

Second Prize

*Are returning foreign fighters dangerous?
Re-investigating Hegghammer's assessment of the impact of
veteran foreign fighters on the operational effectiveness of
domestic terrorism in the West.*

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The concept of foreign fighters in security studies is novel. Prior to a decade ago, the term did not exist in the academic literature.¹ The term came into existence in the media as a means of referring to individuals who left from abroad to join radical Muslim militants in Iraq and Afghanistan. This has meant that the term foreign fighter became intrinsically synonymous with transnational terrorism. An analysis of the historical record shows that this association is erroneous and demonstrates that foreign fighters predate modern radical Islamic terrorism by at least two centuries.² This association is not only erroneous, but it has led to counter-foreign fighter policies that appear likely to

¹ David Malet, *Foreign Fighters*, (New York, Oxford University Press, 2013): p. 9.

² Malet identifies 70 conflicts since 1810 where foreign fighters have been involved. See David Malet, *Foreign Fighters*, (New York, Oxford University Press, 2013), pp. 40-57.

be ineffective and which actually may raise the risk of domestic terrorism.³ As foreign fighters begin to return from the conflict in Syria and Iraq, decision-makers must now adapt policies to deal not only with departing foreign fighters but also with the ones who are returning. Most counter-foreign fighter policies seek to keep these individuals from returning through deterrence, criminalization, removal of travel documents, and even removal of citizenship. These policies are mainly based on a risk-assessment with little evidence to support them and are likely to have negative long-term consequences as they encourage the establishment of a permanent group of transnational terrorists by keeping foreign fighters from demobilizing after the conflict.

Research on the threat posed by returning foreign fighters is very limited. Research on terrorism has been used as a proxy to compensate for the lack of data on foreign fighters.⁴ One of the few studies of the blowback effect has been done by Hegghammer who has published a set of papers on the threat posed by returning foreign fighters.⁵ The conclusion of these papers indicates that while returning foreign fighters pose a low probability of participating in domestic terrorism events, in instances where foreign fighters do commit acts of domestic terrorism, these acts will have a high number of casualties. Hegghammer's conclusion has been largely accepted by the academic and policy-making communities. Problematically, different institutions and authors use his conclusion to argue contradictory views on the threat posed by returning foreign fighters. Those who claim that foreign fighters represent a severe threat to the West will argue that the unprecedented number of foreign fighters means that we are almost statistically certain to see bigger terrorist attacks as a consequence.⁶ On the flipside, the fact that so few (one in nine according to Hegghammer) foreign fighters actually return to their home

³ Raphael Leduc, "Bombs at Home or Fighters Abroad: Domestic Security Policy and its Impact on the Migration of Foreign Fighters," *CDA Institute Vimy Paper* no. 28 (March 2016): pp. 1-11.

⁴ Marc Sageman, "Confronting al-Qaeda: Understanding the Threat in Afghanistan," *Perspectives on Terrorism* 3, no.4 (2009): p. 6.

⁵ Thomas Hegghammer, "Should I stay or Should I go? Explaining Variation in Western Jihadists' Choice between Domestic and Foreign Fighting," *American Political Science Review* (February 2013): p. 11; Thomas Hegghammer and Petter Nesser, "Assessing the Islamic State's Commitment to Attacking the West," *Perspective on Terrorism* 9 no.4 (2015): available at <http://www.terrorismanalysts.com/pt/index.php/pot/article/view/440/html>

⁶ CSIS, *The Foreign Fighters Phenomenon and Related Security Trends in the Middle East*, (January 2016), p. 26.

countries is used to argue that the threat they pose is largely overstated.⁷ Part of the problem is the limited scope of Hegghammer's quantitative methods, the data at the time of his key paper on the issue which does not go beyond 2010 and thus does not encompass the ISIS phenomenon, and limitations in the data itself.

This paper will seek to give clear conclusions on the threat posed by returning foreign fighters to pave the way for effective policies to tackle the problem. It thus seeks to test the following questions: Do returning foreign fighter make it more likely that there will be instances of terrorism in the countries they return to? If so, do the acts of terrorism they commit result in more casualties? This paper will test these questions by using Hegghammer's Jihadi Plots in the West (JPW) dataset. It will use logistic and multiple regression analysis using the difference-to-difference approach to see if Hegghammer's model is valid and should be used to inform counter-foreign fighter policies. The resulting conclusion of this paper argues that foreign fighters, in fact, do not increase the chances that a terrorist plot will be executed and that foreign fighters do not contribute to the number of casualties from executed plots.

