

Thank You, Infidels! Social Welfare and Islamic State Recruitment

Moamen Gouda¹

Hankuk University of Foreign Studies

Marcus Marktanner²

Kennesaw State University

This version: 12 February 2018

Abstract

This paper is motivated by reports about Islamic State fighters having received welfare payments from their home countries. This phenomenon is particularly relevant for OECD countries. Using data of foreign fighters and social safety spending, we explore whether jihadism is an inferior or a normal good. Focusing largely on OECD countries and controlling for multicollinearity, simultaneity, and other explanatory factors of expat jihadism, we find strong empirical evidence that more social welfare spending leads to a higher number of foreign fighters. Thus, expat jihadism is a normal, not an inferior good. Our conclusions are policy relevant in the sense that they add to the literature of perverse effects of social welfare spending: Economic hardship is barely a source of radicalization and more generous social safety nets fail to convert radicalization inclined individuals into moderates.

Keywords: Conflict, Empirical Conflict Research, Terrorism Financing, Islamic State, Terrorism

JEL Classification: D74, F51, F52, J22, N45

¹ Graduate School of International and Area Studies, Hankuk University of Foreign Studies. Seoul, South Korea. Email: moamengouda@yahoo.com. Phone: +82(0)1099752712

² Department of Economics, Finance, and Quantitative Analysis, Coles College of Business and School of Conflict Management, Peacebuilding, and Development, College of Humanities and Social Sciences, Kennesaw State University, Kennesaw, GA, USA. Email: mmarktanner@kennesaw.edu.

1. Introduction

The recent rise in Islamic State (IS) terrorism in many parts of the world is increasingly linked to social safety spending. In a recent report published by the European Parliament, the authors note that “certain (European) States have reported cases where foreign terrorists continued to receive welfare payments while they are in IS-controlled areas” (European Parliament, 2017, p. 17).

Specific examples include the following: According to the Wall Street Journal, authorities have concluded that at least five of the alleged plotters in the 2015 Paris terror attack, as well as the 2016 Brussels attack, partly financed themselves with payments from Belgium's social welfare system. In total they received more than EUR 50,000 (Maremont & Pop, 2016). Anis Amri, the terrorist who ploughed a truck into a crowded Berlin Christmas market in December 2016, duped German authorities into giving him welfare benefits using 14 different identities (BBC, 2017). In 2013, the Boston Herald reported that the family of Boston marathon bombers Tamerlan and Dzhokhar Tsarnaev received over \$100,000 in public benefits from 2002 to 2012 (Cassidy, 2013). Recently, it was revealed that Khalid Masood, the radical terrorist responsible for London's Westminster terror attack in March 2017, was receiving government benefits before engaging in his violence (Read, 2017).

This phenomenon is not recent. Zacarias Moussaoui, for instance, the French North African charged with conspiracy in connection with the 9/11 attack and who is currently serving six life sentences without parole in the United States, became an Islamic radical living in London while drawing welfare benefits (Brabant, 2001). Interestingly, Abu Qatada, the cleric who

taught Moussaoui and is accused of having links to al-Qaida agents in six countries, avoided extradition to Jordan on terrorism charges by settling in England, where "[l]ike many other London-based Arab dissidents, [he] has received regular welfare checks from the British government and government subsidized housing," according to the Washington Post (Dobbs, 2001). Abu Qatada's welfare payments were stopped when it was discovered that he administered a secret bank account containing approximately \$270,000.

According to an article in USA Today (Hjelmgaard, 2017), many European governments have accidentally paid taxpayer-funded welfare benefits, including unemployment funds and housing allowances, to Islamic State recruits who have used the money to wage war in Iraq and Syria. The New York Times reported that Danish officials announced that since 2016, municipal and state authorities had been trying to collect about \$95,000 in welfare benefits paid to 29 citizens who had gone to Syria to fight for the Islamic State (Bilefsky, 2017). Troels Lund Poulsen, Denmark's labor minister, stated that "It is a huge scandal that we disburse money from the welfare fund in Denmark for people who go to Syria" (Hjelmgaard, 2017).

In March 2017, the Swedish National Defense University published a report on financing terrorism. The report investigated hundreds of Swedes who joined Islamic extremist groups such as Islamic State between 2013 and 2016. The report found that the majority of those Swedish jihadists were still receiving living allowances, child and parental benefits and maintenance support while abroad, enabled by other people handling their mail to make it look like they were still at home (Russia Today, 2017).

Yet, there is also a considerable amount of literature that argues that welfare benefits have a mitigating effect on transnational terrorism (Burgoon, 2006), as well as homegrown

terrorism (Krieger & Meierrieks, 2010). The debate about the relationship between social safety spending and terrorism is therefore still far from being concluded, and to the best of our knowledge no study has yet been conducted that specifically focuses on the relationship between social safety spending and foreign fighters.

We largely focus on the foreign fighter problems in OECD countries for three reasons. First, most concerns regarding possible perverse effects of social welfare spending on foreign fighters come from OECD countries. OECD countries are therefore the most relevant unit of analysis. Second, OECD countries have, on average, the highest aggregate social welfare spending as a percentage of GDP. The study is accordingly of highest policy relevance to OECD countries. Third, many OECD countries are non-Muslim majority countries with a sizable Muslim population that often struggles with the assimilation and integration into their host countries as witnessed by, for example, higher unemployment shares among the Muslim population. Thus, the dynamics underlying social welfare spending and foreign fighters can be assumed to be quite robust. In sum, OECD countries' economic and social characteristics suggest unique motivational dynamics behind potential terrorists' decision to become foreign fighters.

The remainder of this paper is organized as follows: Section two reviews the relevant literature; we present our data and methodology in Section three; a discussion of our empirical findings follows in Section four; and we conclude with a summary of our main results and outlook in Section five.

2. Literature Review

No empirical study has yet been conducted on the link between social welfare and individuals choosing to fight with IS in Syria and Iraq. Considerable literature exists on the relationship between welfare payments and terrorism, whether transnational or homegrown. Although Berman (2000) focuses on Israeli Ultra-orthodox Jews and Chen (2003) investigates Islamic insurgency in Indonesia, both claim that weak welfare policies in both settings strengthen religious groups, instigating fundamentalist extremism. Although Berman (2000) focuses on Israeli Ultra-orthodox Jews and Chen (2003) investigates Islamic insurgency in Indonesia, both claim that weak welfare policies in both settings strengthen religious groups, instigating fundamentalist extremism. Vargas (2011) argues that weak welfare policies and the manifestation of grievances of the poor generate the incentive of taking over political power violently.

