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Social Media and Terrorist Organizations: Observing Success of Recruitment Through Social Media

Vincenzo Cibra
University of Central Florida

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SOCIAL MEDIA AND TERRORIST ORGANIZATIONS:
OBSERVING SUCCESS OF RECRUITMENT THROUGH SOCIAL MEDIA

by

VINCENZO CIBRA

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Majors Program in International and Global Studies
in the College of Sciences
and in the Burnett Honors College
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ABSTRACT

The Internet is an instrument that has revolutionized the world and the society since its introduction. Today, over 4 billion people around the world have access to the it. While this technology comes with several positive innovations, it can be also used negatively by terrorist organizations to more easily spread propaganda messages. More so, the development of social media has fostered new methods of recruitment that allows to reach a broader audience anonymously and outside of the geographical area of operation of a terrorist organization.

The purpose of this research is to analyze the relationship between social media development and changes in terrorist recruitment strategies, discuss the main social media used for terrorist recruitment, and identify major targeted demographics. Further, the research seeks to analyze through case study examination whether the use of social media by terrorist organizations result in more effective recruitment. This is accomplished by comparing recruiting success of ISIS, which heavily relies on social media, with Boko Haram, which does not.

After comparing data available on recruits based on their geographical location, gender and age, and economic status, this study finds that there is not a significant diversity between individuals recruited through social media or those recruited through a different method. This study only finds that a significant difference exists when recruiting individuals with different economic opportunities. While fighters from ISIS are recruited from any class of the society, including those with higher income and are more educated, Boko Haram tends to be more successful among individuals who experience economic hurdles.

Keywords: internet, social media, recruitment, ISIS, Boko Haram.

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INTRODUCTION AND STATEMENT OF THE PROBLEM

The Internet is one instrument that has radically revolutionized the world and society since its introduction in the 1990's. For example, it has reduced geographical and cultural boundaries between countries and facilitated worldwide communication and development of a globalized economy. Thanks to its relentless growth, an increasing number of people from developed countries can now virtually access countless pieces of information in an easy and anonymous way. According to the Internet World Stats (2018), over 4 billion people around the world have access to the Internet. Wu (2015) stresses the importance that the Internet has played in sharing information about relevant events in the Middle East, a region where news tends to be government controlled. However, while the Internet brings positive change and helps connect the world, it does not come without criticism. It can be argued that one negative aspect is the use of the Internet by terrorist organizations to enhance recruitment. For the purpose of this paper, terrorist recruitment is defined as a method of actively soliciting individuals to participate in an extremist movement or commit illegal acts on behalf of the movement (Alexander, 2010). The Internet has amplified and improved the recruitment process, allowing terrorist organizations to reach a broader audience with less effort while more accurately targeting specific demographics. Tuttle (2016, 2) argues that the Internet today is more accessible, low cost, mostly unregulated and anonymous, making it easy to reach an audience without waiting for the audience to reach out to the organization. Particularly, the Internet has helped groups such as al-Qaida and ISIS spread their message and ideology to thousands of people. While past organizations sought to gain international attention through spectacular actions that would be covered by traditional

media outlets, in the last decades terrorists have used active recruitment through venues available online.

Generally, terrorist organizations have online platforms that are used to maintain contact with their bases. However, it can be argued that al-Qaida is the first organization to extensively exploit the Internet through the use of social media for recruitment purposes (Jenkins 2011, 1). Later, ISIS became the terrorist group to refine this strategy and take it to the next level. Wu (2015, 283) defines social media as an innovation that allows one to “share information ideas, personal messages, and other content around the world.” Boyd and Allison (2007, 211) give a narrower definition as “services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.” Main social media like Facebook, YouTube and Twitter are broadly used by terrorist organizations to spread their propaganda and actively recruit new members. One benefit of using these platforms is that it allows terrorists to reach a public that is outside geographical boundaries in instantly and with just a click of a button. Further, Weimann (2014, 2) argues that social media intensifies and accelerates the process of radicalization, as it allows anyone to access and publish information due to a lower barrier compared to traditional media and because it permits a consumer to simultaneously be a communicator. This can quickly start a chain reaction where terrorists’ sympathizers and followers can open new websites and blogs themselves (Tuttle 2016, 14). In a previous study, Weimann (2004) cites that new technologies have reduced transmission time, significantly improving communications among members and the coordination of operations.