Literature Review

The term 'foreign fighter' has been popularized by the media and researchers in regards to the ongoing conflict in Syria and Iraq over the last two years.⁸ While estimates differ, it is safe to assume that over 20,000 foreign fighters are or have been involved in this conflict.⁹ The threat of returning foreign fighters becoming terrorists is posing a significant challenge to policy-makers as it is thought that they will benefit from their experience as foreign fighters to conduct more lethal terrorist operations. The response from most Western countries has been to criminalize the act of foreign fighting and to

⁷ Daniel Byman and Jeremy Shapiro, *Be Afraid: The Threat of Terrorism from Western Foreign Fighters in Syria and Iraq*, Policy Paper (Washington, DC: Brookings Institution, 2014).

⁸ Cerwyn Moore, "Introductory Comments to Foreign Fighters Research: Special Mini-Series," *Terrorism and Political Violence*, 27 (2015): pp. 393-394.

⁹ Peter Neumann, "Foreign Fighter total in Syria/Iraq now exceeds 20,000; surpasses Afghanistan conflict in the 1980s," January 26, 2015, <http://icsr.info/2015/01/foreign-fighter-total-syriairaq-now-exceeds-20000-surpasses-afghanistan-conflict-1980s/> accessed 15-04-2016.

deter returning foreign fighters from coming back. There currently is very little empirical knowledge to support these policies and as such their effectiveness is difficult to measure. What is known is that such policies have kept foreign fighters from demobilizing in the Soviet-Afghan conflict¹⁰ and are thus likely to contribute to a long-term stability problem in conflict regions, especially those where Muslim populations are present, by helping foster stronger transnational terrorist organizations.

Research on the threat of returning foreign fighters is limited. There is more research on transnational terrorism but these are two different kinds of actors. Foreign fighters can be defined as “noncitizens of conflict states who join insurgencies during civil conflicts”.¹¹ They usually consist of individuals who:

- 1- Have joined an insurgency;
- 2- Lack citizenship or co-ethnicity with the conflicting factions;
- 3- Are not official agents of a state; and
- 4- Do not receive payment.¹²

Thus a terrorist is not necessarily a foreign fighter and a foreign fighter does not necessarily become a terrorist. There clearly is overlap between the two categories but treating them as the same is not representative of reality. There is a tendency to see contemporary Jihadi-related terrorism as transnational in scope,¹³ however not all foreign fighters who travel will necessarily engage directly in acts of terrorism, at home or abroad. The opposite should be assumed. The norm hypothesis postulates that some individuals have a weighted preference for foreign fighting instead of domestic fighting. This preference means that potential foreign fighters are unlikely to commit acts of domestic terrorism in the West unless the cost of foreign fighting is increased

¹⁰ David Malet, *Foreign Fighters* (New York, Oxford University Press, 2013).

¹¹ *Ibid.*, p. 9.

¹² Thomas Hegghammer, “The Rise of the Muslim Foreign Fighters: Islam and the Globalization of Jihad,” *International Security* 35, no. 3 (Winter 2010/11): pp. 53-94. For the payment of foreign fighters, some reports show that foreign fighters in Iraq and Syria do receive payment, but those payments tend to be token ones (200 to 300 USD per month) and do not figure primarily in the motivation of foreign fighters to join the insurgency. See Carla E. Humud, Robert Pirog, and Liana Rosen, “Islamic State Financing and U.S. Policy Approaches,” *Congressional Research Service* (April 2015): p. 13. Jürgen Todenhöfer who travelled in the IS controlled areas claims in his book that it was closer to 50 USD but it is not possible to verify his figures. See Jürgen Todenhöfer, *Inside IS – Tage im 'Islamischen Staat'* (Munich: C. Bertelsmann Verlag, 2015).

¹³ Charles W. Kegley, *The New Global Terrorism: Characteristics, Causes, Controls* (Upper Saddle River, Prentice Hall, 2003).

significantly. This change in preference is mostly a consequence of counter-foreign fighter policies.¹⁴

The data on foreign fighters is very limited. Large databases on terrorism, such as the International Terrorism: Attributes of Terrorist Events (ITERATE), do not code for the characteristic of foreign fighters.¹⁵ The International Centre for the Study of Radicalisation and Political Violence (ICSR) has begun to build a database on foreign fighters but it is limited and its scope is narrow (social media).¹⁶ The only other dataset which focuses on foreign fighters is the Jihadi Plots in the West (JPW)¹⁷ dataset which codes for terrorist events and foreign fighter instances since 1993 in the West. All datasets on foreign fighters currently share common limitations. Primarily, they underestimate the number of foreign fighters due to under-reporting. Furthermore, the reliability of some of the data can be low. This is mostly controlled in datasets by excluding data that is not reliable or based only on estimates. This has the effect of reducing the size of datasets. Furthermore, all datasets suffer from selection bias which cannot be controlled as only foreign fighters who have actually migrated to fight abroad or returned to conduct terrorism acts are accounted for. These limitations are significant and limit the claims that can be made based on foreign fighter data.

