to live comfortably with household income contributes to more positive immigrant-related attitudes. The experience of past assault also affects anti-immigrant sentiment but only for the Scandinavian and the Liberal welfare state sub-groups. Similarly, more religious individuals tend to adopt more positive attitudes with respect to immigrants in comparison to the rest. Social networks also seem to act positively on the formation of less anti-immigrant values for all sub-groups except for the Southern welfare state sub-group.

Demographic characteristics seem to exert a weaker effect on individual anti-immigrant sentiment. In detail age is found to exert a non-linear (of an inverted \cap -shaped form) effect for the UK sample. This means that as age increases individuals adopt more intense anti-immigrant sentiments which tend to weaken after the age of 65 years. The opposite picture is observed for the Spanish sample. While as age increases individuals hold positive attitudes regarding immigration but these attitudes shift after the age of 45 years. Gender seems to be an important determinant of the formation of anti-immigrant sentiment but the overall picture is not uniform across the sub-groups. While in Scandinavian countries, it is male respondents who hold more negative values regarding immigrants, in Liberal, Continental and Southern welfare schemes it is females who are more opposed to immigrants in comparison to males. Finally, the area of residence also affects the formation of anti-immigrant values in the majority of the sub-groups examined. For all welfare state sub-groups except for the Liberal, respondents living in big cities adopt less negative attitudes against immigrants in comparison to the respondents living in rural areas and villages. The same effect is observed for respondents living in small cities, but the effect is not significant for the respondents of the Liberal and the Southern welfare regimes.

Results by Welfare Regime and Gender

Tables 5 and 6 presents the findings of the regressions by gender and welfare state regime respectively. Regarding the effect of terrorism attacks on the formation of anti-immigrant sentiments among the respondents the effects are similar for both male and female respondents with a notable exception observed for the Liberal welfare regime. In general for all sub-groups, except for the Southern welfare group, the incidence of a terrorist attack contributes on the formation of negative immigrant-

related beliefs for both males and females. The effect is stronger for females for the Scandinavian and the Eastern welfare states while the effect is stronger for males for the Continental welfare state. Still, for the Spanish sample (representing the Southern welfare regime) while both males and females adopt less negative immigrant-related views after a terrorist attack the effect is much stronger for male respondents. For the Liberal regime (the UK sample) the overall index of terrorism incidents does not seem to affect the formation of immigrant-related values of males while it contributes to the formation of negative values for females. On the contrary, the terrorism index with European victims alone, affects both genders by making them adopt more friendly attitudes towards immigrants while the effect seems stronger for females.

All in all, a comparison of the estimated effects between sub-groups for males and females, it seems that while females are driven to the formation of immigrant-related sentiments mainly by household characteristics, social networks, objective economic perceptions and education, male respondents' anti-immigrant sentiment is mainly driven by occupational status and political beliefs variables.

Total Sample

Table 7 presents the results for the overall sample of the ten European countries, while the present the results disaggregated by gender. In general, terrorist attacks undertaken by major Islamic terrorist groups seem to affect the formulation of negative attitudes against immigrants. The effect seems to be stronger when the attacks involve European victims and similarly, the impact is stronger for female members of the sample.

Individual demographic, socioeconomic and political status characteristics appear to exert a strong impact on the formation of immigrant related values. The

estimated coefficients, are in most cases, stronger for males than for females. However, household size and social networks appear to affect more intensely the formation of immigrant related values among the female population.

4. CONCLUDING REMARKS

As, among others Woods (2011) notes, there is ample empirical evidence that terrorism exerts an often profound effect on the general public's attitudes, beliefs and stance on many social and political issues including civil liberties, risk perceptions, electoral behaviour (*inter alia*: Wemlinger, 2013; Frey *et al.* 2007; Berrebi and Klor, 2006, 2008; Drakos and Müller, 2011; Sandler, 2013; Bozzoli and Müller, 2011). Evidence generated a number of studies, such as for instance Spinger *et al.* (2012), Hanes and Machin (2012), Legewie (2013), Echebarria-Echabe and Fernandez-Guede (2006), Aslund and Rooth (2005), Rabby and Rodgers (2011), Finseraas *et al.* (2011) show that attitudes towards immigration and immigrants that share similar demographic and nativity characteristics to those of terrorists, are also adversely affected. Building on previous studies, this paper examined how immigrant related stances and preferences in European countries are affected by major terrorist events that shook and rattled public opinion on a global scale. For the purposes of this investigation a composite continuous index was constructed, approximating the individuals' subjective overall (anti)immigrant sentiment as these are recorded by the *European Social Surveys*. In order to derive the composite continuous index of (anti)immigrant sentiment, we employed Polychoric Principal Component Analysis. On the basis of data availability, the investigation was undertaken for ten European countries grouped by welfare regime (Facchini and Mayda, 2009) as well as for the whole sample. In line with Sandler *et al.* (2011), two indices were constructed for the

terrorist events used here that were drawn from Enders and Sandler (2012). One included all the casualties, irrespective of their nationality. The other comprised only European country-specific casualties. A number of other variables such as individual socio-economic, political and demographic characteristics, that have been shown in the relative literature to affect attitudes towards immigration and immigrants were also included in the tests (*inter alia*: Ira *et al.* 2013; Francois and Magui-Bertonb, 2013; Markaki and Longhi, 2013; Jolly and Di Giusto, 2013; Callens *et al.* 2013; Chandler and Tsai, 2011; Hainmueller and Hiscox, 2007). Albeit not uniformed across all the countries included in the sample (Spain is the notable exception that warrants further country specific investigation), the findings on balance seem to point to a strong and negative effect on attitudes towards immigration and immigrants. The effect was found to be much more pronounced and stronger in the case of the second terrorism index that included only the European casualties suggesting the presence of an (national) identification mechanism with the victims of the attack and a concomitant sympathy and compassion effect transformed into a more negative attitude towards immigration and immigrants that share similar demographics to the perpetrators of the attacks. The estimated effects appear to differ in strength between the five welfare regimes examined here with the weaker being recorded in the case of the Scandinavian group of welfare states. A finding that is in accordance with the relevant literature whereby a more effective and egalitarian welfare state is more capable and efficient in the integration of immigrants and hence acts as a shock absorber of anti-immigrant feelings in such events (Facchini and Mayda, 2009). Occupational, educational and gender factors were also found to affect the net impact on attitudes towards immigrants after a terrorism incident. Again, the finding was strong but not universally applicable. An interesting finding was that the effects of

terrorism were less pronounced in East European countries. A plausible explanation is that, vis-à-vis West European countries, the former are not (yet?) traditional immigrant destinations especially of Muslim immigrants.

