FROM JASMINE TO JIHAD

How disappointment with democracy can create foreign fighters

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1. INTRODUCTION

Why do individuals leave their countries to participate in transnational terrorist organizations? Following the Arab Spring in 2011, an outbreak of civil wars in Syria, Iraq and Libya has led to an astonishing development: foreign fighters are flowing towards these conflicts at a rate never before seen in previous conflicts involving foreign combatants (Bakker and Singleton 2016; Murphy 2015). In response to this dramatic development, the question of “why?” has received significant attention.

For Tunisia, understanding the flow of foreign fighters is especially crucial, as this small and homogenous nation is the highest source of foreign fighters for Salafi-jihadist groups like the Islamic State, Al Qaeda in the Maghreb (AQIM) and Jabhat al-Nusra (TSG 2014, 2015, 2017). What drives Tunisians to leave and fight becomes even more puzzling given that Tunisia is the only democracy to emerge from the Arab Spring. With U.S. policy under George W. Bush and Barack Obama consistently advocating for democratic freedoms as an antidote to the Middle East’s problems of terrorism and instability, Tunisia raises key questions. Does democracy facilitate or encourage foreign fighter participation? If so, under what conditions? If not, what is unique about Tunisia that causes so many Tunisians to become Salafi-jihadist foreign fighters?

This thesis explores the research question: how do democratic and non-democratic factors contribute to the large number of Tunisian foreign fighters joining Salafi-jihadist groups? After quantitative and qualitative analysis, this thesis concludes that unfulfilled democratic and economic promises of the Jasmine Revolution motivate Tunisians to become foreign fighters,

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1 Mobilizing more foreign fighters than the Afghanistan War, the Spanish Civil War, or the Chechen Civil War, these conflicts have drawn approximately 40,000 fighters from over 120 countries (Malet 2010; Schmitt 2018).
2 President Barack Obama advocated American support for Tunisia’s post-revolution democracy saying, “We have the chance to show that America values the dignity of the street vendor in Tunisia more than the raw power of the dictator … America must use all our influence to encourage reform in the region” (Obama 2011).
while democratic freedom of organization, instability after the democratic transition, and ease of travel facilitate fighter recruitment and travel.

Through a cross-country regression, this thesis highlights independent variables that have a statistically significant relationship with foreign fighter participation in North Africa and the Middle East. Classifying independent variables use in the regression as either democratic or non-democratic highlights ways in which democracy and other factors influence the decision to become a foreign fighter. To ensure Tunisia was not skewing regression results due to its high number of foreign fighters, a second regression excluding Tunisia was conducted. While the magnitude of coefficients tends to diminish with Tunisia excluded, Tunisia does not appear to be driving results as significance and signs of results largely remained the same. The study then narrows to examine, using quantitative and qualitative evidence, how the motivations of Tunisian foreign fighters compare with those of the overall region. Qualitative measures include GIS analysis of connectivity to Salafi-jihadist training camps in Libya and studies of Tunisian historical and current climate.

This thesis first outlines Tunisia’s high foreign fighter numbers, the importance of the research question, and literature on why people engage in terrorism. Regression results are then analyzed as indicators of general trends in foreign fighter recruitment, and later analyzed in the context of Tunisia. The conclusion summarizes overall results and suggests how this can inform policy of pro-democracy regimes like the United States (U.S.) in the future.

1. Tunisian Foreign Fighters

Tunisia merits scrutiny because of its status as the highest source of foreign fighters for Salafi-jihadist groups in Syria, Libya, and Iraq. Before the 2011 Jasmine Revolution, Tunisians

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3 The regression results, summary statistics, and a discussion of the differences between the two regressions is included in appendices A, B, C, D, and E.
did not often become foreign fighters. In the Iraqi insurgency of 2003-2011 for example, the Sinjar Records revealed that Tunisia contributed only around 3% of the foreign fighters to Al Qaeda in Iraq (Fishman, Bergen, Felter, Brown, and Shapiro 2008). Today, Tunisian foreign fighters comprise roughly 17.5% of foreign fighters in Iraq and Syria alone. According to a December 2015 Soufan Group report, the official number of Tunisians who have traveled to fight in Syria and Iraq is 6,000, while the unofficial estimate was a larger 7,000. This number remains the highest in the Middle East, with the second largest number of foreign fighters coming from Saudi Arabia at 2,500. In Libya also, Tunisians contribute the highest number of foreign fighters, with numbers estimated around 1,500 (Zelin 2018). Apart from the danger these foreign fighters pose to Syria, Libya, and Iraq, the 800+ returning fighters endanger Tunisian national security and could radicalize others (Joffé 2016). While this thesis will focus on conditions that prompt foreign fighters to leave Tunisia rather than the impact of these returners, these negative ramifications underscore the significance of the research question.

2. Theoretical and Practical Importance of this Question

Tunisia’s large contribution to the jihadist foreign fighter community could provide insight into theory, specifically the role that elements of democracy play in explaining the motivations of foreign jihadist fighters from the Middle East North Africa (MENA) region. The cross-country regression lays a foundation for understanding how certain variables relate to

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4 This number was calculated by dividing the estimated Tunisian foreign fighters in Iraq and Syria (7,000) by the total estimated foreign fighters in Iraq and Syria (40,000). Both of these numbers were derived from the Soufan Group (2014, 2015, 2017).

5 The verified and unofficial estimates were formed from Tunisian and U.S. government estimates, UN estimates, academic estimates, and media sources.

6 While the Soufan Group’s (TSG) October 2017 report “Beyond the Caliphate” notes Tunisian government estimate was 2,926, TSG’s 6,000/7,000 figure is likely more accurate than Tunisia’s number because the Tunisian government has an incentive to underestimate foreign fighter numbers. In fact, after confirming foreign fighter numbers through social media and Islamic State publications, terrorism scholar Aaron Zelin found Tunisian government estimates are often far below the actual number of foreign fighters (Zelin 2018).

7 This number appeared in an October 2017 Soufan Group report on foreign fighters in Iraq and Syria.
foreign fighter recruitment in the region as a whole. Tunisia-specific graphs, maps, and qualitative analysis then investigate factors specific to Tunisia to determine whether Tunisia’s high level of foreign fighter recruitment is due to its democratic transition in 2011, its democratic regime afterwards, or to other factors. Understanding Tunisia’s high foreign fighter numbers can also contribute to the theoretical field on radicalization. In doing so, this research tests existing theories that economic grievances, political opportunity, religious ideology, or social identity most often prompt radicalization. Additionally, this research adds to a growing field of research on foreign fighter motivations by highlighting the influence of grievances and logistics on foreign fighters. Most significantly, because this research focuses on the recent period of 2013-2017, it analyzes how previous theories relate to a modern era.

Practically, research on foreign fighter motivations is important because pro-democracy regimes can tailor democratic support based on these insights to prevent the situation in the MENA region from worsening. Although the Islamic State has lost the majority of its territory in Syria, analysts warn that foreign fighter participation today mirrors the jihadist “finishing school” of the 1980s Afghanistan War. As then, foreign fighter participation today could lead to a resurgence of the Islamic State in the near future (McLaughlin 2018). Moreover, in January 2018, peaceful protests in Tunisia devolved into police violence and arrests of almost 800 people, causing many to speculate that the situation in Tunisia could prop up Salafi-jihadist groups in future years (Estelle 2018; Zelin 2018). Understanding foreign fighter motivations can thus inform the role of pro-democracy regimes like the U.S. that pressure non-democratic countries to encourage democratic development (Levitsky and Way 2005, p. 21). Although the Arab Spring resulted in renewed authoritarianism in many countries, the quick spread of

8 Since the Jasmine Revolution, the U.S. has funneled roughly $300 million to Tunisia to encourage its democratization (USAID 2017).
democratic revolution indicates its attractiveness among those in the MENA region. With this in mind, future democratic transitions are not unlikely, and could follow a similar path as Tunisia’s unless pro-democracy regimes learn from the mistakes of the past. Because this thesis concludes democracy is not the core motivation for foreign fighters in Tunisia, pro-democracy regimes like the U.S. can avoid situations like Tunisia’s in the future by addressing economic, political, and religious grievances at the same time as they continue to encourage democracy.

II. LITERATURE REVIEW

Literature addressing why individuals participate in terrorist activity falls into two categories: non-democracy and democracy explanations. Non-democracy explanations include 1) economic inequalities create push factors that prompt people to engage in terrorism; 2) selective incentives from terrorist groups create pull factors that draw people to engage in terrorism; and 3) social sanctions draw recruits by offering membership in a group. Democracy explanations are 1) democratic political opportunities facilitate terrorist recruitment and financing, and 2) democratic transitions destabilize state security and legitimacy. While these four explanations address terrorism in general, foreign fighter literature emphasizes group ideology and identity. Scholarship on Tunisia tends to combine both non-democracy and democracy explanations. This section addresses each of these bodies of literature in turn.

1. Non-democracy Explanations

The economic inequalities theory explains how awareness of economic disparities creates grievances that prompt individuals to engage in political violence. Gurr (1968) clarified the causal link between economic inequality and violence with the term “relative deprivation” to describe how individuals engage in collective violence when they believe that they have been deprived of something they deserve. Lichbach (1989) outlines the numerous researchers who
subscribe to this explanation. This grievance-based explanation has been substantiated by empirical findings from Davies (1962), Paige (1975), Peterson (2001), Scott (1976), and Huntington (1968).

Muller (1972), however, questioned Gurr’s relative deprivation theory, as his results suggested low trust in political authorities more accurately explained correlations between violence and economic inequalities. Muller and Seligson (1987) qualified this challenge in a study finding income inequality in agrarian societies was still predictive of political violence. Following this initial questioning of the relative deprivation theory, London and Robinson (1989), Timberlake and Williams (1987), and Bradshaw (1985) found empirical support for this theory in cross-country studies. In country-specific contexts, Nejad (1986), Kileff and Robinson (1986), Hamby (1986), and Kennedy (1998) found empirical support that economic inequality contributed to political violence in the Iranian revolution, the Rhodesian Revolution in South Africa, *La Violencia* in Colombia, class struggle in Nicaragua and El Salvador, and gun violence among low-income populations in the U.S. Brush (1996) then summarized that although the relative deprivation theory is no longer considered a sufficient motivation for terrorism, it seems to be a contributing factor.