The JPW dataset is used by its author, Thomas Hegghammer, to conduct quantitative research on the topic of foreign fighters. He finds that the presence of foreign fighters in terrorist plots increases the likelihood that they will be executed and when they are executed, that the presence of foreign fighters will increase the lethality of the attack.¹⁸ Veteran foreign fighters' participation in terrorist plots in their home country is thus seen as increasing the operational effectiveness of domestic terrorists. Hegghammer

¹⁴ Raphaël Leduc, "Bombs at Home or Fighters Abroad: Domestic Security Policy and its Impact on the Migration of Foreign Fighters," *Vimy Paper* no. 28 (March 2016): pp. 1-11.

¹⁵ ITERATE (iterate_common_file_y_2014; accessed January 20, 2016), https://ciser.cornell.edu/ASPs/search_athena.asp?IDTITLE=2340

¹⁶ ICSR, Western Foreign Fighters in Syria, <http://icsr.info/projects/western-foreign-fighters-syria/> accessed 10-04-2016.

¹⁷ Thomas Hegghammer, Jihadi Plots in the West 1.0, <http://hegghammer.com/text.cfm?path=2176>, accessed 22-03-2016.

¹⁸ Thomas Hegghammer, "Should I stay or Should I go? Explaining Variation in Western Jihadists' Choice between Domestic and Foreign Fighting," *American Political Science Review* (February 2013): pp. 1-15.

in his research only uses descriptive statistics to investigate the threat of returning foreign fighters. Furthermore, the JPW dataset has been significantly expanded since then. This in itself warrants further investigation of his findings, especially as they have been quoted in a wide-range of research by think-tanks¹⁹ and governments²⁰ which are being used to influence the discourse on counter-foreign fighter policies. These policies are based on little evidence, thus it is important that what little evidence exists be thoroughly tested in order to ensure the effectiveness of counter-foreign fighter policies.

Other authors have conducted studies which are proxy to Hegghammer's. Sageman²¹ looked at the influence of terrorist training abroad on the operational effectiveness of domestic terrorist cells. This is not exactly the same as foreign fighting, but the premises behind the influence of foreign fighting and training abroad on domestic terrorism are the same. The idea that an individual goes abroad and acquires experience in conducting terrorism (through formal training or combat experience in a civil war) and comes back to his home country as a more effective operative has been one of the factors that has helped develop counter-foreign fighter policies that seek to prevent their return. Sageman uses his own personal database which is not published. He uses descriptive statistics and reaches the conclusion that terrorist training abroad “doubles the probability of success in a terrorist network,”²² thus reaching similar conclusions to Hegghammer. Expectations are thus that experience abroad should increase the likelihood that terrorist plots will be executed.

¹⁹ Geneva Academy, *Foreign Fighters under International Law* (Academy Briefing no. 7, October 2014); Charles Lister, “Returning Foreign Fighters: Criminalization or Reintegration?” (Washington Brookings Institution, 2015).

²⁰ CSIS, *The Foreign Fighters Phenomenon and Related Security Trends in the Middle East*, (January 2016); Council of the European Union, *Response to foreign terrorists fighters and recent terrorist attacks Europe*, <http://www.consilium.europa.eu/en/policies/fight-against-terrorism/foreign-fighters>, last modified 01-03-2016; and US House of Representatives Homeland Security Committee Task Force, *Final Report of the Task Force on Combating Terrorist and Foreign Fighter Travel*, (September 2015).

²¹ Marc Sageman, “Confronting al-Qaeda: Understanding the Threat in Afghanistan,” *Perspectives on Terrorism* 3, no.4 (2009): pp. 4-25.

²² Marc Sageman, “Confronting al-Qaeda: Understanding the Threat in Afghanistan,” *Perspectives on Terrorism* 3, no.4 (2009): p. 19.

Other research on these trends never goes beyond descriptive statistics and uses narrower samples. Cruickshank reaches similar conclusions to the previous two authors, that experience abroad can raise the effectiveness of terrorists at home, by looking only at the 32 most serious terrorist plots between 2004 and 2011 using qualitative analysis.²³

A common problem in most of the literature that looks at the impact of foreign fighting or training abroad on domestic terrorism is the constant inclusion of outliers, especially 9/11. The number of terrorist attacks in the West is relatively small and they usually only result in less than a dozen casualties. Large-scale terrorist attacks like 9/11 significantly skew quantitative analysis of those trends. Those large-scale attacks are few and exceptional, thus they are not representative of the overall terrorism trend in the West, Jihadi-related or otherwise.