REFERENCES

- Arts, W. & Gelissen, J. (2002). Three worlds of welfare capitalism or more? A state-of-the-art report. *Journal of European Social Policy* 12(2), 137-158.
- Aslund, O. & Rooth, D-A., (2005). Shifting Attitudes and the Labor Market of Minorities. Swedish Experiences after 9–11. *Journal of Population Economics* 18, 603–629.
- Bassat, A.B., Daham, M., Geys, B. & Lor, E. (2012). The impact of the economic costs of conflict on individual's political attitudes. *Peace Economics, Peace Science and Public Policy* 18(2), 2-29
- Ben-David, E. (2009). Europe's Shifting Immigration Dynamic. *Middle East Quarterly* XVI (2), 15-24.
- Benhabib, J. (1996). On the political economy of immigration. *European Economic Review* 40(9), 1737–1743.
- Berrebi, C. & Klor, E. (2008). Are voters sensitive to terrorism? Direct evidence from the Israeli electorate. *American Political Science Review* 102(3), 279-301.
- Berrebi, C. & Klor, E. (2006). On Terrorism and Electoral Outcomes. *Journal of Conflict Resolution* 50(6), 899-925.
- Bilal, S., Grether, J-M. & de Melo, J. (2003). Attitudes towards Immigration: a Trade-Theoretic Approach. *Review of International Economics* 11(2), 253–267.

- Borjas, G., (1995). The Economic Benefits from Immigration. *Journal of Economic Perspectives* 9(2), 3–22.
- Bozzoli, C. & Müller, C. (2011). Perceptions and attitudes following a terrorist shock: evidence from the UK. *European Journal of Political Economy* 27, S89-S106.
- Branisa, B., Ziegler, M. and Klasen, S. (2010). The Institutional Basis of Gender Inequality. Proceedings of the German Development Economics Conference, No. 16, Hannover.
- Callens, M-S., Valentová, M. & Meuleman, B. (2013). Do attitudes towards the integration of immigrants change over time? A comparative study of natives, second-generation immigrants and foreign-born residents in Luxembourg. *Journal of International Migration and Integration* DOI 10.1007/s12134-013-0272-x.
- Caruso, R. & Schneider, F. (2011). The socio-economic determinants of terrorism and political violence in Western Europe (1994-2007). *European Journal of Political Economy* 27, S37-S49.
- Caruso, R. & Gavrilova, E. (2012). Youth unemployment, terrorism and political violence: evidence from the Israeli/Palestinian conflict. *Peace Economics, Peace Science and Public Policy* 18, 1554-8597.
- Ceobanu, A. M. & Escandell, X. (2008). East is West? National feelings and anti-immigrant sentiment in Europe. *Social Science Research*, 37(4), 1147-1170.
- Chandler, C. & Tsai, Y. (2011). Social factors influencing immigration attitudes: an analysis of data from the General Social Survey. *The Social Science Journal* 38(2), 177-188.

- Citrin, J., Green, D., Muste, C. & Wong, C. (1997). Public Opinion toward Immigration Reform: The Role of Economic Motivation. *The Journal of Politics* 59(3), 858–881.
- Davis, D. & Silver, B. (2004). Civil liberties vs. security: public opinion in the context of the terrorist attacks on America. *American Journal of Political Science* 48(1), 28-46.
- Dolmas, J. & Huffman, G.W. (2004). On the political economy of immigration and income redistribution. *International Economic Review* 45, 1129–1168.
- Dustmann, C. & Preston, I.P. (2006). Is Immigration Good or Bad for the Economy? Analysis of Attitudinal Responses. *Research in Labor Economics* 24, 3–34.
- Dustmann, C. & Preston, I. (2001). Attitudes to ethnic minorities, ethnic context and location decisions. *The Economic Journal* 111, 353-373.
- Dustmann, C. & Preston, I. (2007). Racial and Economic Factors in Attitudes to Immigration. *B.E. Journal of Economic Analysis and Policy* 7(1), Article 62.
- Drakos, K. & Müller, C. (2011). Terrorism risk concern in Europe. *Economics Letters* 112, 195-197.
- Echebarria-Echabe, A. & Fernandez-Guede, E. (2006). Effects of terrorism on attitudes and ideological orientation. *European Journal of Social Psychology* 36(2), 259-265.
- Enders, W. & Sandler, T. (2012). *The Political Economy of Terrorism*. Cambridge University Press, Cambridge.
- Enders, W. & Sandler, T. (2006). Distribution of transnational terrorism among countries by income class and geography after 9/11. *International Studies Quarterly* 50, 367-393.

- Epstein, G. & Hillman, A.L. (2003). Unemployed immigrants and voter sentiment in the welfare state. *Journal of Public Economics* 87, 1641–1655.
- Erdogan-Ciftci, E., van Doorslaer, E. & López-Nicolás, Á. (2008). Health, Financial Incentives and Retirement in Spain. Tinbergen Institution Discussion Paper Series, No. 2008-093/3.
- Espenshade, T. & Hempstead, K. (1996). Contemporary American Attitudes toward U.S. Immigration. *International Migration Review* 30(2), 535–570.
- Esses, V., Dovidio, J., Jackson, L. & Armstrong, T. (2001). The immigration dilemma: the role of perceived group competition, ethnic prejudice and national identity. *Journal of Social Issues* 57(3): 389-412.
- Esses, V., Dovidio, J., Jackson, L. & Armstrong, T. (1998). Intergroup competition and attitudes toward immigrants and immigration: an instrumental model of group conflict. *Journal of Social Issues* 54(4), 699-724.
- Facchini, G. & Mayda, A. (2008). From individual attitudes towards migrants to migration policy outcomes: theory and evidence. *Economic Policy* 23, 651–713.
- Facchini, G. & Mayda, A. (2009). Does the Welfare State Affect Individual Attitudes toward Immigrants? Evidence across Countries. *Review of Economics and Statistics* 91(2): 295–314.
- Filmer, D. & Pritchett, L. (2001). Estimating Wealth Effects without Expenditure Data—or Tears: An Application to Educational Enrollments in States of India. *Demography* 38(1), 115-132.
- Finseraas, H., Jakobsson, N. & Kotsadam, A. (2011). Did the Murder of Theo van Gogh Change Europeans' Immigration Policy Preferences? *Kyklos* 64(3), 396-409.