Other scholars find the pull of terrorist groups to have greater explanatory value than the push of economic deprivation. The selective incentives theory suggests individuals participate in terrorism because terrorist groups offer some benefit for joining. Olson (1965), Popkin (1979), and Lichbach (1995) cited many examples of recruitment increasing when groups offer selective incentives—like when terrorist groups offer safety from legal consequences to soldiers who desert from the state army. Azam (2006) pointed out the reverse implication of selective incentives.

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incentives, as insurgent groups can also attract members by increasing the cost of not joining. Grossman (1991) noted that insurgencies raise the cost of not joining by threatening private property; so, if an insurgency appears to be succeeding, citizens rationally join to protect property rights. Humphreys and Weinstein (2008) and Gates (2002) also found support for the selective incentives theory, noting social appeals can combine with material incentives to increase insurgency participation.

Scholars studying the third framework, the social sanctions theory, have found that terrorist groups attract new recruits by appealing to outcasts and using social networks. Gabriel and Savage (1979), as well as Shils and Janowitz (1948) introduced the idea that social identity attracts recruits more strongly than material incentives. Schbley (2003), Sageman (2004), and Post et al. (2009)10 found this theory to be particularly strong in the Middle East as Salafi-jihadist groups possess a strong religious identity and recruit through family and community networks.

2. Democracy Explanations

The two democracy explanations for terrorism are the political opportunity theory and the democratic transition theory. The political opportunity theory argues political violence increases in open societies like democracies due to increased opportunities for organization. Eisinger (1973) introduced this framework in the context of U.S. cities, finding the openess of a city’s governance structure, measured by civil liberties and the ease of protest, predicted the number of protests in that city. Tilly (1978) applied Eisinger’s framework to nations as a whole, arguing events like the French Revolution occurred because governments failed to suppress insurgents, providing opportunity for political. Turk (1982), Eubank and Weinberg (1994), Collier and Hoeffler (2000), and Li and Schaub (2004) found democracies experience higher levels of

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political violence because they allow insurgents to recruit fighters and finance activities due to loosely regulated transactions, speech, and group gatherings. Robison et al. (2006)\(^{11}\) found with Islamist terrorist attacks in particular, greater civil liberties correlated with higher levels of political violence. Robison et al. (2006) noted civil liberties likely prompted Islamic terrorism because Salafī-jihādist groups desire to rid their countries of western-sourced democracy through violence. Crelinsten (1989), Hamilton and Hamilton (1983), and Schock (1996) added that democracies prompt terrorism because they are less free to repress civilians following a terrorist attack. This argument is supported by Smelser (2007, p. 29)’s findings that autocracies like Nazi Germany experience low levels of political violence because they repress all protest. On the other hand, Krueger and Malečková (2003) found democracies are less likely to prompt terrorism or to be a target of terrorist attacks, although this finding was not specifically related to Islamist terrorist attacks.

Eyerman (1997) found democracies that recently transitioned from autocracies experience more political violence than democracies or autocracies. LaFree and Dugan (2007) found similar results. LaFree and Ackerman (2009) suggest democratic transitions correlate with terrorism because citizens accustomed to autocratic rule do not respect the ability of a democratic government to enforce laws. The link between weak legitimacy and terrorism is supported by LaFree (1998) who found higher perceived government legitimacy correlated with lower crime rates, and Sunshine & Tyler (2003) found perceived legitimacy to correlate with more cooperation with policing authorities. Crenshaw (1983, p. 25) linked weak legitimacy directly to opportunity for terrorism, writing, “The power of terrorism is through political legitimacy,

\(^{11}\) Robison, Kristopher K., Edward M. Crenshaw, and J. Craig Jenkins. 2006.
winning acceptance in the eyes of a significant population and discrediting the government’s legitimacy.”

3. Foreign Fighter Explanations

While these five terrorism theories overlap somewhat with foreign fighter theories, the distinction between terrorism and foreign fighter activity is important. Domestic terrorist motivations have been extensively studied, and often relate to conditions within a country. Political violence in a foreign country, however, has received much less study, and relates more to ideology than in-country grievances. Hegghammer (2010, 2013) distinguishes between terrorists and foreign fighters, noting objective grievances, material incentives, and political opportunity are not sufficient explanations for foreign fighter participation. Foreign fighter literature instead cites social sanctions, group ideology, and group identity as motivations for foreign fighter participation.

Although some, like Post (1990), have argued against privileging the role of ideology in terrorist recruitment, ideology has empirical support as a motivation for foreign fighters, especially for Islamist foreign fighters. Hassan (2001), Atran (2004), Felter and Fishman (2008), and Hamid and Farral (2015) found adherence to ideology factors more strongly than grievances in decisions to become a foreign fighter. Malet (2010, 2013) and Hegghammer (2010, 2013) underlined how foreign fighters join conflicts when they perceive imminent threats to a unified pan-Islamist community, the *Ummah*.12 Fighting for the *Ummah* is as much an element of identity as of ideology for jihadist foreign fighters, as Salafi-jihadism prioritizes both membership in and protection of the Islamic community (Moghadam 2008).

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12 Examining a virtual manifestation of this pan-Islamist community in Caucasus countries, Knysh (2009) observed that the Salafi-jihadist website kavkazcenter.org used rhetoric like “We are an inseparable part of the Islamic Ummah,” demonstrating how Salafi-jihadists appeal to recruits by crafting a pan-Islamist identity.
It is important to note Benmelech and Klor (2016) published a similar study to this one using a cross-country regression to study Islamic State foreign fighter motivations. Their conclusion differs from that of this thesis, as they found economic and political grievances to be weak indicators of foreign fighter motivation. Focusing instead on why GDP per capita exhibits a positive correlation with Islamic State foreign fighter participation, Benmelech and Klor (2016) concluded Salafi-jihadist ideology attracts recruits who are alienated from western societies—often meaning Muslim immigrants in wealthy western countries. Their thesis cannot explain, then, foreign fighter recruitment from within the MENA region. Additionally, although Benmelech and Klor (2016) cite outside case studies that have been conducted on foreign fighter motivations, looking closely at a single region, and even more closely at a single country, as this thesis does, adds nuance to macro-level statistics. The conclusion of this thesis can also be applied to western countries like those studied by Benmelech and Klor (2016), but is strengthened by the insights gained from a combination of macro and micro-levels of study.

**Tunisia-specific Explanations**

The literature on Tunisia-specific explanations highlights non-democracy explanations like lack of economic opportunities, political marginalization of youth and Salafi-jihadists, bordering unstable regional actors, and existence of jihadist recruitment networks in Tunisia pre-revolution. It also considers democracy explanations like the democratic regime-linked limited state control of mosques, as well as the democratic transition-linked breakdown of security forces and release of jihadists from prison following the Jasmine Revolution.

4. **Non-democracy Explanations for Tunisia**

The Tunisian economic situation is one of the more frequently cited reasons why youth are joining Salafi-jihadist organizations. While before the revolution many considered Tunisia to
be one of the most economically stable countries in North Africa, youth unemployment in Tunisia increased from 29.4% in 2010 (before the revolution) to 42% in 2012 (one year after the revolution), leveling out to a still-high 35.4% in 2017 (Sabha 2014, World Bank 2017).\footnote{To give context for Tunisia’s high unemployment rate, the world youth unemployment rate is 13.8%, while the rate for Morocco was 21% as of March 2017. The rate for the United States in 2017 was 10% (World Bank 2017).} As Fahmi and Medeb (2015) highlight, since Tunisia ended its hadira and Amal welfare programs, Tunisian youth have suffered the economic woes of a declining economy. Zelin (2015) also pointed to widespread disappointment over a worsening post-revolution economy in Tunisia as a factor in Tunisian foreign fighter participation. This argument connects with the economic inequalities theory by reasoning a lack of economic opportunity or a presence of economic inequalities encourages individuals to participate in terrorist organizations.

Scholars also cite political marginalization of Salafists and government corruption as reasons for Tunisia’s increased foreign fighter flow. MacDonald and Waggoner (2017) and Fahmi and Medeb (2015) argue the Tunisian government’s post-2011 exclusion of Salafist views has led to feelings of inadequate political engagement, especially among youth. Although these explanations cite political grievances, which Hegghammer (2010, 2013) argued were not sufficient to prompt foreign fighter participation without ideology, Yerkes (2017) and Zelin (2015) explain how growing corruption in Tunisia’s government is encouraging Tunisians to seek out legitimacy and inclusion in Salafi-jihadist groups. This link between corruption and terrorism has been studied in other contexts, like increased FARC attacks in highly corrupt Colombia or continuing popularity of Hamas due to the corrupt Fatah government (Rotberg 2009). In Tunisia, Salafism seems to be a refuge from government corruption because it provides an extra-governmental source of authority that emulates morality of early Muslims (Olidort
Salafism also often rejects western democracy in favor of promoting Sharia law and *waqf*-based welfare, so Tunisians dissatisfied with a corrupt system and resulting economic problems often look to Salafists for relief (Cavatorta et al. 2012). In addition to promises of material goods, Salafi-jihadist groups like the Islamic State and AQIM promise marriage—a costly endeavor young men are often not able to pursue due to the economic consequences of government corruption (Haykel 2016, Bloom 2014).

A third explanation for Tunisian foreign fighter participation is spillover from instability in Libya. In addition to increased flow of contraband and migrants across the porous Tunisia-Libya border (World Bank 2017), roughly 15% of Islamic State recruits from Tunisia come from the border city of Ben Guerdane (The Soufan Group 2015). Tabesh (2016) pointed to how flow of weapons, money, and recruitment ideology across the Libya-Tunisia border (through cities like Ben Guerdane) are increasing Tunisian extremism.