The literature on foreign fighters is thus limited but it shares commonalities with proxy literature on terrorism. First, all studies consistently include outliers such as 9/11 even though such an event could be considered exceptional. Second, none of the studies go beyond descriptive statistics to reach their conclusions. Third, the study of foreign fighters is relatively novel and thus in a state of rapid change, new data is constantly being added and datasets are being updated. This warrants the re-visiting of old findings using the new data and more relevant methodologies.

Methodology

This paper seeks to test the two following claims. First, that experience fighting abroad makes foreign fighters “returnees more lethal operatives,” when involved in domestic terrorism.²⁴ Second, that having a veteran foreign fighter involved in a domestic plot raises the chances of the attack being executed. The two following questions will thus be tested:

²³ Paul Cruickshank, “The Militant Pipeline: Between the Afghanistan-Pakistan Border Region and the West,” 2nd ed., National Security Studies Program Paper, (July 2011).

²⁴ Thomas Hegghammer, “Should I stay or Should I go? Explaining Variation in Western Jihadists’ Choice between Domestic and Foreign Fighting,” *American Political Science Review* (February 2013): p. 11.

Question 1: Does the involvement of veteran foreign fighters in a terrorist plot make it more likely that it will be executed?

Question 2: Does the involvement of veteran foreign fighters in a plot raise the number of casualties of terrorist plots?

Based on the review of the literature, these two hypotheses outline the expected results:

Hypothesis 1: The presence of any number of foreign fighters in a domestic terrorist plot should raise the probability that it will be executed.

Hypothesis 2: As the ratio of veteran foreign fighters involved in a domestic plot increase, the number of casualties that result from this plot should increase.

This paper uses a modified version of the Jihadi Plots in the West (JPW) dataset²⁵ which tracks terrorist plots in the West along with the size of the cells involved and the number of foreign fighters that were involved between 1990 and 2010. This is combined with the updated JPW dataset for the 2011-2015 period.²⁶ Combining the two datasets significantly raised the size of the sample from $N = 106$ for the initial JPW dataset to $N = 175$ for the combined dataset used in this paper.

The following modifications were made to the combined datasets:

1. Coding a casualty figure which is the sum of deaths and injuries for each individual plots. Creating a more complex casualty variable which weighted deaths and injuries was considered but rejected because the datasets are large aggregates of events. It is not clear how severe an injury had to be for it to be counted.
2. A binary variable for foreign fighter involvement was added. This variable is coded to simply show if there were foreign fighters involved in the plot.
3. A foreign fighter ratio variable. This variable is used to calculate the ratio of foreign fighters against the terrorist cell size. It is used to control for exogeneity

²⁵ Thomas Hegghammer, Jihadi Plots in the West 1.0, <http://hegghammer.com/text.cfm?path=2176>, accessed 22-03-2016.

²⁶ Thomas Hegghammer, Coded Data on Jihadi Plots in the West January 2011-June2015, <http://hegghammer.com/text.cfm?path=2176>, accessed 22-03-2016.

between cell size and the total number of foreign fighters.

4. A group grievance control variable. Research in political violence, particularly civil wars, has shown that ethnic tensions can raise the likelihood of political violence happening in a given country.²⁷ Unfortunately, most existing indexes that account for this are either too outdated to be useful in this study or do not cover the whole time period of the combined JPW dataset. The Fragile State Index covered the longest time period and was thus used. Instead of using the aggregated state fragility score, this paper instead used the group grievance indicator which measures ethnic tensions by looking at communal, religious, ethnic, and sectarian violence as well as discrimination.²⁸ Values were available for the years 2006-2015 and were added to the combined dataset. This control variable was found to not have any explanatory power and was dropped from the analysis.
5. The dataset had some plots overlapping two countries. For these specific cases, individual research was done on the plot to assign it to one country. In all cases, these plots were never executed.

This combined dataset thus has eleven variables summarized in Table 1:

27 Paul Collier, Anke Hoeffler, and Dominic Rohner, "Beyond greed and grievance: feasibility and civil war," *Oxford Economic Papers* 61 (2009): pp. 1-27.