- Finseraas, H. & Listhaug, O. (2013). It can happen here: the impact of the Mumbai terror attacks on public opinion in Western Europe. *Public Choice* 156, 213-228.
- Francois, A. & Magni-Bertonb, R. (2013). Individual gendered attitudes toward immigrants. Empirical evidence from French surveys. *The Social Science Journal* 50, 321–330.
- Frey, B., Luechinger, S. & Stutzer, A. (2007). Calculating tragedy: assessing the costs of terrorism. *Journal of Economic Surveys* 21(1), 1-24.
- Gassebner, M. R. Jong-A-Pin & J. Mierau (2011). Terrorism and Cabinet Duration. *International Economic Review* 52, 1253–70.
- Gaston, N. & Rajaguru, G. (2013). International migration and the welfare state. *European Journal of Political Economy* 29, 90-101
- Gautier, P., Siegman, A. & van Vuuren, A. (2009). Terrorism and Attitudes toward Minorities: The Effect of the Theo van Gogh Murder on House Prices in Amsterdam. *Journal of Urban Economics* 65, 113–126.
- Hall, R. (2003). A note on September eleventh: the Arabization of terrorism. *The Social Science Journal* 40, 459–464
- Hanes, E. & Machin, S. (2012). Hate Crime in the Wake of Terror Attacks: Evidence from 7/7 and 9/11. Working Paper, University College London.
- Hainmueller, J. & Hiscox, M. (2010). Attitudes toward Highly Skilled and Low-skilled Immigration: Evidence from a Survey Experiment. *American Political Science Review* 104(1), 61-84.
- Hainmueller, J. & Hiscox, M. (2007). Educated preferences: explaining attitudes toward immigration in Europe. *International Organization* 61(2), 399–442.

- Havering, A. (2013). Managing integration: German and British policy responses to the “threat from within” post-2001. *Journal of International Migration and Integration* 14(2), 345-362.
- Hetherington, M. & Suhay, E. (2011). Authoritarianism, threat, and Americans’ support for the War on Terror, *American Journal of Political Science* 55(3), 546-560.
- Huddy, L., Feldman, S., Taber, C. & Lahav, G. (2005). Threat, anxiety, and support of antiterrorism policies. *American Journal of Political Science* 57(3): 30-48.
- Indridason, I. (2008). Does terrorism influence domestic politics? Coalition formation and terrorist incidents. *Journal of Peace Research* 45(2), 241–259.
- Ira, G., Rivera-Batiz, F. & Yun, M-S. (2013). Economic Strain, Education and Attitudes towards Foreigners in the European Union. *Review of International Economics* 21, 177-190.
- Jolly, S. & Di Giusto, G. (2013). Xenophobia and immigrant contact: French public attitudes toward immigration. *The Social Science Journal* <http://dx.doi.org/10.1016/j.soscij.2013.09.01>.
- Kibris, A. (2011). Funerals and Elections: The effects of PKK terrorism on voting behavior in Turkey. *Journal of Conflict Resolution*, 55(2), 220-247.
- Kolenikov, S. & Angeles, G. (2004). The use of discrete data in PCA: Theory, simulations, and applications to socioeconomic indices. CPC/MEASURE Working paper WP-04-85, Carolina Population Center.
- Kolenikov, S. & Angeles, G. (2009). Socioeconomic status measurement with discrete proxy variables: Is principal component analysis a reliable answer? *Review of Income and Wealth* 55(1), 128–165.

- Legewie, J. (2013). Terrorist Events and Attitudes toward Immigrants: A Natural Experiment. *American Journal of Sociology* 118(5), 1199-1245.
- Leiken, R. S. (2004). Europe's Immigration Problem, and Ours. *Mediterranean Quarterly* 15(4), 203-218.
- Markaki, Y. & Longhi, S. (2013). What determines attitudes to immigration in European countries? An analysis at the regional level. *Migration Studies* 1(3), 311–337.
- Mayda, A. (2006). Who Is Against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants. *Review of Economics and Statistics* 88(3), 510–30.
- Meuleman, B., Davidov, E. & Billiet, J. (2009). Changing attitudes toward immigration in Europe, 2000-2007: A dynamic group conflict theory approach. *Social Science Research* 38(2), 352-365.
- Montalvo, J. (2011). Voting after the bombings: a natural experiment on the effect of terrorist attacks on democratic elections. *The Review of Economics and Statistics* 93, 1146-1154.
- Moser, C. & Felton, A. (2007). The construction of an asset index measuring asset accumulation in Ecuador. Chronic Poverty Research Center, Working Paper No. 87, Washington, USA.
- Mughan, A. & Paxton, P. (2006). Anti-Immigrant Sentiment, Policy Preferences and Populist Party Voting in Australia. *British Journal of Political Science* 36(2), 341-358.
- Nannestad, P. (2007). Immigration and welfare states: a survey of 15 years of research. *European Journal of Political Economy* 23, 512–532.