A fourth explanation cites the existence of jihadist recruitment networks in Tunisia prior to the Jasmine Revolution. Although the actual numbers of Tunisian fighters in the 1980s Afghanistan War or the Iraq War 2003-2011 were lower than other North African countries like Libya, Algeria, or Morocco, Tunisians formed foreign fighter networks as they worked to facilitate movement of fighters (Pargeter 2009). In particular, Tunisians served key administrative roles by recruiting new members and tracking finances, forming networks throughout the MENA region and Europe (Malka and Balboni 2016). Many posit these networks became the basis for Tunisian foreign fighter participation post-Arab Spring.

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14 Salafism follows the *hadith*: “the best of my community is my generation, then those who follow them, then those who follow them” (Olidort 2015).
5. Democracy Explanations for Tunisia

Democracy explanations for Tunisia’s contribution to global jihadism fall into a democratic transition and a democratic regime theory. The democratic transition theory posits an increased supply of potential foreign fighters due to prison releases and lost control of mosques, while the democratic regime theory highlights how civil liberties and underdeveloped local governance have allowed proliferation of Salafi-jihadism.

Like in Eyerman (1997)’s findings, Tunisia’s transition from an autocracy to a democracy weakened its legitimacy in the fight against jihadism because it led to release of jihadists from prison and weakened control of mosques. As Malka and Balboni (2016) note, the Tunisian government released hundreds of Salafi-jihadists from prison in February 2011. This release of jihadists was strategic, distancing the newly democratic Tunisian government from the autocratic Ben-Ali regime. Following this release of prisoners, however, Salafi-jihadist attacks and violent protests in Tunisia saw a sharp uptick. Tellingly, one of the prisoners released was Abu Iyadh al-Tunisi—a terrorist who in 2000 founded the Tunisian Combatant Group, which in 2011 became Ansar al Sharia in Tunisia (AST) (Gartenstein-Ross and Zelin 2012). Further, in the months following the revolution the Tunisian government lost control of hundreds of mosques, leading to an influx of radical imams who began recruiting foreign fighters (Wolf 2014).

Tunisia’s underdeveloped democratic regime then allowed Salafi-jihadist groups to recruit more freely and fulfill the role of absent official local governance. While dictator Ben Ali had tightly controlled freedom of organization and the press, between 7,000 and 10,000 new organizations and more than 200 new media publications emerged in the year after the revolution. 

\[16\] AST grew to an estimated 70,000 members by 2014 and until then was considered one of the main Tunisian Salafi-jihadist groups, but by 2015 no longer maintained a strong domestic presence in Tunisia (Zelin 2015a).
(Malka and Balboni 2016). This freedom, however, also allowed Salafi-jihadist groups like AST to organize and communicate more freely, with membership growing to an estimated 20,000 by 2012 (Malka and Balboni 2016). This relates to the political opportunities theory, as Tunisia’s increased civil liberties allowed proliferation of Salafi-jihadism. Tunisia’s democratic regime also prompts Salafi-jihadism because its local government is underdeveloped, which is unique to Tunisia’s democratic regime rather than a typical element of democratic regimes. As of April 2018, Tunisia has still not held elections for its municipal bodies, meaning governing bodies are unelected, unstable, and inconsistent in providing basic services like trash collection or notarizing public documents (Abderrahim 2017; Braun and Lizundia 2017). Salafist groups have been filling this power vacuum, allowing Salafi-jihadism to gain legitimacy where the official government lacks it (ICG 2013). Although decentralization is not a core theory of the causes of terrorism, Ezcurra (2017) found in a cross-country study that to a certain extent, government decentralization (or development of local governance) seemed to reduce domestic terrorist activity, and Estelle (2018) found a similar link in Libya.\(^{17}\) So, Tunisia-specific explanations cite democracy and non-democracy explanations, while also highlighting factors unique to Tunisia.

**III. DATA METHODS AND HYPOTHESES**

In this thesis, hypotheses predicting drivers of foreign fighter recruitment are classified into two categories: those related to democracy or a democratic transition, and those that are not. Based on review of current literature as well as current events in Tunisia, this thesis investigates the following hypotheses through qualitative and quantitative analysis:

**Democracy Hypotheses**

- **H1:** If civil liberties in a country increase, then foreign fighter participation will increase.

\(^{17}\) While the domestic terrorism Ezcurra (2017) studied is not equivalent to foreign fighter participation, the principle that less-developed local governance can contribute to terrorist activity remains applicable to Tunisia’s foreign fighters.
• $H_2$: If a country possesses weak local government structures, then foreign fighter participation will increase.
• $H_3$: If a government decreases repression of religious organizations, then foreign fighter participation during that period will increase.
• $H_4$: If a government exhibits growing corruption measures, then foreign fighter participation will increase.

Non-democracy Hypotheses

• $H_5$: If a country experiences regional economic inequality, then foreign fighter participation will increase.
• $H_6$: If a country exhibits high general unemployment, then foreign fighter participation will increase.
• $H_7$: If a country exhibits high youth unemployment, then foreign fighter participation will increase.
• $H_8$: If passage to Salafi-jihadist camps in Libya or Syria is more feasible, then foreign fighter participation will increase.

To test these hypotheses, first a cross-country regression was conducted to understand the larger context of what generally motivates foreign fighter participation in the MENA region. Second, this thesis compares the cross-country regression results to quantitative and qualitative data from Tunisia. The cross-country regression measures how independent variables for each of these hypotheses align with foreign fighter flow from Tunisia, Algeria, Azerbaijan, Egypt, Jordan, Lebanon, Morocco, Saudi Arabia, Sudan, and Turkey for the years 2013-2017. These countries were selected because they are located in the MENA region, and each contribute a minimum of 100 fighters to Salafi-jihadist groups. The United Arab Emirates, Ethiopia, Bahrain, Côte d’Ivoire, and Qatar were included as dummy variables, as there is reason to believe they contributed close to no foreign fighters to Salafi-jihadist groups (TSG 2014, 2015, 2017). Nine independent variables were used in the regression to test these hypotheses. For $H_1$,
the independent variable selected was the Civil Liberties Index from V-Dem. For H2, the independent variable selected was the Local Government Index from V-Dem. For H3, the independent variable selected was Religious Organization Repression from V-Dem. For H4, the independent variable selected was the Corruption Perception Index from Transparency International. For H5, the independent variable selected was percentage of agricultural employment out of total country employment from the World Bank. For H6, the independent variable selected was the unemployment rate from the World Bank. For H7, the independent variable selected was the youth unemployment rate from the World Bank. For H8, the independent variables selected were distance by road between the country’s capital and Raqqa, and then Sirte.

The time span of 2013-2017 was chosen due to limitations on publicly-available foreign fighter data. Another limitation on the scope of this analysis is that of extrapolating individual

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20 The civil liberties index ranked countries on a scale of 0-1 based on the question “To what extent is civil liberty respected?” where 0 indicates no respect for civil liberties and 1 indicates complete respect.
21 The local government index ranked countries on a scale of 0-1 based on the question “Are there elected local governments, and if so to what extent can they operate without interference from unelected bodies at the local level?” Zero indicates no elected local government, while 1 indicates local government elected freely and operating independently.
22 The religious organization repression index ranked countries on a scale of 0-1 based on the question “Does the government attempt to repress religious organizations?” Zero indicates severe religious repression and 1 indicates complete religious freedom.
23 Transparency International’s corruption perception index ranks 180 countries on a scale of 0-100 based on “perceived levels of public sector corruption,” where zero indicates high corruption and 100 indicates nonexistent corruption.
24 The use of agricultural employment as a proxy for regional inequalities has some basis in political science literature, as Muller and Seligson (1987) use agricultural employment in tandem with a country’s Gini coefficient to measure regional inequality. Taylor and Bradley (1997) also use agricultural employment to measure regional inequalities in Europe.
25 This number is based on International Labor Organization (ILO) estimates, derived largely from national sources.
26 This variable is measured by the World Bank as the percentage of the labor force ages 15-24 that is unemployed.
27 The data for foreign fighters is aggregated from RAND, The Soufan Group, the International Centre for the Study of Radicalisation and Political Violence (ICSR), and Aaron Zelin’s 2018 report “The Others: Foreign Fighters in Libya,” and are estimated figures informed by national, NGO, UN, and independent academic studies.
foreign fighter motivations from non-individual data. With this cross-country regression forming a basis for comparing Tunisia to general trends within the MENA region, a Tunisia-specific analysis using quantitative data, qualitative data, and GIS analysis follows discussion of regression results.

IV. DATA

Table 1: Middle East and North Africa cross-country regression with Tunisia

<table>
<thead>
<tr>
<th>DV1</th>
<th>DV2</th>
<th>DV3</th>
<th>DV4</th>
<th>DV5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FFs to Syria and Iraq</td>
<td>Total FFs to Libya</td>
<td>Total FFs to Syria, Iraq, and Libya</td>
<td>FF flow (year-to-year)</td>
<td>FFs per million Sunnis</td>
</tr>
<tr>
<td>Population</td>
<td>6.390***</td>
<td>0.787**</td>
<td>8.927***</td>
<td>3.842**</td>
</tr>
<tr>
<td>Agricultural Employment</td>
<td>-15.54 (11.11)</td>
<td>-0.871 (1.313)</td>
<td>-2.045 (14.16)</td>
<td>-5.33 (7.650)</td>
</tr>
<tr>
<td>Youth Unemployment</td>
<td>-56.42 (21.45)</td>
<td>-3.244 (3.012)</td>
<td>-88.70** (37.05)</td>
<td>-36.83 (23.91)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>241.2***</td>
<td>24.07***</td>
<td>310.4***</td>
<td>114.7”</td>
</tr>
<tr>
<td>Corruption Perception Index</td>
<td>10.91 (11.81)</td>
<td>1.201 (2.727)</td>
<td>12.72 (14.01)</td>
<td>2.547 (9.350)</td>
</tr>
<tr>
<td>Civil Liberties Index</td>
<td>6605.1***</td>
<td>408.9***</td>
<td>7431.8***</td>
<td>3930.0***</td>
</tr>
<tr>
<td>Religious Repression Index</td>
<td>-467.4 (234.7)</td>
<td>10.66 (59.99)</td>
<td>-322.6 (310.5)</td>
<td>-295.5” (173.7)</td>
</tr>
<tr>
<td>Local Government Index</td>
<td>-428.2 (676.9)</td>
<td>-290.6” (158.2)</td>
<td>-1557.2 (1125.4)</td>
<td>-503.8 (618.5)</td>
</tr>
<tr>
<td>Distance to Raqqa</td>
<td>-0.234*** (0.0770)</td>
<td>-0.365*** (0.126)</td>
<td>-0.135” (0.0676)</td>
<td>-0.0611*** (0.0132)</td>
</tr>
<tr>
<td>Distance to Sirte</td>
<td>-0.0252* (0.0132)</td>
<td>-0.187* (0.103)</td>
<td>-0.0642 (0.0575)</td>
<td>-0.0149 (0.0101)</td>
</tr>
</tbody>
</table>

Observations: 64

R^2: 0.504 0.348 0.499 0.325 0.682

Standard errors in parentheses.