28 Fund For Peace, The Methodology Behind the Index, <http://fsi.fundforpeace.org/methodology>, accessed 09-04-2016.

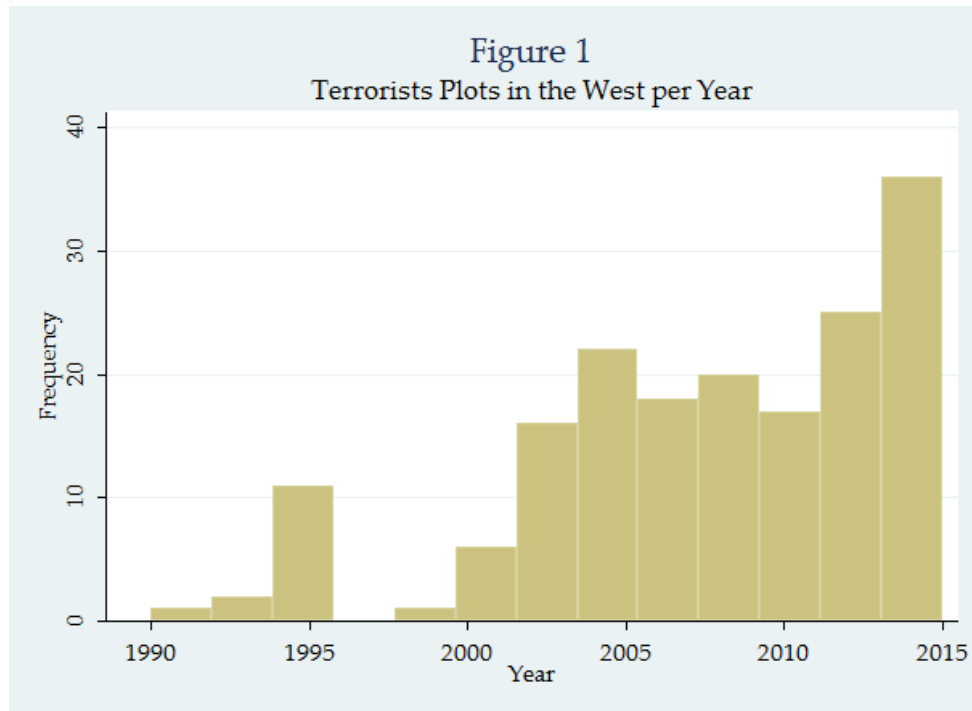
Variable	Description
1. Year	Year of the plot
2. Country	Country where the plot took place
3. Executed	Was the plot executed?
4. Casualties	Sum of deaths and injuries
5. Deaths	Total deaths
6. Injuries	Total Injuries
7. Core cell size	Total cell size
8. Foreign fighter total	Total foreign fighters involved
9. Foreign fighters involvement	Were foreign fighters involved?
10. Foreign fighter ratio	Ratio of cell size that consists of foreign fighters
11. Group grievance	Group grievance score from the Fragile States Index

Hypothesis 1 is tested by using a logistic regression analysis. *Executed* is the dependent variable while *foreign fighters involvement* is used as the independent variable.

Hypothesis 2 is tested by using multiple regression analysis. *Casualties* is used as a dependent variable while *core cell size* and *foreign fighter ratio* are used as independent variables.

For the testing of hypothesis 2, it was hoped to use group grievance as a control and proxy for structural differences between countries that might influence the likelihood of terrorist events taking place and their magnitude. However, this variable was not useful. Coding for the wide-range of socio-structural factors that might influence the scale of terrorism in a given country is a project beyond the scope of this paper. The “difference-to-difference” approach is used to compensate for this and control for the socio-structural differences between states that might influenced the dependent variable. Similarly, it is possible that the number of terrorist plots in the West in a given year might influence the number of plots in following years. Figure 1 below shows that the number of terrorist plots seems to be increasing over time. It is not clear what factors are behind this increase. It is possible that it is due to an improved capacity to detect plots or that the increase is influence by the number of plots in previous years (success encourages copycats). This problematic is compounded by the fact that other authors find that the number of plots

are actually decreasing for a similar time period.²⁹ The model thus uses the difference-to-difference approach to control for years as well.



Lastly, the combined datasets has three significant outliers. The WTC bombing (1993), Madrid bombing (2004), and 9/11 (2001) are the only cases with casualties reaching over one thousand. The model was tested with and without them.

²⁹ Marc Sageman, "Confronting al-Qaeda: Understanding the Threat in Afghanistan," *Perspectives on Terrorism* 3, no.4 (2009): 6.

Findings

The combined dataset shows that foreign fighters were involved in 76 (43%) of all terrorist plots in the West since 1993. Out of those 76 plots, 18 were executed which represents 43% of the plots which were executed. The symmetry between the proportion of foreign fighters involved and the proportion of plots executed seems to *a priori* indicate that foreign fighters have no impact on the likelihood that the plot will be executed. Table 2 summarizes the relationship between the two variables.

	All plots	Plots with foreign fighter	Plots without foreign fighter
All plots	175	76 (43%)	99 (57%)
Executed	42	18 (43%)	24 (57%)

The exclusion of outliers is justified by Table 3 which shows how drastically the three outliers pull the mean of the casualties and foreign fighter total numbers. All the distributions are positively skewed. The relatively small standard deviations, combined with the minimum and maximum values, show that the data ranges are mostly tightly clustered together.