In his seminal paper, Burgoon (2006) finds evidence of a negative relationship between the extensiveness of the welfare state and the incidence of terrorism. The author presents five mechanisms through which social welfare policies may have an impact on terrorism. First, social policies can be expected to affect terrorism by influencing economic inequality. In other words, welfare policies are supposed to decrease both income inequality, as well as economic inequality that coincide with ethnic or religious divisions in a society, thus reducing terrorism. Second, social welfare policies may lead to less poverty and higher development, which in turn mitigates the danger of terrorism. Third, social welfare policy also decreases economic insecurity, leading to less terrorism. Fourth, welfare policies reduce religious-political extremism (also through lower poverty and economic security). Although

Burgoon does not control for per capita income in his model, he concludes by stating that “social welfare [policies] ought to reduce terrorism by reducing poverty, horizontal and income inequality, economic insecurity, and religious extremism” (Burgoon, 2006, p. 197).

While all the aforementioned mechanisms are postulated to have a negative effect on terrorism, Burgoon (2006), lastly, hypothesizes that social welfare policies may have a positive effect on terrorism. This is achieved through increasing the effect on the ‘capacity for terror,’ as potential terrorists may have more time and money to organize terrorist attacks. It should be noted, however, that after examining Burgoon’s (2006) econometric method and usage of variables, Crenshaw et al., (2007, pp. 13-14) replicated the study and find that Burgoon’s results are overstated. Most importantly, the adjusted model makes social welfare policy only significant for leftist terrorism, whereas religious identity terrorism is found to be not influenced by the welfare state (Crenshaw, Robison, & Jenkins, 2007, p. 13)

Peddicord (2008) examines the effect of structural policies on the incidents of terrorist attacks in 150 countries for the period 1975-1995. The author finds that social welfare spending is negatively associated with the count of terrorist incidents. In fact, the results show that a 1% increase in social and health spending, as a share of GDP, is associated with a 0.14% decline in the count of terrorist attacks, all else being equal. Peddicord concludes by arguing that “the evidence suggests governments that are perceived as inclusive and equitable and demonstrate this commitment through social welfare spending suffer from fewer attacks” (Peddicord, 2008, p. 34).

Krieger and Meierrieks (2010) investigate the effect of welfare policies (indicated by social spending and welfare regime variables) on domestic terrorism in Western Europe for the 1980-2003 period. The results show that terrorism decreases as the total welfare spending increases. More specifically, welfare spending on health, labor and unemployment separately decreases the probability of domestic terrorism. But, welfare spending on housing and old age has no relationship with terrorism.

Using the number of terror assaults during 1971 to 2005 in 123 countries, Freytag et al., (2011) investigate social and economic conditions in countries witnessing terrorism, and hypothesize that minimal opportunity costs of terror, e.g., as approximated by slow growth and bad institutions, raise the likelihood of terror. They find government spending to be significantly and negatively related to terrorist activity in Europe and the OECD. However, in the Islamic region of the world, government spending is irrelevant to the probability of terrorist attacks (Freytag, Krüger, & Meierrieks, 2011, p. 17).

Using pooled cross-section time-series estimations, Malan (2012) examines the relationship between social welfare policy and the incidence of terrorism in the 18 most-developed countries for the 1971-2002 period. Results show that there is indeed a modest, albeit significant, negative effect of the welfare state on terrorism. Furthermore, two transmission mechanisms through which this effect may work are examined: inequality and poverty. While inequality does seem to have a significant effect on terrorism, the author finds no evidence that poverty affects terrorism.

In summary, the existing literature on the relationship between social welfare spending and terrorist activities is not conclusive. According to Gassebner and Luechinger (2011),

although the majority of relevant literature finds a significant negative relationship between welfare spending and terrorist attacks, considerable literature finds no evidence for such a controversial relationship.

In economic terms, one way to explain these different findings may simply be the fact that groups of terrorists in dissimilar settings may have different utility functions in terms of the relationship between social safety spending and commitment to terrorist activity. This is illustrated in Figure 1. Both panels of Figure 1 assume that a potentially radicalizing individual has a general utility (U) function of

$$U = F(J, C) \tag{1}$$

where

J = Jihadist activity (on a spectrum from light jihadism like reading about jihad on the internet to strong jihadism like becoming a foreign fighter)

C = Consumption of some basic commodity (like food or shelter).

This initial situation is given in both panels by point “a,” which is the equilibrium ante social safety spending (“as”). The difference between panel A and panel B is that panel A assumes a Leontief utility function of

$$\min U(U_1, U_2) = \left[\underbrace{\alpha(J + C)}_{U_1}, \underbrace{C + \beta}_{U_2} \right] \text{ where } \beta > \alpha > 1 \tag{2}$$

and panel B a Stone-Geary Utility function of

$$U = (J - \bar{J})^\alpha \times (C - \bar{C})^{1-\alpha} \tag{3}$$

where

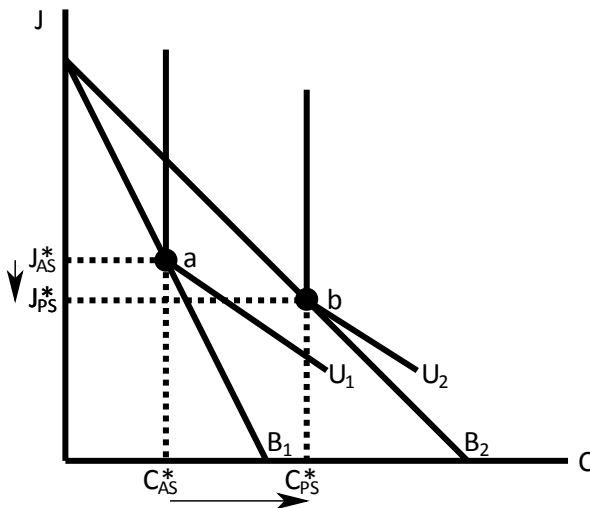
\bar{J} = Some predetermined minimum level of jihadism that the individual needs to meet

\bar{C} = Some predetermined minimum level of consumption that the individual needs to meet

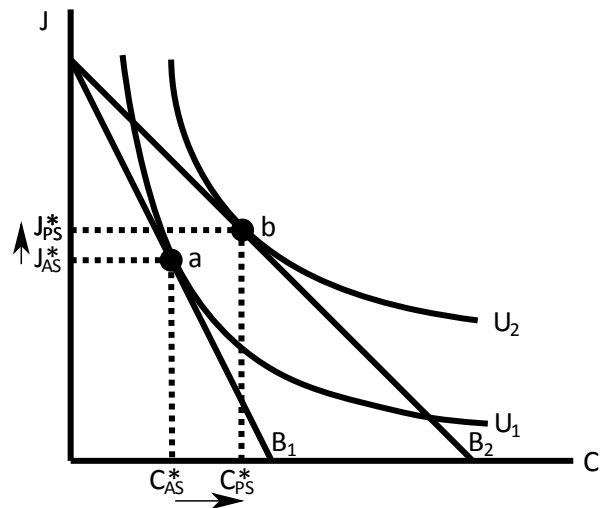
Perverse effects of social safety spending can result if government mistakenly believes that jihadism is an inferior good when in fact it is a normal good. Subsidizing the consumption good (swiveling the budget constraint from B_1 to B_2) would then not draw the potential jihadi away from radicalization (“a” to “b” in panel A) but subsidize jihadism (“a” to “b” in panel B) in a post social safety spending (“ps”) equilibrium.