- O'Rourke, K.H. & Sinnott, R. (2006). The determinants of individual attitudes towards immigration. *European Journal of Political Economy* 22, 838–861.
- Penninx, R. (2006). Dutch Immigrant Policies before and after the van Gogh Murder. *Journal of International Migration and Integration* 7: 241–254.
- Rabby, F. & Rodgers, W. M. (2011). Post 9-11 U.S. Muslim Labor Market Outcomes. *Atlantic Economic Journal* 39(3), 273-289.
- Rose, A. & Blomberg, B. (2010). Total Economic Consequences of Terrorist Attacks: Insights from 9/11. *Peace Economics, Peace Science and Public Policy* 16(1).
- Ruhs, M. (2008). Economic research and labour immigration policy. *Oxford Review of Economic Policy* 24, 403–426.
- Rykkja, L., Laegreid, P. & Fimreite, A. (2011). Attitudes towards anti-terror measures: the role of trust, political orientation and civil liberties support. *Critical Studies on Terrorism* 4, 219-237.
- Sandler, T. (2010). Terrorism shocks: domestic versus transnational responses. *Studies in Conflict and Terrorism* 33, 893-910.
- Sandler, T. (2013). The analytical study of terrorism: taking stock. *Journal of Peace Research*, DOI: 10.1177/0022343313491277.
- Sandler, T., Arce, D. G. & Enders, E. (2011). An Evaluation of INTERPOL's Cooperative-based Counterterrorism Linkages. *Journal of Law and Economics* 54, 79-110.
- Sartori, F. (2012). EU member states granted citizenship to more than 800000 persons in 2010. Eurostat, Statistics in Focus, 45/2012.
- Sharvit, K., Bar-Tal, D., Raviv, A. & Gurevich, R. (2010). Ideological orientation and social context as moderators of the effect of terrorism: the case of the Israeli-Jewish public opinion regarding peace. *European Journal of Social Psychology* 40, 105-121.

- Springer, V., Lalasz, C.& Lykes, V.(2012). Social action response to terrorism: understanding xenophobic violence from a value-added perspective, *The Social Science Journal* 49(2), 175-182.
- Tesfaye T. & Mavisakalyan, A. (2013) Immigration and Political Instability. *KYKLOS* 66(3), 317–341.
- Turvey, C., Onyango, B., Cuite, C. & Hallman, W. (2010). Risk, fear, bird flu and terrorists: a study of risk perceptions and economics. *Journal of Socio-Economics* 39(1), 1-10.
- Wemlinger, E. (2013). The gender gap and torture: Opposition to torture among men and women in the USA. *The Social Science Journal* <http://dx.doi.org/10.1016/j.soscij.2013.06.002>.
- Woods, J. (2011). The 9/11 effect: Toward a social science of the terrorist threat, *The Social Science Journal* 48, 213–233.

Table 1. Variable Definitions

<i>Variables^a</i>	<i>Definitions</i>
<i>Dependent Variables</i>	
<i>Anti-immigrant sentiment</i>	Composite index of anti-immigrant related values, derived with P-PCA from the following six questions:
Allow many/few immigrants of same race/ethnic group as majority	1: allow many to come and live in the country - 4: allow none
Allow many/few immigrants of different race/ethnic group as majority	1: allow many to come and live in the country - 4: allow none
Allow many/few immigrants from poorer countries outside Europe	1: allow many to come and live in the country - 4: allow none
Immigration bad or good for country's economy	1: good for the economy - 11: bad for the economy
Country's cultural life undermined or enriched by immigrants	1: cultural life enriched - 11: cultural life undermined
Immigrants make country worse or better place to live	1: better place to live - 11: worse place to live
<i>Independent Variables</i>	
<i>Age</i>	Age in years (18-85 years)
<i>Age squared</i>	Age squared
<i>Males</i>	1: Male, 0: Female
<i>Household size</i>	Number of people living regularly as members of the household (1-10)
<i>Low level education</i>	1: ISCED levels 0-2 completed, the person has not completed upper secondary education, 0: Otherwise (omitted from regressions)
<i>Middle level education</i>	1: ISCED levels 3-4 completed, the person has completed upper secondary education or ppost-secondary non-tertiary education, 0: Otherwise
<i>High level education</i>	1: ISCED levels 5-6 completed, the person has completed tertiary education, 0: Otherwise
<i>Employed</i>	1: Respondent is employed during the past 7 days, 0: Otherwise
<i>Unemployed</i>	1: Respondent is unemployed during the past 7 days, 0: Otherwise (omitted from regressions)
<i>Retired</i>	1: Respondent is retired during the past 7 days, 0: Otherwise
<i>Out of Labour force</i>	1: Respondent is inactive during the past 7 days (unemployed but not looking for a job; in education; sick/disabled; housework/looking after children), 0: Otherwise
<i>Household Total Net Income^b</i>	Monthly Total Net Income of the household, after tax and compulsory deductions (in euros)
<i>Left Political Self- Placement</i>	1: Respondent scales himself on the left of the political self-placement scale, 0: Otherwise (omitted from regressions)
<i>Center Political Self- Placement</i>	1: Respondent scales himself on the center of the political self-placement scale, 0: Otherwise
<i>Right Political Self- Placement</i>	1: Respondent scales himself on the right of the political self-placement scale, 0: Otherwise
<i>Feeling about household's income</i>	1: Respondent is coping/ living comfortably on present household income, 0: Respondent is experiencing difficulties with present household income
<i>Social connections</i>	1: Respondent meets socially friends, relatives, work colleagues several times a month or more often, 0: Otherwise
<i>Victim of Burglary/Assault</i>	1: Respondent or household member has been a victim of burglary or assault during the past five years, 0: Otherwise
<i>Big city</i>	1: Respondent lives in big city/suburbs of big city, 0: Otherwise
<i>Small city</i>	1: Respondent lives in town or small city, 0: Otherwise
<i>Countryside</i>	1: Respondent lives in country village/countryside, 0: Otherwise (omitted from regressions)
<i>Religiosity</i>	1: Respondent is above sample average religious, 0: Otherwise
<i>Overall Terrorism Index^c</i>	The number of fatalities + 0.57 * number of injuries for each terrorist event
<i>Terrorism Index European Victims^c</i>	The number of fatalities + 0.57 * number of injuries for each terrorist event (only European victims)

^aOnly citizens of each country and citizens not belonging in ethnic minority groups are included in the sample.

^bIncome information is provided in intervals, therefore the mean value of each interval is assigned to each respondent. Income is calculated in euros.