Variable	Observations	Mean	Std. Dev.	Min	Max
Casualties	175	36.67	273.48	0	2977
Casualties (no outliers)	172	3.49	21.16	0	249
Cell size	171	3.73	3.74	1	19
Cell size (no outliers)	168	3.6	3.55	1	18
Foreign fighter total	167	0.81	1.74	0	19
Foreign fighter total (no outliers)	164	0.68	1	0	5
Foreign fighter ratio	171	0.26	0.39	0	1
Foreign fighter ratio (no outliers)	168	0.25	0.39	0	1

Table 4³⁰ also shows why it is necessary to remove outliers from an analysis that looks at the impact of foreign fighters on the lethality of terrorist plots. The correlation

³⁰ Correlations were also conducted without the non-executed plots and the values did not change significantly.

value between the total number of foreign fighters involved and casualties drops from a strong positive correlation to almost no relationship. These low correlations combined with the tight distribution of the data shown in table 3 indicates that it is very unlikely that foreign fighters significantly affect the number of casualties in a terrorist plot.

	R with casualties
Cell size	0.33
Cell size (no outliers)	0.05
Foreign fighter total	0.7
Foreign fighter total (no outliers)	-0.02
Foreign fighter ratio	0.12
Foreign fighter ratio (no outliers)	-.0.06

When testing *Hypothesis 1* (the presence of any number of foreign fighters in a domestic terrorist plot should raise the probability that it will be executed) controlling for country and year actually improved the significance of the foreign fighter involved variable (P decreased from 0.93 to 0.40). Despite this, foreign fighter involvement in a plot was not a statistically significant way of predicting if the plot will be executed. Even if it was, table 5 shows that the probability of plot being executed due to the presence of foreign fighters only goes up by 14% (10% without outliers) which is far from the 100% to 150% ranged claimed in the literature³¹³² and would only account for 11% (14% without outliers) of the variation in the likelihood that a plot will be executed. Removing the outliers improves statistical significance dramatically but still does not make it possible to reject the null hypothesis. *Hypothesis 1* is thus false. The presence of foreign fighters in a domestic plot does not increase the likelihood that it will be executed.

³¹ Marc Sageman, "Confronting al-Qaeda: Understanding the Threat in Afghanistan," *Perspectives on Terrorism* 3, no.4 (2009): p. 19 and Thomas Hegghammer, "Should I stay or Should I go? Explaining Variation in Western Jihadists' Choice between Domestic and Foreign Fighting," *American Political Science Review* (February 2013).

³² Thomas Hegghammer, "Should I stay or Should I go?" p. 11.

Table 6 – Impact of the cell size and foreign fighter ratio on the number of casualties caused by a terrorist plot

	Model			
	1. Including outliers	2. No outliers	3. Controlling years and countries	4. Controlling years and countries (no outliers)
Observations	171	168	171	168
Cell size	25.83**	0.27	38.12*	0.27
Foreign Fighter Ratio	114.55*	-2.99	113.76***	-1.16
Adj. R-square	0.12	0	0.22	0

Note: Asterisks (, **, ***) indicate significance at the 1%, 5%, and 10% level, respectively. All the regressions include an intercept (constant) which is not reported here.*

Hypothesis 2 seeks to test if the number of casualties that result from a terrorist plot increase as the number of foreign fighters who are participating in the plot increases. The model was run four times and resulted in two pairs of results which can be found in table 6 below. One pair uses a multiple regression and looks at the impact of the removal of outliers on the results. The second pair used the difference-to-difference approach to control for the impact of countries and year on the dependent variable. This study also tried to use group grievance instead of the difference-to-difference approach to control for countries but those results were not useful. The regressions were also run by excluding non-executed plots. Those results did not show any real difference either. The models without outliers (2 and 4) were also tested just by removing 9/11 and had similar results

Table 5 – Impact of foreign fighters involvement on plot execution

Plot executed	Observations	Coefficient (log unit)	Coefficient (%)	Pseudo R2	P>z
Foreign fighter present	150	-0.42	14.00%	0.11	0.4
Foreign fighter present (No outliers)	137	-0.74	10.00%	0.14	0.18