Figure 1: Jihadism – Inferior or Normal?

Panel A: Jihadism as an Inferior Good



Panel B: Jihadism as a Normal Good



In this paper, we focus especially on IS foreign fighters. We argue that unemployment may be a key push factor for young Muslims to be radicalized and express allegiance to IS (ASDA’A Burson-Marsteller, 2016; Bhatia & Ghanem, 2017; Devarajan, et al., 2016; Gouda & Marktanner, 2018). Unemployment in many OECD countries is structural as a result of high minimum wages, or lack of assimilation and integration among minority groups. In the case

of unemployment among citizens with a migration background or sympathizers with the jihadist cause, the combination of unemployment, lack of socioeconomic integration, little perspectives for vertical upward mobility, and social welfare spending may then brew into a radicalization cocktail. The belief that the radicalization aspirations of potential jihadists trapped on the lower rungs of the socioeconomic ladder could be curbed by increased unemployment-subsidizing welfare spending would only work if jihadism were an inferior good. If it is a normal good, social welfare spending to cushion vertical social immobility would create perverse effects and actually subsidize national insecurity.

3. Data and Methodology

In order to test our hypothesis that social welfare spending and the foreign fighter phenomenon have a direct relationship, we built a dataset consisting of 150 countries, 35 of which are OECD countries. Out of the 35 OECD countries, 19 are Western European countries. Table 1 lists the 35 OECD countries and non-OECD countries in our dataset by regional classification.

<Table 1 here>

Our main dependent variable is foreign fighters per million of population. Our main focus independent variable is the sender countries' social safety spending (% GDP). Our additional control variables are: GDP per capita, youth unemployment rate, Muslim population share, a multiplicative interaction term of Muslim population share and youth unemployment rate, income inequality (Gini index), level of democracy (Polity2 score), distance between a foreign fighter sending country's capital and Damascus, and religious fractionalization. Table 2 provides a description of the variables and their sources.

<Table 2 here>

We think of the independent variables as three categories of determinants of expat jihadism: Economic capability, grievance, and grievance amelioration factors. Becoming a foreign fighter requires economic resources for travel, “expat jihadism research,” and communication. The independent variables social safety nets, GDP per capita, and distance fall under the economic capability category. Our grievance factors are Muslim population share, youth unemployment, their multiplicative interaction, income inequality, and religious fractionalization. Lastly, we interpret democracy as a grievance amelioration mechanism.

Table 3 of the Appendix provides summary descriptive statistics of our variables. Based on the examination of the descriptive statistics, we introduce natural log transformations in order to increase the variables’ distributional characteristics. Any transformations are also noted in Table 3.

<Table 3 here>

We also control for a non-linear relationship between foreign fighters per million and GDP per capita by adding a quadratic GDP per capita term on the right hand side.

Multicollinearity is a severe problem, especially between our two economic capability variables social safety spending and GDP per capita. While in large samples multicollinearity will not bias the estimates, it increases the standard error of the estimate. This may lead to non-significant results and mask the economic significance of the variable under consideration. In small samples, multicollinearity may additionally cause unexpected or “flipping” signs. We address multicollinearity concerns through the orthogonalization of the

GDP per capita variable by social safety spending. Table 4 and Table 5 show the correlation matrix for the entire sample and OECD countries, respectively.

<Table 4 here>

<Table 5 here>

Another concern is simultaneity. Because of the automatic stabilizer function of social safety spending, social safety spending and youth unemployment are simultaneously determined. Because expat jihadism is a correlate of youth unemployment, social safety spending and foreign fighters per million are simultaneously determined as well.

As for the specific testing procedure, we first focus on the entire sample with the objective of showing that OECD and non-OECD countries are subject to different dynamics, and should therefore be treated separately. Because our dependent variable foreign fighters per million is naturally left-censored for countries with zero foreign fighters, our prefer estimation model is a Tobit. A particular concern that we address in the entire sample regression is multicollinearity. In a second step, we then focus on the sample of OECD countries in more detail. In addition to multicollinearity concerns, we will also address small sample and simultaneity issues. We run our regressions with the open source software gretl (Gnu Regression Time Series Library), whose accompanying manual also provides technical background information on the various estimation techniques.

4. Empirical Results

We begin our empirical section by highlighting first the unique dynamics within OECD countries. For this purpose we plot in Figure 1 for all countries the variable foreign fighters

per Million (ln) against social safety spending (%GDP). Figure 1 shows three lines of best fit: A cubic one for the entire sample, as well as a linear line for each subgroup.

<Figure 1 here>

Figure 1 shows a relatively isolated cluster of OECD countries around the strongly upward sloping cubic trend line after the point of inflection. It also shows that the relationship between social safety spending and foreign fighters per million is much stronger for the OECD countries than for the non-OECD countries. The fact that OECD countries can be visually easily separated from the non-OECD countries suggests that they are two different populations with different underlying dynamics which are best analyzed separately.

To illustrate the dominance of social safety spending among OECD countries in the entire sample furthermore, we show in Table 6 the Tobit regression results of two specifications, each subdivided three times. The general specification is:

$$FFperMill = \beta_0 + \beta_1 SocialSafe_{ij} + \beta_2 \ln y_{ik} + \beta_3 \ln y_{ik}^2 + \beta_l \sum_4^{10} controls_l + u_i \quad (4)$$

where

i = country i

$j \in$ [Social Safety Spending, Social Safety Spending×(OECD=1), Social Safety Spending×(nonOECD=1)]

$k \in$ [GDP per capita(ln), GDP per capita orthogonalized(ln)]

$l \in$ [Distance (ln), Youth Unemployment Rate (ln), Muslim Population Share (ln), Youth Unemployment Rate-Muslim Population Share Interaction Term, Gini Coefficient, Religious Fractionalization, Polity 2 Score]

The sub-specifications test the impact of social spending once non-differentiated between OECD and non-OECD countries (1), once by only including an interaction term of social spending with the OECD dummy (2), and once by including an interaction term with the non-OECD dummy (3). Because GDP per capita and social safety spending are highly correlated for the entire sample ($r=0.69$, Table 4), the significance of each effect is likely masked by multicollinearity. Therefore, in order to remove the effect of multicollinearity on the significance test of each variable, we orthogonalize GDP per capita (ln) in Model II using the residuals from the following regression

$$\ln y_i = \beta_0 + \beta_1 SocSafe_i + \beta_2 SocSafe_i^2 + u_i \quad (5)$$

The results of Models I show that social safety spending and GDP per capita always carry the expected signs, but are never significant. However, after orthogonalizing GDP per capita by social safety spending in Model II, social safety spending is now significant for the entire sample (II.1) and a comparison of models II.2 and II.3 suggests that this significance can be attributed to social safety spending in OECD countries.