^cData on terrorism attacks and related fatalities are drawn from Enders and Sandler (2012). Terrorism indices are divided by 1,000 to facilitate the presentation of the results.

Table 2. Terrorist Attacks Used in the Study

A/A	Terrorist Incidence	Attack Type & Target	City, Country	Perpetrator	Total victims		European Victims	
					Fatalities	Injuries	Fatalities	Injuries
1	23/10/1983	Explosions on US and French Peacekeeping forces	Lebanon, Beirut	Hezbollah	299	75	58 (French)	0
2	23/06/1985	Airplane bombing	Toronto, Canada	Sikh extremists	329	0	27 (British)	0
3	21/12/1988	Airplane bombing	London, UK	Libyan	270	0	64 (European)	0
4	19/09/1989	Airplane bombing	Bilma, Nigeria	Hezbollah (suspected)	171g	0	69 (European)	0
5	07/08/1998	Explosions in US Embassies	Nairobi in Kenya & Dar Es Salaam in Tanzania	Al-Qaeda	235	≈ 4085	0	0
6	11/09/2001	Hijacking / Airplane Bombings / Buildings Attack	New York City, Arlington, Shanksville, USA	Al-Qaeda	2871	≈ 6000	120	Unknown
7	23-26/10/2002	Hostage Taking/ Attack in a Theatre	Moscow, Russia	Islamic International Peacekeeping Brigade, Riyadus-Salikhin Reconnaissance and Sabotage Battalion of Chechen Martyrs, Special Purpose Islamic Regiment	178	≈ 700	≈ 20	Unknown
8	a) 11/03/2004 b) 01-03/09/2004	a) Bombings on Commuter Trains b) Hostage Taking / School seize	a) Madrid, Spain b) Beslan, Russia	a) Abu Hafs al-Masri Brigades (suspected) b) Riyadus-Salikhin Reconnaissance and Sabotage Battalion of Chechen Martyrs	a) 191 b) 385	a) ≈ 1,800 b) 727	a) 191 b) 0	a) ≈ 1,800 b) 0
9	07/07/2005	Bombings on Commuter Trains	London, UK	Al-Qaeda	56	784	56	784
10	26/11/2008	Bombing attacks	Mumbai, India	Deccan Mujahideen, Lashkar-e-Taiba	183	≈ 600	9	16

Source: Enders and Sandler (2012).

Data on the Nationalities of the victims are drawn from the Global Terrorism Database and various internet sources (international press, victims memorial, Wikipedia, etc.). For the terrorist hits in Spain (2004) and London (2005) we could not find the nationality of the victims, however in the case of Spain we have information only on victims of Spanish nationality (142 victims). Since both terrorist hits occurred in EU countries and the number of non-European victims would probably be low, we include all victims in the terrorism incidence dummy.

Table 3. Descriptive Statistics

<i>Countries</i>	<i>Scandinavian Welfare Regime (DK, FI, SE)</i>		<i>Liberal Welfare Regime (UK)</i>		<i>Continental Welfare Regime (BE, DE, NL)</i>		<i>Southern Welfare Regime (ES)</i>		<i>Eastern Welfare Regime (PL, SI)</i>	
	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>
<i>Anti-immigrant sentiment</i>	-0.428	1.785	0.748	1.947	0.183	1.973	0.202	1.978	-0.113	1.792
<i>Age</i>	48.416	16.699	49.803	16.918	49.017	16.332	46.496	16.978	44.990	16.886
<i>Males</i>	0.513	0.499	0.479	0.499	0.501	0.500	0.506	0.500	0.503	0.500
<i>Household size</i>	2.459	1.249	2.281	1.232	2.519	1.256	3.025	1.262	3.372	1.481
<i>Middle level education</i>	0.417	0.493	0.158	0.365	0.473	0.499	0.244	0.429	0.599	0.490
<i>High level education</i>	0.334	0.472	0.362	0.481	0.292	0.455	0.217	0.412	0.197	0.398
<i>Employed</i>	0.614	0.487	0.550	0.498	0.536	0.499	0.556	0.497	0.511	0.499
<i>Unemployed</i>	0.027	0.163	0.030	0.171	0.035	0.184	0.045	0.208	0.044	0.204
<i>Retired</i>	0.229	0.420	0.248	0.432	0.220	0.415	0.156	0.363	0.247	0.431
<i>Out of Labour force</i>	0.128	0.334	0.171	0.376	0.208	0.406	0.243	0.429	0.196	0.397
<i>Household Total Net Income</i>	2871.090	1552.748	2471.211	1649.865	2499.505	1430.008	1811.743	1133.986	975.516	801.020
<i>Center Political Self-Placement</i>	0.365	0.482	0.543	0.498	0.438	0.496	0.393	0.488	0.458	0.498
<i>Right Political Self-Placement</i>	0.342	0.474	0.185	0.389	0.197	0.398	0.150	0.357	0.253	0.435
<i>Feeling about household's income</i>	0.907	0.291	0.829	0.377	0.848	0.359	0.810	0.392	0.747	0.435
<i>Social connections</i>	0.895	0.307	0.830	0.376	0.862	0.345	0.888	0.315	0.699	0.459
<i>Victim of Burglary/Assault</i>	0.275	0.447	0.238	0.426	0.162	0.368	0.248	0.432	0.171	0.377
<i>Big city</i>	0.330	0.470	0.290	0.454	0.287	0.452	0.268	0.443	0.291	0.454
<i>Small city</i>	0.331	0.471	0.465	0.499	0.300	0.458	0.306	0.461	0.288	0.453
<i>Religiosity</i>	0.533	0.499	0.464	0.499	0.540	0.498	0.534	0.499	0.728	0.445
<i>Overall Terrorism Index</i>	2680.271	3664.439	2606.001	3678.486	2777.493	3719.413	2126.078	3298.729	2894.365	3792.509
<i>Terrorism Index European Victims</i>	463.862	480.100	410.786	451.685	461.316	471.211	387.931	467.918	470.127	470.577
<i>Observations</i>	20190		6484		20947		4424		8445	

Table 4. Anti-immigrant Sentiment Determinants by Welfare Regime, OLS regressions (2002-2010)