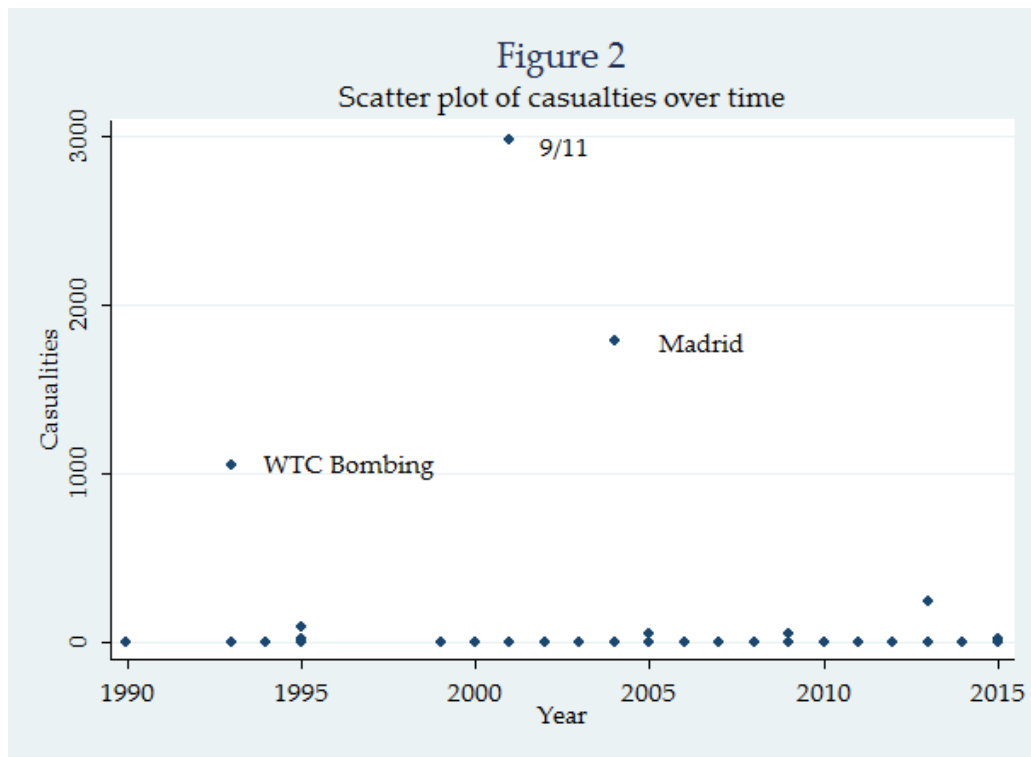
Note: Regression includes an intercept (constant) which is not reported here.

Past quantitative analysis of the phenomenon always included what this paper terms to be outliers (WTC bombing, Madrid, and 9/11). Model 1, which includes outliers and is the most similar to what Hegghammer proposes in his paper, agrees with his conclusions. As the ratio of foreign fighters who join a cell size increases by one unit, the number of casualties increases by 114.55. Overall, model 1 explains 12% of the variation in casualties. Controlling for years and countries (model 3) improved the explanatory power of the model by 10% but lowered the statistical significance of the foreign fighter ratio as an independent variable.

Models 2 and 4 tell an opposite story. They show that the size of cells and the foreign fighter ratio have no impact on the number of casualties when outliers are removed. They explain none of the variation (adj. R-square = 0). Controlling for years and

countries did not change the results. Importantly, the results are not statistically significant and even if they were, the coefficient are reduced drastically.

Accepting or rejecting *hypothesis 2* is thus dependent on the inclusion or rejection of outliers in the model. Table 3 and Figure 2 make it clear that the three outliers are exceptional events that do not follow the general pattern. Most executed events have only a few casualties (mean = 3.49). The three outliers are clearly exceptional events that happen rarely (the most recent happened 13 years ago) and are not representative of the general sample. Most plots do not seem to come from highly-trained and organized cells but from sympathetic individuals who do not have access to a significant amount of resources.³³ This partly explains why most plots are not executed and when they are, they result in few casualties, usually less than a dozen.



³³ Thomas Hegghammer and Petter Nesser, "Assessing the Islamic State's Commitment to Attacking the West," *Perspective on Terrorism* 9, no. 4 (2015).

The exclusion of outliers thus seems to be warranted based on two arguments. First, they affect statistical tools very severely and are clear statistical outliers. Second, the nature of the events themselves seems to differ drastically from the rest of the sample. Thus *hypothesis 2* is rejected. The number of foreign fighters involved in a plot has no impacts on the number of casualties that result from it.

Conclusion/discussion

This study has found that the presence of foreign fighters do not raise the likelihood that a terrorist plot will be executed and if it is, then they have no impact on the number of casualties as a consequence of that plot. Overall, this means that foreign fighters do not increase the operational effectiveness of terrorist cells in a way that is different from any other member of the population that joins the cell. These findings are different from past research. Other studies included outliers in their analysis and limited themselves to the use of descriptive statistics based on older data with a much smaller sample. Significantly from most other studies on this trend, this is the only study, along with Hegghammer's, that focuses exclusively on foreign fighters as distinct from terrorists who received formal training abroad. This would suggest that the two concepts need to be further disaggregated.