<Table 6 here>

A final argument to illustrate that OECD countries' social safety spending accounts for the lion's share of the variation of all social safety spending can be seen from a simple correlation matrix of social safety spending, social safety spending \times (OECD=1), and social safety

spending \times (nonOECD=1), which is shown in Table 7. It shows that the correlation coefficient of Social Safety Spending and Social Safety Spending \times (OECD=1) is $r=0.99$.

<Table 7 here>

Because Figure 1 and the results of Tables 6 and 7 suggest that OECD countries are best examined separately, we next focus in more detail exclusively on the OECD sample. For this purpose we run alternative models. We first run again a Tobit model with all variables, expecting, like for the entire sample, non-significant results due to multicollinearity between social safety spending and GDP per capita. In a second model, we re-run the first model, similar to Model II of the entire sample, with orthogonalized values of GDP per capita (re-estimated for the OECD sample). In a third step, we run the specification of Model II as a simple OLS model, whose squared inverse residuals we use as the weights in a fourth model of a weighted least square estimation. This fourth model serves the purpose of detecting a possible small sample bias. In a fifth and sixth model, we specify again a Tobit model in which we also address simultaneity between social safety spending and foreign fighters per million (model 6 shows the results of model 5 with robust standard errors). The basic idea for simultaneity between the two variables is straightforward. As social safety spending increases, this is likely a response to rising unemployment, which in turn is a major driver of expat jihadism. A Hausman test for endogeneity also confirms simultaneity between social safety spending and foreign fighters. We instrumentalize social safety spending with the 2011-2015 average values of “Population ages 65 and above (% of total)” and “Life expectancy at birth, total (years)” from the World Bank Development Indicators Database. Table 8 shows the correlation matrix of social safety spending, foreign fighters per million,

and the two instruments. It shows that the instruments are highly correlated with social safety spending but little with foreign fighters. Table 9 shows the OLS regression results of social safety spending against the two instruments. Table 10 summarizes the regression results associated with the various specifications.

<Table 8 here>

<Table 9 here>

<Table 10 here>

The regression results show that, as expected, multicollinearity between social safety spending and GDP per capita masks any socioeconomic significance. The social safety spending variable even carries an unexpected negative sign (Model I). Yet, after orthogonalizing GDP per capita (Model II), social safety spending carries the expected sign and is significant. The magnitude of the coefficient is also statistically in the range of the social safety spending \times (OECD=1) coefficient of Model II.2 in Table 6. Models III (OLS) and IV (WLS) suggest that while the OECD sample is small, the coefficients are not biased by distributional irregularities. Last but not least, Models V (default standard errors) and VI (robust standard errors) suggest that the simultaneity between social safety spending and foreign fighters does not meaningfully affect the estimation results.

Regression coefficients in Tobit models cannot be readily interpreted as marginal effects as in Ordinary Least Square (OLS) models as they capture both the independent variable's marginal effect on whether a certain observation is non-zero and its marginal effect on non-

zero observations. In technical terms, the marginal effect is the product of the cumulative density of the predicted standardized value of the Tobit regression evaluated at the mean values of all right hand side variables. For our preferred model V, the calculated marginal effect of social safety on foreign fighters is, similar to the Tobit coefficient, 0.05. Thus, a one percentage point increase in social safety spending increases the number of foreign fighters by five percent. In the context of all OECD countries, this would mean that for every one percentage point increase of social safety spending on average roughly 400 more foreign fighters would be generated.

5. Conclusions

In this paper we examined the role of social safety spending on expat jihadism. Our main argument is that the conservation of grievances such as the subsidization of structural youth unemployment through generous social safety spending exercises perverse effects in the sense that social safety spending provides the economic capability to convert grievances into terrorist adventurism. In arriving at this conclusion we concentrated on OECD countries where the nexus of social safety spending and expat jihadism has received the biggest media attention and is most relevant.

While our sample is rather small, we nevertheless feel that the results are valid and not subject to any small sample bias. The unique dynamics of OECD countries hold both when working with a large sample and interacting social safety spending with an OECD dummy and when focusing only on OECD countries. In the OECD sample, the results are regularly highly significant in alternative specifications that control for multi-collinearity, distributional irregularities, simultaneity, and a set of standard controls. Our findings are in

line with Kaus (2001) who argues that “relatively generous welfare benefits enable those [Muslims] in the ethnic ghetto to stay there, stay unemployed, and seethe. Without government subsidies, they would have to overcome the prejudice against them and integrate into the mainstream working culture. Work, in this sense, is anti-terrorist medicine.”

Our paper must not be falsely interpreted in the sense that we advocate against social safety nets. On the contrary, our objective is to create awareness for improving social safety spending. Jihadism, we argue, must be seen as an economic good and should be analyzed accordingly. The essential question is: Is jihadist activity a normal or an inferior good? If it is an inferior good, social safety spending on basic social needs like food, housing, and unemployment support will reduce demand for jihadist activities. If it is a normal good, such subsidies will increase jihadist activity. Our findings strongly suggest that jihadism is a normal good, at least, on average, in OECD countries.

Since among OECD countries we can observe both high social safety spending and high youth unemployment rates especially among citizens with a migration background, the lessons from the nexus of social safety spending and foreign fighters suggest, for example, that policies directed towards the subsidization of youth unemployment are superior to the subsidization of youth unemployment.