*p < 0.1, **p < 0.05, ***p < 0.01

28 On this Jessica Stern has noted, “It is difficult to make gross generalizations about what leads individuals to do what they do in any area of life; difficulty in answering this question is not unique to terrorism experts” (Stern 2014).

29 As stated before, summary statistics and regression results with Tunisia removed are included in appendices A, B, C, D, and E.

30 To control for homoscedasticity, I used the Huber-White Sandwich estimator to calculate standard errors.
V. ANALYSIS: CROSS-COUNTRY REGRESSION RESULTS

1. Democracy Hypotheses

**H1:** *If civil liberties in a country increase, then foreign fighter participation will increase.* The cross-country regression suggests a surprising result: the civil liberties index exhibits both a statistically significant and a large positive relationship with four of the five dependent variables. This data suggests there is enough confidence to reject the null hypothesis that civil liberties have no effect on foreign fighter recruitment, and the relationship between civil liberties and foreign fighter recruitment is positive. With relation to DV3, this means if a country in the MENA region were to move from no respect for civil liberties (e.g., North Korea with a score of 0.03) to complete respect for civil liberties (e.g. the Netherlands with a score of 0.95), the total number of foreign fighters from 2013-2017 from that country would increase by an average of 6,837.31 This result is consistent with the political opportunity theory advanced in political science literature.

**H2:** *If a country possesses weak local government structures, then foreign fighter participation will increase.* The cross-country regression results only indicate statistical significance for DV2, which measures total foreign fighters to Libya. Although this independent variable is only significant at the lax confidence level of 90%,32 the signs of correlation coefficients for each of the dependent variables are negative, suggesting a higher level of local governance has a negative correlation with foreign fighter participation. For DV2, this correlation means if a country transitioned from a score of 0 like Qatar to a score like the U.S.’s (0.96), the number of total foreign fighters to Libya would decrease by an average of 279 total foreign fighters between

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31 This was found by calculating 7431.8 x 0.92 [0.95-0.03].
32 This means we can only be 90% confident that this correlation is not due to random chance.
2013-2017.\textsuperscript{33} For DV3, foreign fighters to Syria, Iraq, and Libya, this number becomes even larger, decreasing by an average of 1,495.\textsuperscript{34, 35} This result is consistent with literature on the link between government centralization and terrorism (Ezcurra 2017). Although lacking strong statistical significance, this suggests in the MENA region, higher levels of local government generally correlate with decreased foreign fighter participation.

\textit{H3: If a government decreases repression of religious organizations, then foreign fighter participation during that period will increase.} In the cross-country regression, religious organization repression exhibited a result opposite that expected by the hypothesis; religious repression seemed to correlate with increased foreign fighter participation. This variable exhibited statistically significant negative correlations for DV1\textsuperscript{36} and DV4,\textsuperscript{37} but because increased religious repression is measured as an increase on the scale, this suggests a positive relationship.\textsuperscript{38} This result is contrary to assumptions of political opportunity literature, but somewhat aligns with the emphasis on foreign fighter ideology advanced by Hegghammer (2010, 2013) and Malet (2010, 2013). For DV4, these results indicate for every one-point increase on the religious repression scale (where higher ratings indicate lower religious repression), foreign fighter flow for that year to Syria, Iraq, and Libya increases by an average of 295.5 individuals. In other words, if Maoist China with a rating of 0 and the U.S. with a rating of 0.98 were MENA countries from 2013-2017, there would be an average of 290 more Salafi-

\textsuperscript{33} This number was found by calculating 290.6 x 0.96.
\textsuperscript{34} This number was found by calculating 1557.2 x 0.96.
\textsuperscript{35} Although this correlation with DV3 was not statistically significant at the confidence level of 90\%, its p-value was 0.172, and it exhibited a similar correlation as the statistically significant coefficient for DV2.
\textsuperscript{36} This variable represents total foreign fighters to Syria and Iraq.
\textsuperscript{37} This variable represents total foreign fighter flow.
\textsuperscript{38} While the sign of the coefficients for DV2 and DV5 was positive, these two coefficients were not statistically significant and were relatively close to zero when compared to the large negative coefficients for DV1, DV3, and DV4.
jihadist foreign fighters from China per year than from the U.S. The partial statistical significance indicates this conclusion should be taken with caution. Nevertheless, this negative correlation is suggestive that if a government increases repression of religious organizations, foreign fighter participation will also increase.

**H4: If a government exhibits growing corruption measures, then foreign fighter participation will increase.** The independent variable used to test H4, the Corruption Perception Index (CPI) from Transparency International, was only statistically significant for DV5, and indicates mixed signs for other dependent variables. These mixed results indicate this independent variable should be interpreted with caution. For DV5, the regression suggests every one-point increase on the CPI scale correlated with a decrease of about 5 foreign fighters for every million Sunnis in a specific country. Despite the fact that the regression indicated this result with 99% confidence, this relatively small correlation and mixed results across the five dependent variables do not offer enough confidence to soundly reject the null hypothesis that corruption measures do not correlate with foreign fighter participation.

2. Non-democracy Hypotheses

**H5: If a country experiences regional economic inequality, then foreign fighter participation will increase.** In the regression analysis, the variable used to approximate regional inequality was agricultural employment. Because agriculture is typically a dominant occupation in impoverished regions, this could be a proxy on a national scale for regional inequalities. In the

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39 This number was found by calculating [295.5 x (0.98 - 0)].
40 This variable was statistically significant for DV1 and DV4, but not for DV2, DV3, or DV5.
41 This index scores countries on a scale of 0-100 with lower numbers indicating higher perceived corruption.
42 The use of agricultural employment as a proxy for regional inequalities has some basis in political science literature, as Muller and Seligson (1987) use agricultural employment in tandem with a country’s Gini coefficient to measure regional inequality. Taylor and Bradley (1997) also use agricultural employment to measure regional inequalities in Europe. The Gini coefficient was not used in the regression because this data was not available for countries studied after the year 2010, and so was not relevant to the post-Arab Spring analysis.
countries studied, however, agricultural employment was not statistically significant, even at the law 90% level of confidence. Thus, we are unable to reject the null hypothesis: regional economic inequality has no relationship with foreign fighter participation.

\( H_0: \text{If a country exhibits high general unemployment, then foreign fighter participation will increase.} \) The independent variable used to test \( H_0 \), general unemployment,\(^{43}\) was statistically significant for four out of the five dependent variables tested, displaying a strong positive correlation with foreign fighter participation. This indicates with medium to high confidence that we can reject the null hypothesis that general unemployment has no relationship with foreign fighter participation. For DV3, there is 99% confidence that, a one percentage point increase in unemployment for a MENA country correlates with an average increase of 310.4 foreign fighters to Iraq, Syria, and Libya from 2013-2017. These results are consistent with economic grievance literature and indicate higher unemployment in a country generally correlates with higher foreign fighter participation.

\( H_7: \text{If a country exhibits high youth unemployment, then foreign fighter participation will increase.} \) The results for the independent variable used to test \( H_7 \), youth unemployment,\(^{44}\) suggest a surprising conclusion. Unlike general unemployment, which exhibits a positive relationship to foreign fighter participation, youth unemployment seems to correlate negatively with foreign fighter participation.\(^{45}\) The negative sign for four out of five of the correlation coefficients, as well as statistical significance for DV1 and DV3 is suggestive of this conclusion. For DV3, this means we can say with 95% confidence for every 1\% decrease in youth unemployment, the total number of foreign fighters sent to Syria, Iraq, and Libya between 2013-

\(^{43}\) The numbers for general unemployment were from the World Bank, which used International Labor Organization (ILO) estimates.
\(^{44}\) Numbers for youth unemployment were from the World Bank, using ILO estimates.
\(^{45}\) The scatterplot for this variable with relation to foreign fighter flow is located in appendix F.
2017 increases by an average of 88.7. This result is counterintuitive not only because general unemployment exhibits a positive correlation with foreign fighter participation, but also because it runs contrary to economic grievance literature.

Hs: If passage to Salafi-jihadist camps in Libya or Syria is more feasible, then foreign fighter participation will increase. The independent variables used to measure Hs were distance to Raqqa and Sirte.\(^{46}\) Distance to Raqqa was statistically significant for all four variables studied\(^{47}\) and produced a negative correlation coefficient. This means for every ten kilometers between a country’s capital and Raqqa, the number of foreign fighters that country sent to Iraq or Syria from 2013-2017 decreased by an average of 2.34. In practical terms, a country in North Africa like Algeria\(^{48}\) should see an average of 907.9 fewer total foreign fighters being sent to Iraq and Syria than a country in the Middle East like Lebanon.\(^{49}\) These results are consistent with negative correlations for the independent variable of distance to Sirte, although distance to Sirte exhibited a smaller correlation coefficient. These statistically significant results for distance to Raqqa and distance to Sirte suggest rejection of the null hypothesis that feasible passage to Salafi-jihadist camps in Libya or Syria does not correlate with foreign fighter participation.