<i>Countries</i>	<i>Scandinavian Welfare Regime (DK, FI, SE)</i>		<i>Liberal Welfare Regime (UK)</i>		<i>Continental Welfare Regime (BE, DE, NL)</i>		<i>Southern Welfare Regime (ES)</i>		<i>Eastern Welfare Regime (PL, SI)</i>	
<i>Ind. Variables</i>										
<i>Age</i>	0.001	0.001	0.026 ***	0.026 ***	0.001	0.001	-0.018 *	-0.018 *	0.003	0.003
<i>Age squared</i>	0.0001	0.0001	-0.0002	-0.0002	0.00001	0.00001	0.0002 *	0.0002 *	0.0001	0.0001
<i>Males</i>	0.151 ***	0.151 ***	-0.172 ***	-0.172 ***	-0.113 ***	-0.113 ***	-0.234 ***	-0.234 ***	-0.018	-0.018
<i>Household size</i>	0.045 ***	0.045 ***	0.053 ***	0.053 ***	0.009	0.009	0.025	0.025	0.050 ***	0.050 ***
<i>Middle level education</i>	-0.402 ***	-0.402 ***	-0.535 ***	-0.535 ***	-0.387 ***	-0.387 ***	-0.683 ***	-0.683 ***	-0.385 ***	-0.385 ***
<i>High level education</i>	-1.065 ***	-1.065 ***	-1.080 ***	-1.080 ***	-1.109 ***	-1.109 ***	-1.170 ***	-1.170 ***	-0.914 ***	-0.914 ***
<i>Employed</i>	-0.178 ***	-0.178 ***	0.204	0.204	-0.185 ***	-0.185 ***	-0.193	-0.193	-0.166 *	-0.166 *
<i>Retired</i>	-0.092	-0.092	0.164	0.164	-0.056	-0.056	-0.173	-0.173	-0.060	-0.060
<i>Out of Labour force</i>	-0.401 ***	-0.401 ***	0.094	0.094	-0.221 ***	-0.221 ***	-0.302 **	-0.302 **	-0.256 ***	-0.256 ***
<i>Household Total Net Income</i>	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0002 ***	-0.0002 ***
<i>Center Political Self-Placement</i>	0.524 ***	0.524 ***	0.587 ***	0.587 ***	0.574 ***	0.574 ***	0.532 ***	0.532 ***	0.238 ***	0.238 ***
<i>Right Political Self-Placement</i>	0.651 ***	0.651 ***	0.771 ***	0.771 ***	0.913 ***	0.913 ***	1.071 ***	1.071 ***	0.258 ***	0.258 ***
<i>Feeling about household's income</i>	-0.177 ***	-0.177 ***	-0.266 ***	-0.266 ***	-0.420 ***	-0.420 ***	-0.093	-0.093	-0.271 ***	-0.271 ***
<i>Social connections</i>	-0.186 ***	-0.186 ***	-0.257 ***	-0.257 ***	-0.397 ***	-0.397 ***	-0.135	-0.135	-0.140 ***	-0.140 ***
<i>Victim of Burglary/Assault</i>	0.061 ***	0.061 ***	0.125 **	0.125 **	-0.001	-0.001	-0.079	-0.079	-0.057	-0.057
<i>Big city</i>	-0.334 ***	-0.334 ***	-0.034	-0.034	-0.210 ***	-0.210 ***	-0.211 ***	-0.211 ***	-0.332 ***	-0.332 ***
<i>Small city</i>	-0.072 ***	-0.072 ***	0.035	0.035	-0.073 ***	-0.073 ***	-0.091	-0.091	-0.256 ***	-0.256 ***
<i>Religiosity</i>	-0.164 ***	-0.164 ***	-0.319 ***	-0.319 ***	-0.247 ***	-0.247 ***	0.040	0.040	-0.030	-0.030
<i>Overall Terrorism Index</i>	0.016 ***	-	0.019 **	-	0.026 ***	-	-0.042 ***	-	0.045 ***	-
<i>Terrorism Index European Victims</i>	-	0.181 ***	-	-0.204 ***	-	0.363 ***	-	-0.278 ***	-	0.216 ***
<i>Constant</i>	0.508 ***	0.508 ***	0.343 ***	0.645 ***	1.283 ***	1.283 ***	1.521 ***	1.521 ***	-0.125	-0.125
<i>Country dummies</i>	Yes		No		Yes		No		Yes	
<i>Year dummies</i>	Yes		Yes		Yes		Yes		Yes	
<i>R-squared</i>	0.23		0.18		0.17		0.16		0.18	
<i>F-test</i>	270.64 (0.000)		53.17 (0.000)		188.46 (0.000)		40.15 (0.000)		79.74 (0.000)	
<i>Observations</i>	20190		6484		20947		4424		8445	

^a Indicates *** significance at 1%, ** significance at 5%, * significance at 10%.

^b All regressions are estimated with heteroskedasticity-robust standard errors.

^c Terrorism indices are divided by 1,000 to facilitate the presentation of the results.

Table 5. Anti-immigrant Sentiment Determinants by Welfare Regime, Males, OLS regressions (2002-2010)