6. References

- ASDA'A Burson-Marsteller. (2016). 8th Annual ASDA'A Burson-Marsteller Arab Youth Survey: Inside the Hearts and Minds of Arab Youth. ASDA'A Burson-Marsteller.
- Barrett, R. (2017). *Beyond The Caliphate: Foreign Fighters and the Threat of Returnees*. New York, NY: The Soufan Center.
- BBC. (2017, January 5). Berlin truck killer Amri 'had 14 identities' in Germany. Retrieved April 4, 2018, from BBC News: <http://www.bbc.com/news/world-europe-38516691>
- Berman, E. (2000). Sect, Subsidy, and Sacrifice: An Economist's View of Ultra-Orthodox Jews. *The Quarterly Journal of Economics*, 65(3), 905-53.
- Bhatia, K., & Ghanem, H. (2017). How do education and unemployment affect support for violent extremism? Evidence from eight Arab countries. Washington, DC: Brookings Institution. Retrieved from https://www.brookings.edu/wp-content/uploads/2017/03/global_20170322_violent-extremism.pdf
- Bilefsky, D. (2017, February 21). Danes fighting for ISIS were paid welfare benefits, government says. Retrieved April 20, 2017, from The New York Times: <https://www.nytimes.com/2017/02/21/world/europe/danes-fighting-for-isis-were-paid-welfare-benefits-government-says.html>
- Brabant, M. (2001, October 3). British security 'negligent' over attack suspects. Retrieved April 11, 2017, from BBC: http://news.bbc.co.uk/2/hi/middle_east/1577487.stm
- Burgoon, B. (2006). On Welfare and Terror: Social Welfare Policies and Political-Economic Roots of Terrorism. *Journal of Conflict Resolution*, 50(2), 176-203.
- Cassidy, C. (2013, April 29). Tsarnaev family received \$100G in benefits. Retrieved April 14, 2017, from Boston Herald: http://www.bostonherald.com/news_opinion/local_coverage/2013/04/tsarnaev_family_received_100g_in_benefits
- Chen, D. L. (2003). Economic Distress and Religious Intensity: Evidence from Islamic Resurgence During the Indonesian Financial Crisis. PRPES Working Paper No. 39, 1-55.
- Crenshaw, E. M., Robison, K. K., & Jenkins, J. C. (2007). The 'roots' of terrorism: A replication and extension of Burgoon. The annual meeting of the American Sociological Association. New York: The American Sociological Association.
- Devarajan, S., Mottaghi, L., Do, Q.-T., Brockmeyer, A., Joubert, C., Bhatia, K., & Abdel Jelil, M. (2016). *Economic and Social Inclusion to Prevent Violent Extremism*. Washington, DC: World Bank.

- Dobbs, M. (2001, October 28). Probe Targets Cleric in London. Retrieved April 14, 2017, from The Washington Post:
https://www.washingtonpost.com/archive/politics/2001/10/28/probe-targets-cleric-in-london/3f50c08c-3e56-4185-804c-52640d82b5eb/?utm_term=.041c54207492
- European Parliament. (2017). The financing of the 'Islamic State' in Iraq and Syria (ISIS). Brussels: European Parliament. doi:10.2861/193643
- Freytag, A., Krüger, J. J., & Meierrieks, D. (2011). The Origins of Terrorism: Cross-Country Estimates on Socio-Economic Determinants of Terrorism. *European Journal of Political Economy*, 27(1), 5-16. Retrieved from
https://www.diw.de/documents/publikationen/73/diw_01.c.354169.de/diw_econsec0027.pdf
- Gassebner, M., & Luechinger, S. (2011). Lock, stock, and barrel: a comprehensive assessment of the determinants of terror. *Public Choice*, 149(3), 235-261.
- Gouda, M., & Marktanner, M. (2018). Muslim Youth Unemployment and Expat Jihadism: Bored to Death? *Studies in Conflict & Terrorism*, 1-20.
- Hjelmgaard, K. (2017, February 23). European welfare benefits help fund ISIS fighters. Retrieved April 20, 2017, from USA Today:
<https://www.usatoday.com/story/news/world/2017/02/23/european-welfare-benefits-fund-islamic-state-isis-fighters/98290438/>
- Kaus, M. (2001, December). Does Welfare Cause Terrorism? Retrieved April 4, 2018, from Slate.com.
- Krieger, T., & Meierrieks, D. (2010). Terrorism in the Worlds of Welfare Capitalism. *Journal of Conflict Resolution*, 54(6), 902-939.
- Malan, M. (2012). *Welfare States and Terrorism: Understanding the relationship between social welfare policy and terror*. Amsterdam: University of Amsterdam.
- Maremont, M., & Pop, V. (2016, August 4). Terrorist Suspects in Europe Got Welfare Benefits While Plotting Attacks. Retrieved April 14, 2017, from The Wall Street Journal: <https://www.wsj.com/articles/terrorist-suspects-in-europe-got-welfare-benefits-while-plotting-attacks-1470350251>
- Peddicord, M. (2008). *The effects of structural policies on terrorist incidents in democracies, 1975 to 1995*. Washington, DC: Georgetown University. Retrieved from
https://repository.library.georgetown.edu/bitstream/handle/10822/555942/etd_mtp26.pdf?sequence=3

- Read, R. (2017, March 27). London's Westminster Terrorist Received Government Welfare Before Engaging In His Attack. Retrieved April 13, 2017, from The Daily Caller: <http://dailycaller.com/2017/03/27/londons-westminster-terrorist-received-government-welfare-before-engaging-in-his-attack/>
- Russia Today. (2017, March 9). Swedish jihadists funded themselves through benefits, govt says 'unacceptable'. Retrieved April 20, 2017, from Russia Today (RT): <https://www.rt.com/news/380052-swedish-jihadists-benefits-report/>
- The Soufan Group. (2015). Foreign Fighters: An Updated Assessment of the Flow of Foreign Fighters into Syria and Iraq. The Soufan Group.
- Vargas, J. F. (2011). Rebellion, Repression and Welfare. *Defence and Peace Economics*, 22(5), 563-579.