VI. ANALYSIS: TUNISIA-SPECIFIC RESULTS

While the cross-country regression provides insights into foreign fighter motivations in the MENA region as a whole, proceeding analysis will use quantitative and qualitative evidence from Tunisia to illuminate how Tunisia aligns with and diverges from regional foreign fighter

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\(^{46}\) This distance was measured in kilometers. Raqqa was chosen because until 2017, the city was widely considered to be the “capital” of the Islamic State in Syria. Sirte was also chosen because between 2013-2017 it was the location of major Libyan Salafi-jihadist training camps. Although DV2 measured foreign fighter travel from cities throughout home countries to cities throughout Syria and Libya, Raqqa and Sirte were chosen for simplicity.  
\(^{47}\) DV2 was removed because it measured fighters traveling to Libya.  
\(^{48}\) Algiers is located 4,344 km from Raqqa.  
\(^{49}\) Beirut is located 464 km from Raqqa. The calculated number was found by calculating \((4344 – 464) \times 0.234 = 907.92\).
trends. The central question of this Tunisia-specific analysis is whether or not democracy is the core reason so many Tunisians are becoming foreign fighters. This analysis concludes that democracy itself does not seem to be the core driver of foreign fighter participation in Tunisia. In fact, Tunisia’s failure to fully deliver on many of its democratic promises like free exercise of religion, democratically elected local governments, and reduced corruption seem to combine with failure to improve the economy as well as ease of travel to Libya, Iraq, and Syria to contribute to Tunisia’s high foreign fighter numbers.

1. Democracy Hypotheses for Tunisia

*H1: If civil liberties in a country increase, then foreign fighter participation will increase.* In the cross-country regression, civil liberties exhibited a statistically significant, positive relationship with foreign fighter participation. Civil liberties in Tunisia also seem to correlate somewhat with foreign fighter participation, as depicted by the graph below, indicating a possible link between political opportunity and Salafi-jihadism. Because civil liberties in Tunisia spiked after the

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50 One caveat for this visual comparison of foreign fighter totals and civil liberties per year is that these are estimations. As noted above, data for foreign fighters is aggregated from RAND, The Soufan Group, the International Centre for the Study of Radicalisation and Political Violence (ICSR), and Aaron Zelin’s 2018 report “The Others: Foreign Fighters in Libya.” The years displayed in this graph (2008-2012) are extrapolated from this 2013-2017 data and informed by reports that foreign fighters were already in the hundreds by early 2011 (Malka and
Jasmine Revolution in 2011, this result aligns with the political opportunity theory predicting that democracies experience higher levels of terrorism. In the early years after the revolution, civil liberties both allowed Salafists to organize more freely, and led to tensions between Tunisia’s secular society and Salafists attempting to practice their religion in public, revealing how civil liberties likely motivated and facilitated foreign fighter participation.

As predicted by political opportunity literature, civil liberties seemed initially to facilitate Salafist organization and radicalization in Tunisia.\(^5\) For two years after the revolution, the ruling Islamist party Ennahda did not strictly regulate Salafist organizations, allowing Salafi-jihadist groups like AST and AQIM auxiliary Katibat Uqba ibn Nafi (KUIN) to grow unchecked (Marks 2015; Zelin 2015a). After years of being forced to organize secretly under Ben Ali, Salafist groups could register as political parties and even hold gatherings that consisted of thousands of people (Malka and Balboni 2016). In addition to allowing local Salafi-jihadist organization, increased civil liberties permitted fundamentalist countries like Saudi Arabia and Qatar to send Salafi-jihadist propaganda and money to fund foreign fighter travel (Bass 2013; Zelin 2013). Thus, increased freedom for Salafist groups to organize and spread their messages seems to have facilitated foreign fighter radicalization in Tunisia. The motivation for Salafists to listen to and respond to these jihadist recruitment messages, however, comes from the unfulfilled promise of free religious practice.

Salafists attempting to practice their post-revolution religious liberties have met strong social opposition in Tunisia, motivating them to seek the more pious environment of foreign

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\(^5\) In Tunisia, several key civil liberties included in the post-revolution constitution include freedom of religious exercise, expression, and assembly (Title I: Article 6; Title II: Articles 31, 37).
Salafi-jihadist groups. After decades of Presidents Bourguiba and Ben Ali repressing religious liberty, the Jasmine Revolution promised change. One of the most visual examples of this repression was President Bourguiba’s ban of the *niqab* and *hijab* in schools in 1957, and Ben Ali’s use of security forces to harass women wearing veils (Smadhi and Joyce 2014). The post-revolution Tunisian Constitution, in contrast, guarantees “free exercise of religious practices,” but Tunisia’s secular society has hindered *de facto* free exercise of religion (Title 1: Article 6, 2014). In 2012, for example, Manouba University Dean Habib Kazdaghli banned the *niqab*, claiming that the covering created security and identification concerns (Daley 2012; Amara 2017). Salafist students on campus reacted by staging protests and other demonstrations, some of which turned violent (Daley 2012; Amara 2011). In addition to prompting protest, these kinds of limitations on individual religious practice likely motivate Salafists to become foreign fighters because groups like the Islamic State promise a caliphate run according to Sharia law (Malka and Balboni 2016). Thus, civil liberties in Tunisia highlight how the failed promise of free exercise of religion combined with greater opportunity to organize under Tunisia’s democratic regime to prompt foreign fighter participation.

*Hypothesis 2 (H2): If a country possesses weak local government structures, then foreign fighter participation will increase.* The cross-country regression suggests weak local government structures correlate with increased foreign fighter participation. In Tunisia as well, qualitative evidence suggests one of the factors driving foreign fighter participation is underdeveloped local government. The results align with (Ezcurra 2017)’s theory that countries lacking strong local government structures experience higher levels of terrorism. This was classified as a democracy hypothesis because democracies should, ideally, hold democratic elections for all levels of government—a
feat Tunisia has yet to accomplish as of April 2018.\textsuperscript{52} Indeed, qualitative evidence suggests Tunisia’s underdeveloped local governments create power vacuums that Salafi-jihadist groups fill, allowing these groups to radicalize and recruit foreign fighters. Like $H_1$, results for $H_2$ point to how Tunisia’s failure to fulfill the promises of democracy stimulate increased foreign fighter participation.

Following the Jasmine Revolution, Tunisian municipal governments were in turmoil, permitting Salafi-jihadist groups to establish extrajudicial authorities in many neighborhoods. Municipal governments were formed haphazardly with unelected representatives during the months following the revolution, with some remaining nonexistent for several years (ICG 2013). Salafi-jihadist groups like AST quickly responded to this perceived need for local governance by infiltrating impoverished interior and border regions as well as working-class suburbs of wealthy coastal cities, providing security and Salafist charity ($\textit{waqf}$) (Boukhars 2014). In addition to providing services like security and traffic control, these neighborhood Salafist groups offer economic mediation, schooling, and even marital counseling (ICG 2017). These services strengthened the perceived legitimacy of Salafist organizations, prompting disillusioned Tunisians to listen sympathetically to Salafi-jihadist messages. One Tunisian even noted that he joined a Salafi-jihadist organization simply because it helped him recover property stolen after the revolution (Whewell 2013). Moreover, Salafists facilitate the informal smuggling economy in impoverished border neighborhoods, gaining the loyalty of local Tunisians and strengthening routes that transport foreign fighters (ICG 2017). Although Tunisian authorities have attempted to combat this informal system of justice and governance by arresting many of its leaders, these theocratic neighborhood structures persist into 2017 (ICG 2017).

\textsuperscript{52} A first round for municipal elections are scheduled for May 9, 2018, although repeated postponements in the past cast doubt on this possibility (\textit{Reuters staff} 2017).
Tunisia’s underdeveloped local governments seem to both motivate and facilitate foreign fighter participation, aligning with patterns in the MENA region. In addition to supporting Ezcurra (2017)’s findings, this result supports democratic transition literature because Tunisia’s destabilizing democratic transition is partly responsible for underdeveloped local governments.

H3: If a government decreases repression of religious organizations, then foreign fighter participation during that period will increase. In the cross-country regression, repression of religious organizations seemed to correlate with increased foreign fighter participation, turning the political opportunities theory on its head. While those subscribing to the political opportunities theory might expect more religious repression would lead to decreased foreign fighter participation, the cross-country regression displays the opposite effect. In Tunisia, too, this trend holds true. As Figure 2 illustrates, there seems to be a modest correlation between religious repression and foreign fighter flow in Tunisia. Some might conclude religious

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53 Here, the religious repression index (0-1) was first subtracted from 1 to get a measure where when religious repression increases, the numerical score on this graph will also increase. The index was then multiplied by 1,000 to display visually how the relative changes in score magnitude compare with foreign fighter numbers per million Sunnis in Tunisia.
repression correlates with foreign fighter participation in Tunisia because Salafists disappointed by failed promises of religious freedom are driven to escape to a foreign jihadist conflict where they can freely practice Salafism. However, it is also possible that the Tunisian government’s religious repression is a response to increased Salafi-jihadist activity. This discussion concludes that results are likely driven by both Tunisia’s repressive response to Salafi-jihadism as well as resulting Salafist alienation, indicating again that unfulfilled promises of democracy could motivate foreign fighter participation.

Since 2013, the Tunisian government began to rein in the civil liberties that, as discussed in H1, initially allowed Salafi-jihadist groups to organize and recruit foreign fighters. This crackdown followed an AST-organized riot outside the U.S. Embassy in Tunis and a political assassination coordinated by AST and KUIN in February 2013 (Counter Extremism Project 2016; Zelin 2015a). The ruling party Ennahda reacted by banning AST’s annual meeting in May and policing similar Salafist gatherings (Gall 2015). Two months later, in July 2013, AST assassinated a second liberal politician, leading Ennahda in August to ban the group, declaring it a terrorist organization (Counter Extremism Project 2016).\footnote{Although KUIN is also a significant Salafi-jihadist presence in Tunisia, it tends to focus on conducting a domestic Tunisian insurgency, while AST focuses more on recruiting foreign fighters, and was considered the central Salafi-jihadist group in Tunisia until 2015 (Zelin 2015b; ICG 2013).} As Figure 2 shows, increased religious repression only lasted through 2013 and 2014, likely because AST increasingly began operating from strongholds in Libya rather than in Tunisia (Malka and Balboni 2016). During 2013 and 2014 though, heightened religious repression often seemed to respond to increased Salafi-jihadist activity in Tunisia.