<i>Countries</i> <i>Ind.Variables</i>	<i>Scandinavian Welfare Regime</i> <i>(DK, FI, SE)</i>		<i>Liberal Welfare Regime</i> <i>(UK)</i>		<i>Continental Welfare Regime</i> <i>(BE, DE, NL)</i>		<i>Southern Welfare Regime</i> <i>(ES)</i>		<i>Eastern Welfare Regime</i> <i>(PL, SI)</i>	
<i>Age</i>	-0.012 **	-0.012 **	0.004	0.004	-0.009	-0.009	-0.030 *	-0.030 *	-0.001	-0.001
<i>Age squared</i>	0.0002 ***	0.0002 ***	0.0001	0.0001	0.001 *	0.001 *	0.0003 **	0.0003 **	0.0001	0.0001
<i>Household size</i>	0.027 *	0.027 *	0.036	0.036	0.009	0.009	0.006	0.006	0.027	0.027
<i>Middle level education</i>	-0.393 ***	-0.393 ***	-0.558 ***	-0.558 ***	-0.335 ***	-0.335 ***	-0.545 ***	-0.545 ***	-0.477 ***	-0.477 ***
<i>High level education</i>	-1.091 ***	-1.091 ***	-1.022 ***	-1.022 ***	-1.079 ***	-1.079 ***	-1.055 ***	-1.055 ***	-0.992 ***	-0.992 ***
<i>Employed</i>	-0.201 **	-0.201 **	0.232	0.232	-0.117	-0.117	-0.259	-0.259	-0.133	-0.133
<i>Retired</i>	-0.137	-0.137	0.045	0.045	0.043	0.043	-0.155	-0.155	0.051	0.051
<i>Out of Labour force</i>	-0.576 ***	-0.576 ***	-0.049	-0.049	-0.171	-0.171	-0.500 **	-0.500 **	-0.220	-0.220
<i>Household Total Net Income</i>	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0002 ***	-0.0002 ***
<i>Center Political Self-Placement</i>	0.494 ***	0.494 ***	0.640 ***	0.640 ***	0.599 ***	0.599 ***	0.552 ***	0.552 ***	0.261 ***	0.261 ***
<i>Right Political Self-Placement</i>	0.606 ***	0.606 ***	0.821 ***	0.821 ***	1.059 ***	1.059 ***	1.081 ***	1.081 ***	0.214 ***	0.214 ***
<i>Feeling about household's income</i>	-0.167 ***	-0.167 ***	-0.313 ***	-0.313 ***	-0.454 ***	-0.454 ***	-0.084	-0.084	-0.231 ***	-0.231 ***
<i>Social connections</i>	-0.151 ***	-0.151 ***	-0.189 **	-0.189 **	-0.357 ***	-0.357 ***	-0.237 **	-0.237 **	-0.155 ***	-0.155 ***
<i>Victim of Burglary/Assault</i>	0.063 *	0.063 *	0.206 ***	0.206 ***	0.047	0.047	-0.145	-0.145	-0.134 **	-0.134 **
<i>Big city</i>	-0.356 ***	-0.356 ***	0.130	0.130	-0.231 ***	-0.231 ***	-0.286 ***	-0.286 ***	-0.375 ***	-0.375 ***
<i>Small city</i>	-0.076 **	-0.076 **	0.137 *	0.137 *	-0.111 ***	-0.111 ***	-0.074	-0.074	-0.251 ***	-0.251 ***
<i>Religiosity</i>	-0.199 ***	-0.199 ***	-0.360 ***	-0.360 ***	-0.250 ***	-0.250 ***	-0.148 **	-0.148 **	-0.010	-0.010
<i>Overall Terrorism Index</i>	0.016 ***	-	0.013	-	0.027 ***	-	-0.055 ***	-	0.047 ***	-
<i>Terrorism IndexEuropean Victims</i>	-	0.145 ***	-	-0.146 *	-	0.378 ***	-	-0.394 ***	-	0.184 ***
<i>Constant</i>	1.133 ***	1.133 ***	0.540	0.756 **	1.184 ***	1.184 ***	1.918 ***	1.918 ***	0.067	0.067
<i>Country dummies</i>		Yes		No		Yes		No		Yes
<i>Year dummies</i>		Yes		Yes		Yes		Yes		Yes
<i>R-squared</i>		0.22		0.14		0.17		0.17		0.18
<i>F-test</i>		132.34 (0.000)		25.60 (0.000)		188.46 (0.000)		23.16 (0.000)		42.02 (0.000)
<i>Observations</i>		10351		3108		10494		2240		4244

^aIndicates *** significance at 1%, ** significance at 5%, * significance at 10%.

^bAll regressions are estimated with heteroskedasticity-robust standard errors.

^cTerrorism indices are divided by 1,000 to facilitate the presentation of the results.

Table 6. Anti-immigrant Sentiment Determinants by Welfare Regime, Females, OLS regressions (2002-2010)