Appendix

Table 1: Units of Observations

Country	Region*	Country	Region	Country	Region
Australia	EAP (OECD)	Brazil	LAC	Ethiopia	SSA
Cambodia	EAP	Chile	LAC (OECD)	Gabon	SSA
China	EAP	Colombia	LAC	Ghana	SSA
Fiji	EAP	Costa Rica	LAC	Guinea	SSA
Indonesia	EAP	Dominican Republic	LAC	Guinea-Bissau	SSA
Japan	EAP (OECD)	Ecuador	LAC	Kenya	SSA
Kiribati	EAP	El Salvador	LAC	Lesotho	SSA
Korea, Rep.	EAP (OECD)	Grenada	LAC	Liberia	SSA
Lao PDR	EAP	Guatemala	LAC	Madagascar	SSA
Malaysia	EAP	Honduras	LAC	Malawi	SSA
Marshall Islands	EAP	Mexico	LAC (OECD)	Mali	SSA
Mongolia	EAP	Nicaragua	LAC	Mauritania	SSA
Myanmar	EAP	Panama	LAC	Mauritius	SSA
New Zealand	EAP (OECD)	Peru	LAC	Mozambique	SSA
Papua New Guinea	EAP	St. Lucia	LAC	Namibia	SSA
Philippines	EAP	Uruguay	LAC	Niger	SSA
Samoa	EAP	Djibouti	MENA	Nigeria	SSA
Thailand	EAP	Egypt, Arab Rep.	MENA	Rwanda	SSA
Timor-Leste	EAP	Iraq	MENA	Sao Tome and	SSA
Vanuatu	EAP	Israel (OECD)	MENA	Senegal	SSA
Vietnam	EAP	Jordan	MENA	Seychelles	SSA
Albania	EECA	Kuwait	MENA	Sierra Leone	SSA
Armenia	EECA	Lebanon	MENA	Somalia	SSA
Azerbaijan	EECA	Morocco	MENA	South Africa	SSA
Belarus	EECA	Saudi Arabia	MENA	South Sudan	SSA
Bosnia and Herzegovina	EECA	Tunisia	MENA	Sudan	SSA
Bulgaria	EECA	West Bank and Gaza	MENA	Tanzania	SSA
Croatia	EECA	Canada	NAM (OECD)	Togo	SSA
Czech Republic	EECA (OECD)	United States	NAM (OECD)	Uganda	SSA
Estonia	EECA (OECD)	Bangladesh	SA	Zambia	SSA
Georgia	EECA	Bhutan	SA	Zimbabwe	SSA
Hungary	EECA (OECD)	India	SA	Austria	WE
Kazakhstan	EECA	Maldives	SA	Belgium	WE
Kosovo	EECA	Nepal	SA	Denmark	WE
Kyrgyz Republic	EECA	Pakistan	SA	Finland	WE
Latvia	EECA (OECD)	Sri Lanka	SA	France	WE
Lithuania	EECA	Angola	SSA	Germany	WE
Macedonia, FYR	EECA	Benin	SSA	Greece	WE
Moldova	EECA	Botswana	SSA	Iceland	WE
Montenegro	EECA	Burkina Faso	SSA	Ireland	WE
Poland	EECA (OECD)	Burundi	SSA	Italy	WE
Romania	EECA	Cabo Verde	SSA	Luxembourg	WE
Russian Federation	EECA	Cameroon	SSA	Netherlands	WE
Serbia	EECA	Central African	SSA	Norway	WE
Slovak Republic	EECA (OECD)	Chad	SSA	Portugal	WE
Slovenia	EECA (OECD)	Comoros	SSA	Spain	WE
Tajikistan	EECA	Congo, Dem. Rep.	SSA	Sweden	WE
Ukraine	EECA	Congo, Rep.	SSA	Switzerland	WE
Argentina	LAC	Cote d'Ivoire	SSA	Turkey	WE
Bolivia	LAC	Eswatini	SSA	United Kingdom	WE

* The regional classification follows the World Bank classification except for the World Bank's classification of Europe and Central Asia, which we subdivide into Western Europe (WE) and Eastern Europe and Central Asia (EECA). The countries in the EECA group are all the former socialist countries whereas the countries in the WE group are the market economies since World War II. The other abbreviations are: EAP = East Asia and the Pacific, LAC=Latin America and the Caribbean, MENA = Middle East and North Africa, SA = South Asia, SSA = Sub Saharan Africa.

Table 2: Data and Sources

Variables	Description and Source
Foreign Fighters per million population (lnFFperMill)	Soufan (2015, p. 7) and Soufan (Barrett, 2017, p. 12). Soufan (2015) reports official and non-official counts, and Soufan (2017) revised 2015 counts. Some numbers are reported as ranges (for example, "100-200"), others with a "~", "+", "<" or ">" sign (for example, "~90," "104+," <10," or ">165"). Whenever available, we took Soufan (2017) data. If Soufan (2017) data was unavailable, we took available official count data from Soufan (2015). If neither Soufan (2017) nor official counts in Soufan (2015) data was available, we took the unofficial count in Soufan (2015). For numbers given with ranges, we took the midpoint of the range. Data provided with "~", "+", "<" or ">" signs were reported by ignoring the signs. Population data are 2011-2015 averages from the World Bank Development Indicator Database (WDI).
Social Safety Spending, % GDP (SocSafe)	Compiled for OECD and non-OECD countries from two different sources. For OECD countries, the variable is the 2011-2015 average of "Social Expenditure - Aggregated data, %GDP" (http://stats.oecd.org/). For non-OECD countries, the variable is the 2011-2015 average of "Total spending as percent of GDP - All Social Assistance" from the World Bank's "The Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE)" dataset (http://datatopics.worldbank.org/aspire/indicator_glance).
GDP per capita (lny)	GDP per capita (constant \$2010), 2011-2015 averages. Source: World Bank Development Indicators Database
Distance	Distance in kilometers of Expat Jihadist's Home Country's Capital to Damascus. Source: Mayer, Thierry, and Soledad Zignago. "Notes on CEPIL's distances measures: The GeoDist database" (2011). <code>dist_cepil.dta</code> dataset
Youth Unemployment	Unemployment, youth total (% of total labor force ages 15-24) (modeled ILO estimate), 2011-2015 average. Source: World Bank Development Indicators Database
Muslim	Muslim population share (2010 observation), Association of Religion Data Archives (www.thearda.com/)
Muslim/Youth Unemployment Rate Interaction Term	Muslim \times Youth Unemployment Rate
Gini	Index of income inequality. Latest available observation. United Nations University's World Income Inequality Database (WIID).
Religious Fractionalization (RelFrac)	Religious Fractionalization Index, Alesina et al., (2003), Fractionalization, <i>Journal of Economic Growth</i> , vol. 8, no. 2, June 2003, pp. 155-194.
Polity	Polity2 score. A value which ranges between negative ten and positive ten. Values between negative ten and negative six indicate autocracies, values between negative five and positive five anocracies, and values between positive six and positive ten democracies (2011-2015 averages). Source: Center for Systemic Peace