Increased religious repression during those two years may also have pushed Salafists to become foreign fighters by disillusioning them with the failed promises of democratic religious
freedom. Even prior to the revolution, religious repression often correlated with foreign fighter participation. Many of Tunisian Salafists who became foreign fighters in the Afghanistan War and the Iraq War likely seemed to do so in part to escape Ben Ali’s repressive tactics of imprisoning Salafists and policing sermons (Boukhars 2014; Gall 2015). In the post-revolution environment, the Tunisian government’s increased religious repression beginning in 2013 also led AST to increasingly focus on “takfiri-minded jihad,” encouraging more recruits to become foreign fighters (Merone 2017, p. 73). In fact, in the months after AST was declared a terrorist organization, its members flocked in large numbers to Libyan Salafi-jihadist training camps (Gall 2015).

So, a link between religious organization repression and foreign fighter participation in Tunisia is likely because the Tunisian government responded to Salafi-jihadist activity with increased repression, which in turn drove Salafists to become foreign fighters.

**H4:** If a government exhibits growing corruption measures, then foreign fighter participation will increase. Although this hypothesis had little statistically significant support in the regression analysis, post-revolution corruption Tunisia suggests this may both motivate and facilitate foreign fighter participation by representing yet another unfulfilled promise of democracy. Rotberg (2009) argues that corruption can both motivate and facilitate terrorism. In Tunisia as well, qualitative evidence suggests corruption may both motivate fighters to join Salafi-jihadist groups and facilitate travel through weakened border security.

Tunisians often voice disappointment with growing post-2011 corruption, pointing to the possibility that corruption is motivating foreign fighter participation. Yerkes (2017) informs that

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55 While discussion for H3 is similar to H1 in discussing Salafist religious freedom, H3 discusses religious repression from the state, while H1 discusses religious repression from secular society in Tunisia. Distinguishing between these two sources of repression of free individual exercise and later repression of religious organizations highlights the many sources of religious grievances for Salafists in Tunisia.
corruption today is worse than it was under the autocratic Ben Ali in all levels of the national
government, bureaucracy, and police force. In a survey of Tunisians, 76% of respondents agreed
that “there is more corruption in Tunisia today than there was under Ben Ali” (Yerkes 2017, p. 5).
Trust in the Tunisian government has also dropped dramatically, from 62% in 2011 to 16% in
2014 (Abbott and Teti 2016). Moreover, awareness of corruption seems highest among those 18-
29 in Tunisia, when compared with those 50 and older, meaning the young people most likely to
be recruited by Salafi-jihadist groups are most motivated to join (Robbins and Jamal 2016).
Awareness of corruption may then motivate Tunisians to become foreign fighters because
disillusionment could drive them toward the piety and perceived legitimacy of the Salafi-jihadist
message (Malka and Balboni 2016; Callimachi 2018).

In addition to motivating Tunisians to become foreign fighters, corruption seemed to
facilitate foreign fighter travel across the porous Tunisia-Libya border by allowing informal trade
to grow. One of the reasons illicit trade has flourished under the post-revolutionary government
is because national corruption has led to continued postponement of local elections, causing
border policing to be lax (Meddeb 2017). Failing to find licit jobs due to high national and youth
unemployment, those in poor border regions increasingly turn to illicit jobs like smuggling
(Yerkes 2017). This porous border not only allows practices like money laundering, drug
trafficking, and arms trafficking, but also facilitates foreign fighter travel and terrorist financing
(Rotberg 2009; Gall 2017). The influence of this porous border is not only linked to corruption,

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56 A recent New York Times report, “The ISIS Files,” uncovered primary documents the Islamic State left behind in
Syria, outlining the detailed and relatively functioning governing structures the Islamic State constructed in territory
it held from 2014-2017. While countries like Tunisia often forced citizens to bribe officials (called a “corruption
tax”) to accomplish menial tasks, the Islamic State instated in its occupied territories fairly efficient services like
trash collection, sharecropping, healthcare, and distribution of needed goods (Yerkes 2017; Callimachi 2018). This
pious and organized system would likely have appeared attractive to Tunisians disillusioned with an increasingly
corrupt government.
but also to regional inequalities, so the ramifications of the informal economy will receive further elaboration in discussion for Hs.

Despite lack of statistical significance, corruption appears to both motivate and facilitate foreign fighter participation. Taking the democracy hypotheses together, it seems the unfulfilled promises of the Jasmine Revolution likely motivate Tunisians to become foreign fighters, while initially increased civil liberties for Salafist groups, underdeveloped local government, and smuggling along the Tunisia-Libya border facilitate foreign fighter participation.

2. Non-democracy Hypotheses for Tunisia

$H_5$: If a country experiences regional economic inequality, then foreign fighter participation will increase. In the regression analysis, agricultural employment was not statistically significant.$^{57}$ Despite lack of statistical significance, political and economic marginalization in border regions informs how Tunisia’s regional inequalities could motivate foreign fighter participation.$^{58}$

Historically, Tunisia’s southeast border has been marginalized since the French protectorate when elites dismissed this region as backward and overly tribal. This political marginalization lay the foundation for future economic marginalization as these nomadic peoples were forced to give up pastoral livelihoods for agriculture in an infertile region (Boukhars 2017). Continuing this historic marginalization, the government today sends roughly 70% of its budget to the wealthy interior, distributing only a fraction of the remaining funds to border regions (see appendix G for a visualization of unequal regional unemployment) (Yerkes and Muasher 2017).

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$^{57}$ Agricultural employment was used as a proxy for regional inequalities because impoverished and historically disenfranchised regions in Tunisia tend to be largely agricultural. Using the dominant industry in an area to measure regional inequalities has been done in other studies, like Taylor and Bradley (1997) in measuring regional inequalities in Europe, as well as in Muller and Seligson (1987) when measuring regional inequalities in relation to political violence. In Tunisia, low measures of agricultural employment could proxy for regional economic inequalities because Tunisia’s most political and economically disenfranchised border regions are overwhelmingly agricultural (Boukhars 2017).

$^{58}$ The map of unemployment by Tunisian governorate in appendix G illustrates through standard deviation how unemployment is disproportionately concentrated in the border and interior regions.
The resulting economic underdevelopment in these border regions has led to negative externalities like the swelling informal economy and growth in Salafi-jihadism. Continuing a decades-long tradition of smuggling across the border with Libya, Tunisians in border regions today operate a thriving informal trade due to lack of licit alternatives (Boukhars 2017). Although hard numbers are difficult to find because of the nature of this hidden trade, the World Bank ranked the informal sector in Tunisia as the second largest “business environment obstacle” in the country, indicating a significant presence (World Bank 2013). Moreover, Tunisia’s informal economy is estimated to employ 37% of the labor force, with workers heavily concentrated in border regions (Ben Cheikh 2012). Growth in the informal economy has implications for Salafi-jihadism, as an informal economy indicates both weak government control and necessity-driven illicit activity in these regions.

The result of this marginalization and increased illicit economy in Tunisia is increased Salafi-jihadist activity and foreign fighter participation. In months after the Jasmine Revolution, Salafi-jihadist protests exploded in border regions, expressing discontent after years of repression under Ben Ali (Boukhars 2017). These Salafi-jihadist protests still continue in 2018 largely because economic conditions in border regions are not improving (Jebli 2018). Tunisia’s Salafi-jihadist movement has been driven predominantly by the socioeconomically marginalized, so the proliferation of Salafi-jihadist activity in border regions is not surprising (Marks 2015). As Marks (2013) notes, Tunisians in border regions often feel frustration and powerlessness. This makes Salafi-jihadism especially attractive, as individuals can attain positions of authority, fight for the *Ummah*, and find meaningful employment (Malka and Balboni 2016).

Therefore, while regression results for agricultural employment are not statistically significant, the push factor of regional inequalities in Tunisia seems to combine with the pull
factor of Salafi-jihadist ideology, noted in foreign fighter literature by Hegghammer (2010, 2013) and Malet (2010, 2013), to motivate foreign fighter participation.

*H0: If a country exhibits high general unemployment, then foreign fighter participation will increase.* The cross-country regression suggests a significant and positive correlation between general unemployment and foreign fighter participation. In Tunisia, this relationship also seems valid. As Figure 3 shows, unemployment in Tunisia spiked in 2011, likely contributing to the lagged effect of increased foreign fighter participation in the years studied, 2013-2017. Additionally, the relative magnitude of Tunisia’s unemployment in comparison with other

![Figure 3: Tunisian foreign fighter flow and unemployment](image3)

![Figure 4: Unemployment average by country](image4)
MENA countries demonstrates how the economic problem of unemployment in Tunisia likely has encouraged foreign fighter participation (Figure 4). Qualitative evidence from Tunisians’ reactions to high unemployment further demonstrate how economic grievances and the need for employment could be linked to foreign fighter participation.