<i>Countries</i> <i>Ind.Variables</i>	<i>Scandinavian Welfare Regime</i> <i>(DK, FI, SE)</i>		<i>Liberal Welfare Regime</i> <i>(UK)</i>		<i>Continental Welfare Regime</i> <i>(BE, DE, NL)</i>		<i>Southern Welfare Regime</i> <i>(ES)</i>		<i>Eastern Welfare Regime</i> <i>(PL, SI)</i>	
<i>Age</i>	0.013 **	0.001	0.043***	0.043***	0.010 *	0.010 *	-0.014	-0.014	0.006	0.006
<i>Age squared</i>	0.0000	0.0001	-0.0003 ***	-0.0003 ***	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001
<i>Household size</i>	0.067 ***	0.045 ***	0.070 **	0.070 **	0.004	0.004	0.038	0.038	0.071 ***	0.071 ***
<i>Middle level education</i>	-0.408 ***	-0.402 ***	-0.506 ***	-0.506 ***	-0.442 ***	-0.442 ***	-0.824 ***	-0.824 ***	-0.299 ***	-0.299 ***
<i>High level education</i>	-1.028 ***	-1.065 ***	-1.125 ***	-1.125 ***	-1.162 ***	-1.162 ***	-1.274 ***	-1.274 ***	-0.844 ***	-0.844 ***
<i>Employed</i>	-0.121	-0.178 ***	0.234	0.234	-0.230 **	-0.230 **	-0.119	-0.119	-0.220 *	-0.220 *
<i>Retired</i>	-0.021	-0.092	0.285	0.285	-0.135	-0.135	-0.384	-0.384	-0.208	-0.208
<i>Out of Labour force</i>	-0.229 **	-0.401 ***	0.197	0.197	-0.260	-0.260	-0.249	-0.249	-0.322 ***	-0.322 ***
<i>Household Total Net Income</i>	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001	-0.0001	-0.0002 ***	-0.0002 ***
<i>Center Political Self-Placement</i>	0.557 ***	0.524 ***	0.531 ***	0.531 ***	0.548 ***	0.548 ***	0.514 ***	0.514 ***	0.222 ***	0.222 ***
<i>Right Political Self-Placement</i>	0.697 ***	0.651 ***	0.707 ***	0.707 ***	0.732 ***	0.732 ***	1.048 ***	1.048 ***	0.314 ***	0.314 ***
<i>Feeling about household's income</i>	-0.208 ***	-0.177 ***	-0.239 ***	-0.239 ***	-0.387 ***	-0.387 ***	-0.123	-0.123	-0.314 ***	-0.314 ***
<i>Social connections</i>	-0.233 ***	-0.186 ***	-0.338 ***	-0.338 ***	-0.444 ***	-0.444 ***	-0.046	-0.046	-0.121 **	-0.121 **
<i>Victim of Burglary/Assault</i>	0.056	0.061 ***	0.045	0.045	-0.051	-0.051	-0.0004	-0.0004	0.018	0.018
<i>Big city</i>	-0.299 ***	-0.334 ***	-0.196 **	-0.196 **	-0.175 ***	-0.175 ***	-0.125	-0.125	-0.288 ***	-0.288 ***
<i>Small city</i>	-0.055	-0.072 ***	-0.076	-0.076	-0.034	-0.034	-0.098	-0.098	-0.258 ***	-0.258 ***
<i>Religiosity</i>	-0.126 ***	-0.164 ***	-0.281 ***	-0.281 ***	-0.251 ***	-0.251 ***	0.264 ***	0.264 ***	-0.047	-0.047
<i>Overall Terrorism Index</i>	0.018 ***	-	0.022 **	-	0.025 ***	-	-0.032 ***	-	0.043 ***	-
<i>Terrorism IndexEuropean Victims</i>	-	0.223 ***	-	-0.256 ***	-	0.356 ***	-	-0.164 ***	-	0.250 ***
<i>Constant</i>	-0.0002	1.133 ***	0.038	0.415	1.293 ***	1.293 ***	1.076 ***	1.076 ***	-0.317	-0.317
<i>Country dummies</i>	Yes		No		Yes		No		Yes	
<i>Year dummies</i>	Yes		Yes		Yes		Yes		Yes	
<i>R-squared</i>	0.24		0.16		0.18		0.15		0.18	
<i>F-test</i>	147.85 (0.000)		31.93 (0.000)		100.28 (0.000)		19.90 (0.000)		42.63 (0.000)	
<i>Observations</i>	9839		3376		10453		4424		4201	

^aIndicates *** significance at 1%, ** significance at 5%, * significance at 10%.

^bAll regressions are estimated with heteroskedasticity-robust standard errors.

^cTerrorism indices are divided by 1,000 to facilitate the presentation of the results.

Table 7. Anti-immigrant Sentiment Determinants Total Sample & by Gender, OLS regressions (2002-2010)

<i>Countries</i>						
<i>Ind.Variables</i>	<i>Total Sample</i>		<i>Males</i>		<i>Females</i>	
<i>Age</i>	0.006 **	0.006 **	-0.006	-0.006	0.015 ***	0.015 ***
<i>Age squared</i>	0.00002	0.00002	0.0001 ***	0.0001 ***	-0.0001	-0.0001
<i>Males</i>	-0.030 ***	-0.030 ***	-	-	-	-
<i>Household size</i>	0.035 ***	0.035 ***	0.023 ***	0.023 ***	0.048 ***	0.048 ***
<i>Middle level education</i>	-0.429 ***	-0.429 ***	-0.405 ***	-0.405 ***	-0.455 ***	-0.455 ***
<i>High level education</i>	-1.101 ***	-1.101 ***	-1.091 ***	-1.091 ***	-1.093 ***	-1.093 ***
<i>Employed</i>	-0.178 ***	-0.178 ***	-0.152 ***	-0.152 ***	-0.188 ***	-0.188 ***
<i>Retired</i>	-0.097 **	-0.097 **	-0.044	-0.044	-0.123 *	-0.123 *
<i>Out of Labour force</i>	-0.276 ***	-0.276 ***	-0.349 ***	-0.349 ***	-0.265 ***	-0.265 ***
<i>Household Total Net Income</i>	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***
<i>Center Political Self-Placement</i>	0.518 ***	0.518 ***	0.522 ***	0.522 ***	0.515 ***	0.515 ***
<i>Right Political Self-Placement</i>	0.724 ***	0.724 ***	0.749 ***	0.749 ***	0.690 ***	0.690 ***
<i>Feeling about household's income</i>	-0.309 ***	-0.309 ***	-0.322 ***	-0.322 ***	-0.307 ***	-0.307 ***
<i>Social connections</i>	-0.262 ***	-0.262 ***	-0.240 ***	-0.240 ***	-0.281 ***	-0.281 ***
<i>Victim of Burglary/Assault</i>	0.026	0.026	0.035	0.035	0.013	0.013
<i>Big city</i>	-0.257 ***	-0.257 ***	-0.277 ***	-0.277 ***	-0.231 ***	-0.231 ***
<i>Small city</i>	-0.087 ***	-0.087 ***	-0.096 ***	-0.096 ***	-0.074 ***	-0.074 ***
<i>Religiosity</i>	-0.188 ***	-0.188 ***	-0.213 ***	-0.213 ***	-0.160 ***	-0.160 ***
<i>Overall Terrorism Index</i>	0.016 ***	-	0.016 ***	-	0.015 ***	-
<i>Terrorism Index European Victims</i>	-	0.169 ***	-	0.152 ***	-	0.189 ***
<i>Constant</i>	1.351 ***	1.351 ***	1.590 ***	1.590 ***	1.113 ***	1.113 ***
<i>Country dummies</i>		Yes		Yes		Yes
<i>Year dummies</i>		Yes		Yes		Yes
<i>R-squared</i>		0.21		0.19		0.23
<i>F-test</i>		532.26 (0.000)		248.08 (0.000)		314.01 (0.000)
<i>Observations</i>		60490		30437		30053

^aIndicates *** significance at 1%, ** significance at 5%, * significance at 10%.

^bAll regressions are estimated with heteroskedasticity-robust standard errors.

^cTerrorism indices are divided by 1,000 to facilitate the presentation of the results.