Table 3: Summary Statistics

Variable	Sample	n	Mean	Median	S.D.	Min	Max	Transformation
Foreign Fighters (FF)	OECD	35	225.00	60.00	433.80	0.00	1910.00	None
	Non-OECD	115	195.40	0.00	617.80	0.00	3417.00	
	All	150	202.30	0.00	578.90	0.00	3417.00	
Population (in Million, Pop)	OECD	35	36.26	10.53	59.50	0.33	317.50	ln(Pop)
	Non-OECD	115	48.38	9.76	176.10	0.05	1361.00	
	All	150	45.55	10.25	156.70	0.05	1361.00	
Foreign Fighters per Million (FFperMill)	OECD	35	8.71	1.83	12.12	0.00	47.16	ln(FFperMill+1)
	Non-OECD	115	20.34	0.00	67.62	0.00	497.30	
	All	150	17.63	0.00	59.64	0.00	497.30	
Social Safety Spending (%GDP, SocSafe)	OECD	35	17.42	19.69	10.13	0.77	31.45	None
	Non-OECD	115	1.50	1.05	1.54	0.00	10.10	
	All	150	5.21	1.50	8.42	0.00	31.45	
GDP per capita (y)	OECD	35	38,909	40,515	22,146	9,523	105,800	ln(y)
	Non-OECD	112	4,358	3,018	4,972	233	37,312	
	All	147	12,585	4,192	18,736	233	105,800	
Distance (km, Dist)	OECD	35	4,783	3,173	4,012	214	16,286	ln(Dist)
	Non-OECD	107	5,980	5,207	3,810	86	15,900	
	All	142	5,685	4,708	3,881	86	16,286	
Youth Unemployment Rate (yuer)	OECD	35	19.48	17.13	11.03	7.01	52.06	Ln(yuer)
	Non-OECD	110	17.08	11.89	13.43	0.39	60.41	
	All	145	17.65	14.72	12.90	0.39	60.41	
Muslim Population Share (Muslim)	OECD	34	5.44	1.50	16.96	0.00	99.00	ln(Muslim+1)
	Non-OECD	111	28.40	6.00	36.54	0.00	100.00	
	All	145	23.01	4.00	34.37	0.00	100.00	
Muslim/yuer Interaction Term (MusXyuer)	OECD	34	93.18	26.89	288.90	0.00	1696.00	ln(MusXyuer+1)
	Non-OECD	110	476.10	78.91	777.10	0.00	3675.00	
	All	141	385.70	45.02	711.50	0.00	3675.00	
Religious Fractionalization (Relig)	OECD	35	0.42	0.40	0.24	0.01	0.82	None
	Non-OECD	106	0.45	0.49	0.23	0.00	0.86	
	All	141	0.44	0.48	0.23	0.00	0.86	
Gini Coefficient (Gini)	OECD	35	32.70	30.70	7.79	23.60	50.45	ln(Gini)
	Non-OECD	109	40.43	39.70	7.92	24.09	60.80	
	All	144	38.55	37.61	8.53	23.60	60.80	
Polity 2 Score (Polity)	OECD	34	9.46	10.00	1.05	6.00	10.00	None
	Non-OECD	98	3.76	5.10	5.32	-10.00	10.00	
	All	132	5.23	7.00	5.24	-10.00	10.00	

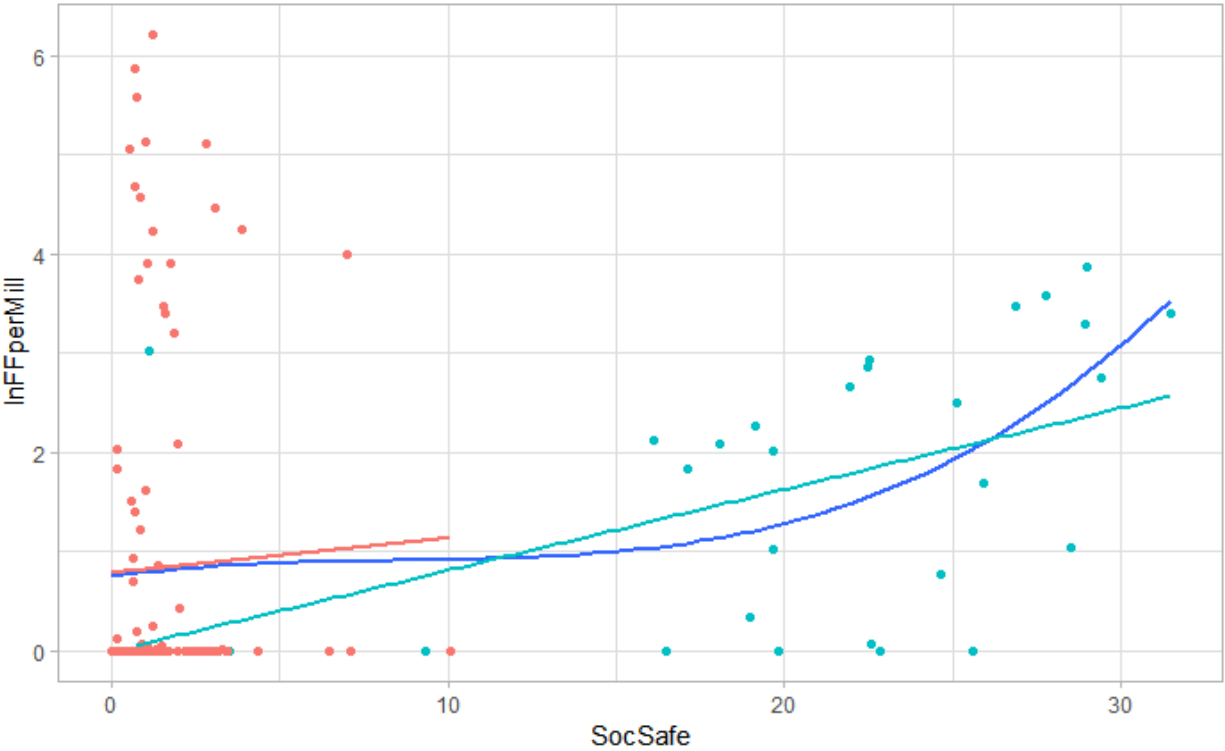
Table 4: Correlation Matrix (Entire Sample)

	Foreign Fighters (absolute)	Population (ln)	Foreign Fighters per Million (ln)	Social Safety Spending (%GDP)	GDP per Capita (ln)	Distance (ln)	Youth Unemployment Rate (ln)	Muslim Population Share (ln)	Muslim/Youth Unemployment Rate	Gini (ln)	Religious Fractionalization	Polity 2 Score
Foreign Fighters (absolute)	1.00											
Population (ln)	0.20	1.00										
Foreign Fighters per Million (ln)	0.64	0.01	1.00									
Social Safety Spending (%GDP)	0.05	0.09	0.27	1.00								
GDP per Capita (ln)	0.15	-0.04	0.32	0.69	1.00							
Distance (ln)	-0.39	-0.07	-0.52	-0.12	-0.14	1.00						
Youth Unemployment Rate (ln)	0.17	-0.22	0.27	0.18	0.41	-0.24	1.00					
Muslim Population Share (ln)	0.36	0.19	0.46	-0.21	-0.33	-0.45	-0.05	1.00				
Muslim/Youth Unemployment Rate Interaction (ln)	0.40	0.19	0.57	0.12	-0.04	-0.51	0.15	0.92	1.00			
Gini (ln)	-0.14	0.04	-0.35	-0.41	-0.33	0.39	0.02	-0.09	-0.21	1.00		
Religious Fractionalization	-0.22	0.04	-0.11	-0.04	-0.08	0.06	0.03	-0.11	-0.13	0.16	1.00	
Polity 2 Score	-0.22	-0.08	-0.07	0.42	0.40	0.13	0.26	-0.34	-0.17	-0.16	-0.06	1.00