As will be elaborated in H7, Tunisians often cite economic problems as issues the post-revolutionary government is not addressing, indicating widespread disappointment with the Jasmine Revolution that could contribute to foreign fighter participation. In fact, interviews with Tunisian foreign fighters have highlighted the strong link between bad economic conditions and jihadism. One Tunisian who joined the Islamic State said to a reporter: “I can’t build anything in this country. But the Islamic State gives us the chance to create, to build bombs, to use technology” (Packer 2016). Other interviews underline how unemployment not only creates grievances, but also economic need that influences foreign fighter participation. One Tunisian foreign fighter seemed to have traveled to Syria partly for economic reasons; while in Syria he received a salary and when he returned to Tunisia he immediately bought a set of nice clothes for his parents (Zelin 2013). So, evidence from Tunisia’s experience with high unemployment builds on the discussion of regional inequalities in H5 to underline influence of bad economic conditions on foreign fighter participation. As will be emphasized in the discussion for H7, youth unemployment provides an even stronger marker of how Tunisia’s dire economic conditions influence foreign fighter participation by creating disillusionment as well as economic need.
If a country exhibits high youth unemployment, then foreign fighter participation will increase. The cross-country regression results suggest that in general, flow of foreign fighters exhibits a statistically significant, negative relationship with youth unemployment. This result is the opposite of that predicted by the hypothesis and does not seem to be true for Tunisia. Rather, in Tunisia it is likely that the spike in youth unemployment in 2011, as well as persistently high youth unemployment relative to other MENA countries contributed to increased foreign fighter participation in 2013-2017. This further aligns with Tunisians frustration with persistently high youth unemployment rates after the Jasmine Revolution. This frustration as well as economic need for employment has likely contributed to Tunisia’s high foreign fighter participation.

One explanation for the difference between regression results and evidence from Tunisia could be that idiosyncrasies unrepresentative of Tunisia’s foreign fighters in the cross-country data are driving results. For example, Jordan is near the bottom of general unemployment rankings, but near the top of youth unemployment rankings. The same is true for Egypt and Saudi Arabia. Large differences between the magnitude of youth and general unemployment could be skewing results without providing the full picture. Examining youth unemployment in Jordan compared with foreign fighter flow, the relationship suggests a weak positive correlation (0.11) from 2013-2017, while a stronger positive correlation (0.45) when the years are expanded to 2009-2017 (see Appendix K). Appendix F illustrates a scatterplot between foreign fighter flow and youth unemployment, displaying how outliers in foreign fighter flow (some of which are points for Tunisia) are not represented by the regional trend line.
While high youth unemployment in Tunisia was one of the critical factors many claim drove the Jasmine Revolution, persistently high youth unemployment rates following 2011 represent yet another unfulfilled promise of democracy (Assaad 2011). Tunisia’s historically high youth unemployment results in part from the large number of young Tunisians holding advanced degrees, making them overqualified for many jobs in Tunisia. From 2009-2010, roughly 40% of Tunisia’s 18-23-year-olds were enrolled in universities, but once they graduated many were forced to rely on parental support until they could find a job matching their skill sets (De Bel-Air 2016). Moreover, youth unemployment in Tunisia spiked immediately after the revolution from 29.4% in 2010 to 42.4% in 2012, likely producing a lagged effect in prompting foreign fighter participation from 2013-2017 that the regression could not measure (World Bank 2017). This explanation for Tunisia’s divergence from regression results has merit particularly because youth unemployment only includes those aged 15-24, while the average age of an Islamic State foreign fighter is 26 (TSG 2014; Campbell 2015). A 24-year-old who experienced the 2011 spike in unemployment and remained unemployed even after the Jasmine Revolution would likely begin to develop grievances and a sense of powerlessness, making the lure of fighting in a heroic and lucrative foreign jihad particularly tempting (Callimachi 2018).
Public opinion surrounding youth unemployment in Tunisia often highlights disappointment with the post-revolutionary government, again pointing to economic grievances that could then prompt foreign fighter participation. According to a 2017 survey, 70% of Tunisians agree that “Employment should be the government’s first priority regarding Tunisian youth,” while 73% of Tunisians believe Parliament is doing nothing to address their needs (IRI 2017). Youth unemployment is producing both anger and a sense of powerlessness among Tunisians—sentiments that could potentially motivate individuals to become foreign fighters (Malka and Balboni 2016). Moreover, the link between unemployment and the decision to engage in illicit employment is supported by Gurr’s (1968) relative deprivation theory, as well as Dube and Vargas (2013) who found that in Colombia, individuals who lack licit employment are more likely to engage in illicit activities. Thus, the conclusion for youth unemployment mirrors that for general unemployment, accentuating how economic conditions likely combine with political grievances to motivate Tunisian foreign fighter participation.

Hs: If passage to Salafi-jihadist camps in Libya or Syria is more feasible, then foreign fighter participation will increase. This hypothesis provides yet another non-democracy explanation for foreign fighter recruitment, this time pointing to feasibility of travel rather than motivation. Regression results for this hypothesis indicated both negative and statistically significant correlations across almost all dependent variables.60 Naturally, humans are more likely to travel to a location if it is geographically closer to them. While the capital of Tunisia is 4,344 km from Syria,61 from 2011-2013 travel from Tunisia to Syria was relatively easy because Tunisians did not require visas to enter Turkey, and direct Tunis to Istanbul flights were relatively cheap

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60 Results for Raqqa were more statistically significant than those for Sirte.
61 This number could be compared with Jordan or Lebanon at 651 km and 464 km, respectively.
(Malka and Balboni 2016). Even when the Tunisian government instated international travel restrictions for those younger than thirty-five, the porous Tunisia-Libya border allowed continued ease of travel to Libya, Iraq, and Syria (Malka and Balboni 2016; Boukhars 2018). Further, travel hubs in Libya are often training camps for foreign fighters, increasing the likelihood that Tunisians from 2013-2017 would travel to these camps before joining conflicts in Iraq, Syria, or elsewhere in Libya. The map on page 38 explores this hypothesis on a domestic level in Tunisia by illustrating road connectivity between Tunisian hometowns of foreign fighters and Libyan Salafi-jihadist training camps.

Scholars generally agree that the three cities of Ben Guerdane (15.2%), Bizerte (10.7%), and Tunis (10.7%) are the largest sources of foreign fighter recruits in Tunisia, so these cities were highlighted in red on the map (TSG 2015; Zelin 2018). On this map, connectivity seems to correlate with foreign fighter contribution for Tunis and Ben Guerdane but appears weaker for Bizerte. While these results are suggestive that logistics facilitate foreign fighter travel, they also reveal that many of the confirmed hometowns of foreign fighters are not well-connected to Libyan training camps. These two observations suggest that in Tunisia, the majority of foreign fighter recruitment fits the pattern found in the cross-country regression; namely, that logistics facilitates recruitment. Many sources of foreign fighters, though, are not particularly well-connected via road networks to Libyan jihadist training camps, but still travel there. So, while ease of travel seems to facilitate foreign fighter travel,

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62 In fact, ease of travel to Turkey from MENA countries has been cited as a central reason for the high number of foreign fighters in Syria. Istanbul is a known tourist location, making flights cheap and inconspicuous (Zelin 2013).
63 With GIS software, roads in Tunisia and Libya were digitized into a network, and then analyzed for density of least-cost paths between Tunisian cities and Libyan training camps. A tool called Kernel density was used to visualize how many times these paths overlapped with one another, showing connectivity. The cities used in the network analysis were from a 2018 report by Aaron Zelin that mapped hometowns of Salafi-jihadist recruits in Tunisia. Libyan Salafi-jihadist training camps are from Estelle (2018). Larger images of this map and of the cities Ben Guerdane, Bizerte, and Tunis are in appendices H, I, and J).
64 This analysis comes with significant caveats. Data for Tunisian and Libyan roads was obtained from an open source database, and locations of both Libyan training camps and Tunisian foreign fighter cities are from secondary sources that do not claim certainty.
political and economic grievances likely also motivate Tunisians to become foreign fighters even when travel is more difficult.

VII. CONCLUSION

When a country overthrows its dictator, the promises of democracy and youthful hope for the future seem nearly incorruptible. Citizens dream of the new civil liberties they will enjoy, and youth envision a future of increased opportunity. When Tunisia overthrew dictator Zine El Abidine Ben Ali in the 2011 Jasmine Revolution, Salafists dreamed of the religious liberties they would enjoy, and young Tunisians envisioned increased economic opportunities. Seven years after this overthrow, though, Tunisia’s failed democratic promises, struggling economy, and continuing regional inequalities seem to have disillusioned many Tunisians—particularly Tunisian Salafists. When these disappointments combined with increased opportunity for Salafists to recruit foreign fighters, flow of Tunisians to foreign Salafi-jihadist conflicts swelled.
This thesis has highlighted how Tunisian foreign fighter participation aligns with and diverges from trends in the overall MENA region, finding that democracy itself does not appear to be the core driver in Tunisia’s high foreign fighter numbers. Tunisia’s destabilizing and imperfect experience with democracy, on the other hand, does seem to play a significant role. Without the Jasmine Revolution, Tunisians would not have experienced the disillusionment stemming from unfulfilled democratic promises, nor the destabilization, civil liberties, underdeveloped local governments, and growing informal trade that facilitate foreign fighter participation.

This link between the Jasmine Revolution and foreign fighter participation, however, does not indicate that pro-democracy regimes should stop promoting democracy, or that democratic revolutions should be avoided in the MENA region. Instead, many of the results that pointed to broken promises of the revolution—results for religious repression, restrained Salafist exercise of religion, corruption, and underdeveloped local governments—highlight ways in which democracy promotion could have avoided this situation in Tunisia. In addition to addressing these failures to deliver on promises of democracy, pro-democracy regimes like the U.S. could concentrate aid for new democracies on fostering economic growth. In Tunisia, the apparent link between economic grievances (unemployment and regional inequalities) and foreign fighter participation highlights how certain kinds of foreign aid or trade deals with Tunisia could remove the lure of participating in a seemingly glamorous and lucrative foreign jihad. To help reduce these grievances, the U.S. could leverage an offer of increased economic aid to Tunisia on the condition that Tunisia reduce business regulations. This would make Tunisia more attractive for foreign investment and enable Tunisian entrepreneurs to more easily
start businesses, increasing employment opportunities.\textsuperscript{65} The U.S. could also establish trade deals with Tunisia, lowering tariffs on selected Tunisian exports to boost the economy. Regardless of the specific policy pro-democracy regimes follow, the central lesson of Tunisia is that newly democratic governments must be circumspect about fulfilling the promises and expectations of their revolutions.