The purpose of this research is to analyze the relationship between social media development and changes to in terrorist recruitment strategies, discuss the main social media used for terrorist recruitment, and identify major targeted demographics. This research seeks to expand previous research that aims at understanding methods that modern terrorist organizations use to spread their message and recruit new members. Particularly, the paper attempts to demonstrate through case study examination that use of social media results in more successful recruitment. This will be accomplished by comparing recruitment success by ISIS, which heavily relies on social media, with Boko Haram, which does not. As the Internet has become a fundamental tool both in the professional and private sphere, it is necessary to analyze the consequences that come with the development of this relatively new technology. Going forward, more terrorist organizations will abandon traditional recruitment methods to embrace more effective ones that exploit the adverse side of the Internet.

The following research question will be addressed during this research:

Q1. Does social media use by a terrorist organization results in recruiting a more diverse group of members when compared to more traditional recruiting methods?

A Note on Methodology

Due to the limited data available on the topic, the scope of this paper is to primarily review existing literature and data. The literature review involves academic, peer-reviewed sources retrieved from the University of Central Florida database, specifically Academic Search Premier, Pro Quest and Taylor and Francis databases, as well as, open sources available on the Internet. A general approach will look at two groups that are similar in the way they are structured and with similar objectives but differ in recruitment methods. First, a modern terrorist

group, such as ISIS, that existed during the time of social media introduction and growth. Data on this organization will be analyzed and compared to a second terrorist group that has primarily relied on a different recruiting method.

The approach to answer **Q1** will compare geographic breadth between the two groups. This will require a method that allows the researcher to analyze if the use of social media results in effective recruitment beyond the geographical area of the group's main operation. Further, data on the two groups will be analyzed to understand whether recruitment through social media results in more diverse demographics. Specifically, data will look at diversity of recruitments in gender and income by measuring the number of females recruited and the ability of the group to recruit from income brackets with more opportunity.

While previous research demonstrates that more recent terrorist organizations prefer the Internet and social media for recruiting due to a variety of reasons, there is still little knowledge available on the impact that social media has on recruitment numbers and on what type of demographics are the most targeted by this new phenomenon. The first part of the research focuses on extensively reviewing the literature available on the issue to understand if a relationship exists between the use of Internet propaganda and increase in recruitment. The second part analyzes data collected that are used to answer the research question. The research concludes with some concluding remarks on the findings.

Assumptions

The researcher assumes that terrorist organizations are increasingly relying on the Internet and social media for recruitment purposes by conducting more focused recruiting campaigns. These methods allow terrorists to directly reach out to a larger audience and target

specific demographics, while abandoning less effective propaganda means. Particularly, it can be argued that with the advent of social media and smart phones, the main demographics targeted by terrorist organizations are young people who feel disillusioned and who struggle to integrate into the societies they live in (Tuttle 2016, 6).

Another assumption is that women are becoming important recruits for terrorist organizations. ISIS has focused on this demographic in order to continue expand its core. Women are employed in roles ranging from managing the household to recruiting more women through social media. Non-Muslim women are more likely to join the organization because they are attracted by a better level of life advertised by the organization. Further, Muslim women living in Europe and the United States are more likely to join the organization because the societies they live in do not allow them to freely practice their culture in public.

LITERATURE REVIEW

The literature review is divided into two sections. The first section is dedicated to reviewing the main social media utilized by two terrorist organizations. The following section focuses on identifying preferred demographics targeted by terrorist organizations.