Table 5: Correlation Matrix (OECD Sample)

	Foreign Fighters (absolute)	Population (ln)	Foreign Fighters per Million (ln)	Social Safety Spending (%GDP)	GDP per Capita (ln)	Distance (ln)	Youth Unemployment Rate (ln)	Muslim Population Share (ln)	Muslim/Youth Unemployment Rate	Gini (ln)	Religious Fractionalization	Polity 2 Score
Foreign Fighters (absolute)	1.00											
Population (ln)	0.40	1.00										
Foreign Fighters per Million (ln)	0.58	0.15	1.00									
Social Safety Spending (%GDP)	0.22	0.09	0.60	1.00								
GDP per Capita (ln)	0.06	-0.16	0.53	0.74	1.00							
Distance (ln)	-0.20	0.19	-0.22	0.00	0.10	1.00						
Youth Unemployment Rate (ln)	0.00	-0.08	-0.16	0.04	-0.31	-0.24	1.00					
Muslim Population Share (ln)	0.68	0.16	0.71	0.28	0.27	-0.52	-0.10	1.00				
Muslim/Youth Unemployment Rate Interaction (ln)	0.57	0.12	0.69	0.53	0.43	-0.39	0.12	0.90	1.00			
Gini (ln)	-0.01	0.56	-0.27	-0.26	-0.29	0.35	-0.12	-0.05	-0.08	1.00		
Religious Fractionalization	-0.05	0.29	-0.08	-0.02	0.10	0.40	-0.30	-0.21	-0.23	0.20	1.00	
Polity 2 Score	-0.27	-0.08	-0.06	0.33	0.39	0.45	0.16	-0.41	-0.15	-0.21	0.20	1.00

Figure 1: Foreign Fighters per Million (ln) vs Social Safety Spending (% GDP) – With Entire Sample Cubic Trend Line and linear trend lines for OECD and non-OECD countries



- Legend:
- Red Dots: Non-OECD Countries
- Red Line: Linear trend line Non-OECD Countries
- Green Dots: OECD countries
- Green line: Linear trend line OECD Countries
- Blue line: Cubic fit for entire sample, both OECD and non-OECD countries

Table 6: Tobit Regression Results – Entire Sample (n=123, left-censored=74)

	I			III		
	1	2	3	1	2	3
const	-10.18 (10.88)	-9.21 (10.92)	-2.65 (8.93)	7.49* (4.08)	8.56** (4.05)	16.15*** (3.89)
Social Safety Spending	0.05 (0.05)			0.12** (0.03)		
Social Safety Spending × (OECD Dummy = 1)		0.04 (0.04)			0.10*** (0.03)	
Social Safety Spending × (nonOECD Dummy =1)			0.11 (0.2)			-0.17 (0.19)
GDP/cap	3.32 (2.35)	3.17 (2.41)	1.49 (2.00)			
GDP/cap squared	-0.14 (0.14)	-0.13 (0.14)	-0.02 (0.12)			
GDP/cap social safety spending orthogonalized				0.97*** (0.27)	0.94** (0.27)	0.80*** (0.29)
GDP/cap social safety spending orthogonalized squared				-0.24 (0.27)	-0.25 (0.27)	-0.59** (0.3)
Distance (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Youth Unemployment (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Muslim population share (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Youth Unemp. Rate × Muslim Pop. Share +1 (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Gini Coefficient (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Religious Fractionalization	Yes	Yes	Yes	Yes	Yes	Yes
Polity 2 Score	Yes	Yes	Yes	Yes	Yes	Yes
Log-Likelihood	-122.3	-122.5	-122.8	-122.4	-123.2	-130.1

Standard errors in parentheses. ***=significant at 1%, **=significant at 5%, *=significant at 10%.

Table 7: Correlation Matrix Social Safety Spending, Social Safety Spending × (OECD=1)

	Social Safety Spending	Social Safety Spending × (OECD=1)	Social Safety Spending × (nonOECD=1)
Social Safety Spending	1.00		
Social Safety Spending × (OECD=1)	0.99	1.00	
Social Safety Spending × (nonOECD=1)	-0.20	-0.36	1.00

Table 8: Correlation Matrix Foreign Fighters, Social Safety Spending, and Instruments

	Foreign Fighters per Million	Social Safety Spending	Life Expectancy	Population Age 65+
Foreign Fighters per Million	1.00			
Social Safety Spending	0.60	1.00		
Life Expectancy	0.37	0.76	1.00	
Population Age 65+	0.15	0.55	0.35	1.00

Table 9: Regression Results to Instrumentalize Social Safety Spending

DV=Social Safety Spending (% GDP)	Coefficient
Constant	-208.39*** (32.24)
Age 65+	0.84*** (0.28)
Life Expectancy	2.65*** (0.44)
n	35
R-squared	0.67
F-Stat	31.6

Standard errors in parentheses. ***=significant at 1%.

Table 10: Regression Results Focusing on OECD Countries Only

	I	II	III	IV	V	VI
	Tobit	Tobit	OLS	WLS	Tobit	Model V with robust S.E.
const	-359.77*** (72.85)	4.56 (3.64)	5.83* (3.32)	6.98*** (2.09)	7.02* (3.79)	7.02** (3.52)
Social Safety Spending	-0.02 (0.03)	0.07*** (0.02)	0.05*** (0.02)	0.06*** (0.01)		
Social Safety Spending Instrumentalized					0.05** (0.02)	0.05** (0.02)
GDP/cap	67.47*** (13.69)					
GDP/cap squared	-3.15*** (0.64)					
GDP/cap social safety spending orthogonalized		0.08 (0.44)	0.03 (0.38)	0.16 (0.28)	-0.03 (0.49)	-0.03 (0.6)
GDP/cap social safety spending orthogonalized squared		-2.96*** (0.81)	-2.42*** (0.61)	-2.13*** (0.45)	-3.68*** (0.87)	-3.68*** (0.98)
Distance (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Youth Unemployment (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Muslim population share (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Youth Unemp. Rate × Muslim Pop. Share +1 (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Gini Coefficient (ln)	Yes	Yes	Yes	Yes	Yes	Yes
Religious Fractionalization	Yes	Yes	Yes	Yes	Yes	Yes
Polity 2 Score	Yes	Yes	Yes	Yes	Yes	Yes
Left-censored	11	11	11	11	11	11
n	33	33	33	33	33	33
Log-likelihood	-16.84	-20.27	-20.32	-41.72	-23.16	-23.16
R-Squared			0.89	0.99		
F-Stat (10,22)			18.27	218.8		

Standard errors in parentheses. ***=significant at 1%, **=significant at 5%, *=significant at 10%.