As the headiness of revolution wears off, citizens of a new democracy will naturally expect to enjoy new rights and improved conditions. Failure to fulfill these expectations produces dangerous disappointment, while attentiveness to these desires can place a democracy on a peaceful foundation. In Tunisia the potential for peaceful democracy has not died, but it may be in jeopardy. Strengthening democratic institutions, enforcing civil liberties for all citizens, and building foundations for economic growth can thus help Tunisia as well as countries that undergo democratic revolutions in the future to reduce the risk of foreign fighters, creating a more peaceful global environment.

\textsuperscript{65} The Global Competitiveness Report for 2017 ranked “inefficient government bureaucracy” as the number one business environment obstacle in Tunisia (Schwab 2017). This indicates that reduced business regulations could make bureaucracy more efficient, thus encouraging both foreign and domestic entrepreneurship.
## APPENDIX

### A. Cross-country Regression with Tunisia

Table 1: Middle East and North Africa cross-country regression with Tunisia

<table>
<thead>
<tr>
<th>DV1</th>
<th>DV2</th>
<th>DV3</th>
<th>DV4</th>
<th>DV5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total FFs to Syria and Iraq)</td>
<td>(Total FFs to Libya)</td>
<td>(Total FFs to Syria, Iraq, and Libya)</td>
<td>FF flow (year-to-year)</td>
<td>FFs per million Sunnis</td>
</tr>
<tr>
<td>Population</td>
<td>6.390***</td>
<td>0.787**</td>
<td>8.927***</td>
<td>3.842**</td>
</tr>
<tr>
<td>(1.950)</td>
<td>(0.351)</td>
<td>(2.740)</td>
<td>(1.584)</td>
<td>(0.343)</td>
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<tr>
<td>Agricultural Employment</td>
<td>-15.54</td>
<td>-0.871</td>
<td>-2.045</td>
<td>-5.333</td>
</tr>
<tr>
<td>(11.11)</td>
<td>(1.313)</td>
<td>(14.16)</td>
<td>(7.650)</td>
<td>(1.512)</td>
</tr>
<tr>
<td>Youth Unemployment</td>
<td>-56.42**</td>
<td>-3.244</td>
<td>-88.70**</td>
<td>-36.83</td>
</tr>
<tr>
<td>(21.45)</td>
<td>(3.012)</td>
<td>(37.05)</td>
<td>(23.91)</td>
<td>(4.157)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>241.2***</td>
<td>24.07**</td>
<td>310.4***</td>
<td>114.7*</td>
</tr>
<tr>
<td>(73.14)</td>
<td>(9.880)</td>
<td>(102.7)</td>
<td>(63.03)</td>
<td>(11.88)</td>
</tr>
<tr>
<td>Corruption Perception Index</td>
<td>10.91</td>
<td>1.201</td>
<td>12.72</td>
<td>-2.547</td>
</tr>
<tr>
<td>(11.81)</td>
<td>(2.727)</td>
<td>(14.01)</td>
<td>(9.350)</td>
<td>(1.647)</td>
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<td>Civil Liberties Index</td>
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<td>408.9</td>
<td>7431.8***</td>
<td>3930.0***</td>
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<tr>
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<td>(292.0)</td>
<td>(2024.4)</td>
<td>(1322.1)</td>
<td>(193.6)</td>
</tr>
<tr>
<td>Religious Repression Index</td>
<td>-467.4*</td>
<td>10.66</td>
<td>-322.6</td>
<td>-295.5*</td>
</tr>
<tr>
<td>(234.7)</td>
<td>(59.99)</td>
<td>(310.5)</td>
<td>(173.7)</td>
<td>(33.38)</td>
</tr>
<tr>
<td>Local Government Index</td>
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<td>-290.6*</td>
<td>-1557.2</td>
<td>-503.8</td>
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<tr>
<td>(676.9)</td>
<td>(158.2)</td>
<td>(1125.4)</td>
<td>(618.5)</td>
<td>(103.6)</td>
</tr>
<tr>
<td>Distance to Raqqa</td>
<td>-0.234***</td>
<td>-0.365***</td>
<td>-0.135*</td>
<td>-0.061***</td>
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<tr>
<td>(0.0770)</td>
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<td>(0.0676)</td>
<td>(0.0132)</td>
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<tr>
<td>Distance to Sirte</td>
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<td>-0.187*</td>
<td>-0.0642</td>
<td>-0.0149</td>
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<tr>
<td>(0.0132)</td>
<td>(0.103)</td>
<td>(0.0575)</td>
<td>(0.0101)</td>
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</tr>
<tr>
<td>Observations</td>
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<td>62</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.504</td>
<td>0.348</td>
<td>0.499</td>
<td>0.325</td>
</tr>
</tbody>
</table>

Standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$
### B. Summary Statistics with Tunisia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV1</td>
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<td>1286.35</td>
<td>0</td>
<td>7000</td>
</tr>
<tr>
<td>DV2</td>
<td>75.63265</td>
<td>221.689</td>
<td>0</td>
<td>1500</td>
</tr>
<tr>
<td>DV3</td>
<td>850.3067</td>
<td>1454.47</td>
<td>0</td>
<td>7900</td>
</tr>
<tr>
<td>DV4</td>
<td>314.2934</td>
<td>679.692</td>
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<td>4011.428</td>
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<td>DV5</td>
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<td>44.5</td>
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</tr>
<tr>
<td>Corr. Perc.</td>
<td>37.6625</td>
<td>14.21</td>
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<td>71</td>
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<tr>
<td>Civ. Lib. Index</td>
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<td>2502.82</td>
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<td>Dist. Sirte</td>
<td>4625.8</td>
<td>2264.93</td>
<td>0</td>
<td>8026</td>
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</table>
### C. Cross-country Regression Without Tunisia

Table 2: Middle East and North Africa cross-country regression without Tunisia

<table>
<thead>
<tr>
<th></th>
<th>(DV1) Total FFs to Syria and Iraq</th>
<th>(DV2) Total FFs to Libya</th>
<th>(DV3) Total FFs to Syria, Iraq, and Libya</th>
<th>(DV4) FF flow (year-to-year)</th>
<th>(DV5) FFs per million Sunnis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>3.909***</td>
<td>0.301**</td>
<td>5.354***</td>
<td>2.552**</td>
<td>-1.059***</td>
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<tr>
<td></td>
<td>(1.055)</td>
<td>(0.121)</td>
<td>(1.431)</td>
<td>(1.173)</td>
<td>(0.285)</td>
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<tr>
<td>Agricultural Employment</td>
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<td>-0.141</td>
<td>1.747</td>
<td>3.435</td>
<td>1.362</td>
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<td></td>
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<td>(4.254)</td>
<td>(3.669)</td>
<td>(0.875)</td>
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<td>(23.39)</td>
<td>(23.35)</td>
<td>(2.971)</td>
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<tr>
<td></td>
<td>(42.67)</td>
<td>(2.257)</td>
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<td>(9.167)</td>
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<td>(97.33)</td>
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<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.708</td>
<td>0.567</td>
<td>0.739</td>
<td>0.287</td>
<td>0.828</td>
</tr>
</tbody>
</table>

Standard errors in parentheses

*p < 0.1, **p < 0.05, ***p < 0.01*

66 To control for homoscedasticity, I used the Huber-White Sandwich estimator to calculate standard errors.
**D. Summary Statistics Without Tunisia**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV1</td>
<td>571.986</td>
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</tr>
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</tr>
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<td>602.639</td>
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</tr>
<tr>
<td>DV4</td>
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<tr>
<td>DV5</td>
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<td>Yunemployment</td>
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<td>44.5</td>
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</tr>
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</tr>
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<td>-0.2896</td>
<td>1.176759</td>
<td>-2.76</td>
<td>1.96</td>
</tr>
<tr>
<td>Dist. Raqqa</td>
<td>3447.74</td>
<td>2560.604</td>
<td>464</td>
<td>9674</td>
</tr>
<tr>
<td>Dist. Sirte</td>
<td>4805.11</td>
<td>2180.118</td>
<td>0</td>
<td>8026</td>
</tr>
</tbody>
</table>
E. Differences in the With-Tunisia and Without-Tunisia Regressions

When Tunisia was removed from the regression analysis, the main shift that occurred was diminished magnitude of the correlation coefficients. For almost all of the significant coefficients, the signs remained the same, and there were few changes in statistical significance.

Major differences when Tunisia was taken out of the regression analysis include:

- The negative correlations between youth unemployment and foreign fighter participation became smaller in magnitude.
- The positive correlations between general unemployment and foreign fighter participation became smaller in magnitude.
- The positive correlations between the civil liberties index and foreign fighter participation became smaller in magnitude.
- The negative correlations between religious repression and foreign fighter participation became smaller in magnitude.
- The negative correlations between local government index and foreign fighter participation (in general, though not for DV4) became smaller in magnitude.
- The negative correlations between distance to Raqqa and Sirte became slightly smaller in magnitude.\(^\text{67}\)

Although adding Tunisia to the regression analysis tended to increase the correlation coefficient, this is expected for a country that is the largest contributor of Salafi-jihadist foreign fighters in the sample and does not qualify Tunisia as an outlier skewing the analysis.

\(^\text{67}\) Each of the differences described in this bulleted list were between variables that were statistically significant.
F. Scatterplot Youth Unemployment and Foreign Fighter Flow

\[ \text{coeff} = -35.237388, \text{se} = 34.183836, t = -1.03 \]
G. Map of Unemployment by Governorate in Tunisia 2016
Map of Connectivity of Tunisian Cities to Salafi-jihadist Training Camps in Libya
I. Map of Connectivity of Ben Guerdane to Salafi-jihadist Training Camps in Libya
J. Map of Connectivity of Tunis and Bizerte to Salafi-jihadist Training Camps in Libya
K. Foreign Fighter Flow and Youth Unemployment in Jordan

![Graph showing foreign fighter flow and youth unemployment in Jordan](image)
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