This study can be criticized on data limitation grounds; a criticism it would share with other quantitative studies of foreign fighters. As most data is based on what plots and foreign fighters were publicly reported by government agencies, one of the most serious limitations of the data is that there is likely to be under-reporting. The rate of under-reporting is likely to go down over time as security agencies get better at identifying plots, cells, and foreign fighters but it is not possible to know exactly to what extent under-reporting happens. The data is currently the best available on this topic and it can help create a discussion for policy-making. This selection bias is hard to control for but this study has attempted to do so by controlling for countries and year to refine the model. Importantly, the data limitations should not be used to preclude quantitative studies on foreign fighters. Instead, they should encourage security scholars to re-evaluate previous findings as more data becomes available, which is crucial for a novel and still under-studied concept in the field.

As it stands, most counter-foreign fighter policies are based on the premise that returning foreign fighters present a threat to their home country and thus aim to criminalize the act of foreign fighting and limiting the ability of foreign fighters to return.³⁴ This is popularly referred to as the 'blowback' effect. This study indicates that returning foreign fighters do not present a domestic terrorist threat that is any higher than any other member of the population. Counter-foreign fighter policies that make it harder to return contribute to keeping foreign fighters from demobilizing. This trend was seen at the end of the Soviet-Afghan war and largely contributed to turning radical Islamist groups into transnational organizations who followed conflicts in which Muslims were involved (Bosnia, Chechnya, Afghanistan, Iraq).³⁵ Current counter-foreign fighter policies thus create a long-term problem to solve a short-term risk (the blowback effect).³⁶ This study shows that the blowback effect is likely non-existent or much lower than what is feared. Counter-foreign fighter policies should thus focus on reintegration. Doing so will allow researchers to gather more data on the motivations of foreign fighters and find better ways to prevent radicalization. More importantly, returning foreign fighters can contribute to intelligence capacities and help in designing better de-radicalization programs. This study thus contributes to dispelling the risk element which drives current counter-foreign fighter policies. Future research in this field should focus on data-gathering as it is a recurring limitation to research on foreign fighters, in particular it would be useful to have a database which encompasses all foreign fighters who have recently left to fight in Syria and Iraq which tracks their status and have basic biographical information.

³⁴ Somini Sengupta, "Nations Trying to Stop their Citizens From Going to Middle East to Fight for ISIS," New York Times, 12 September 2014, <http://www.nytimes.com/2014/09/13/world/middleeast/isis-recruits-prompt-laws-againstforeign-fighters.html>. For a comprehensive review of counter-foreign fighter policies see: Charles Lister, "Returning Foreign Fighters: Criminalization or Reintegration?" (Washington: Brookings Institution, 2015).

³⁵ David Malet, *Foreign Fighters* (New York, Oxford University Press, 2013).

³⁶ Charles Lister, "Returning Foreign Fighters: Criminalization or Reintegration?" (Washington: Brookings Institution, 2015).

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Annex 1: Syntax

histogram year, frequency

scatter casualties year

corr casualties cell

corr casualties ffratio

corr casualties fftotal

corr casualties cell if casualties < 1000

corr casualties ffratio if casualties < 1000

corr casualties fftotal if casualties < 1000

sum casualties

sum casualties if casualties < 1000

tab executed ffinvolved

sum cell

sum fftotal

sum ffratio

sum cell if casualties < 1000

sum fftotal if casualties < 1000

sum ffratio if casualties < 1000

tab executed ffinvolved

scatter casualties fftotal if casualties < 1000

scatter casualties fftotal if casualties < 1000 & casualties > 0

corr casualties cell if casualties < 1000 & casualties != 0

logit executed ffinvolved

logit executed ffinvolved i.year i.countrycode

logit executed ffinvolved i.year i.countrycode if casualties < 1000

regress casualties cell ffratio i.year i.countrycode if (executed==1)

regress casualties cell ffratio

regress casualties cell ffratio if casualties < 1000

regress casualties cell ffratio if casualties < 1000 & (executed==1)

regress casualties cell ffratio i.year i.countrycode

regress casualties cell ffratio i.year i.countrycode if casualties < 1000

regress casualties cell ffratio i.year i.countrycode if casualties < 1000 & (executed==1)

regress casualties cell ffratio i.countrycode if casualties < 1000

```
regress casualties cell ffratio i.year if casualties < 1000
regress casualties cell ffratio gg
regress casualties cell ffratio i.year i.countrycode
regress casualties cell fftotal i.year i.countrycode
regress casualties cell fftotal i.year i.countrycode if casualties < 1000
regress casualties cell ffratio i.year i.countrycode if casualties < 2000
scatter casualties year if casualties > 0
```