Social Media Utilized for Recruitment Purposes

Today, nearly every group that is identified as a foreign terrorist organization by the United States Department of State has an online presence (Mantel 2009, 287). However, their engagement on the platform sometimes is limited to simply creating a web page that provides general information about the organization and outlines its ideology. This can be understood as a method of passive propaganda, as information are made available to an audience that usually nurtures a prior interest for the organization. Tuttle (2016, 13) points out that terrorist propaganda through the use of websites has dramatically increased in the last decades, with an increase from a dozen websites in 1999 to more than 7,000 in 2009. Furthermore, a study at the University of Arizona revealed over 50,000 sites with terrorist propaganda related content in 2009 (Tuttle 2016, 14). On the other hand, terrorist groups such as ISIS have extensively made use of social media not only for propaganda purposes but also for active recruitment. The reason for this shift in trend lies in the fact that social media platforms are usually easier to run, free or relative inexpensive to maintain operational, and capable of reaching a much wider audience than dedicated websites (“Radicalization” 2014, 4). Wu (2015, 289) adds that the cost of setting up an account for online recruitment is minimal. Today, virtually anyone with an internet connection is able to create an account on any of the most popular social media platform without the requirement of technical skills that are needed to create a dedicated website. While new

social media platforms are virtually released on a daily basis, terrorist organizations have primarily relied on Facebook, Twitter, and YouTube for propaganda and recruitment purposes (Weimann 2014, 1).

Facebook is the largest and most popular online social network, with more than 222 million users worldwide (Weimann 2010, 50). Initially created in 2004 for Harvard students to communicate with each other, this platform has soon evolved in a worldwide communication medium. Weimann (2014, 4) states that in 2014 Facebook counted 1.31 billion users with more than half logging in on a regular basis. Due to its users' large numbers, Facebook has become the top social media of choice for terrorist propaganda and recruitment (Tuttle 2016, 17). Particularly, Weimann (2014, 4) argues that the success of Facebook among terrorist organizations, such as ISIS and al-Qaida, lies in the ability to send standardized informative messages to a large number of people instantaneously. Awan (2017, 138) conducted a study in which he analyzed 100 different Facebook accounts with ISIS related content and found the organization uses online hate for recruitment and propaganda purposes. Weimann (2014) further argues that ISIS is utilizing this social media to carry out a "Facebook invasion" with instructions on how to expand the organization's support base through the addition of new members by other users. This approach can thus dramatically increase a recruitment process that is already much more successful compared to more traditional methods.

Twitter is another social that media terrorist organizations have extensively and successfully utilized for propaganda and recruitment purposes. Twitter is a service that allows for the distribution of tweets, which are messages of a maximum length of 140 characters (Weimann 2014, 8). According to Awan (2017), Twitter counts "350,000 tweets being sent per minute and

500 million tweets per day,” making it second in usage to Facebook. One major benefit of this platform is that it can be used to provide real-time coverage without the need of proving the legitimacy of the information shared. Weimann (2014) states that terrorist organizations take advantage of this Twitter feature, which allows them to glorify violence without worrying about validating the source. This can rapidly increase a terrorist group’s base by reaching segments of the population who are more likely to use this platform. Recent studies found that over 46,000 Twitter accounts were associated with praising ISIS actions in the period between September 2014 and December 2014 (“Social Media” 2016). Klausen (2014) further argues that Twitter is used to increase recruitment by expanding its traffic to broader network. One innovative feature of Twitter is its capability to “retweet” contents and share messages on other platforms such as Facebook.

A third platform that has become increasingly popular among terrorist organizations for recruitment purposes is YouTube. YouTube is a platform for sharing video that was created in February 2005 and on average is updated with one hundred new hours of video every minute (Weimann 2014, 10). Weimann (2010) argues that YouTube is rapidly becoming an alternative to television for terrorists who aim at reaching a broad audience worldwide. This internet platform is perhaps the most widely used by virtually every terrorist organizations, featuring propaganda content by organizations such as Hezbollah, Hamas, the Liberation Tigers of Tamil Eelam and the Shining Path of Peru to name a few (Weimann 2010, 52). However, groups like al-Qaida and ISIS have elevated the purpose of YouTube from a simple propaganda tool to a sophisticated recruitment one. Taking advantage of the fact that social media violations are hard to identify, terrorist organizations have the chance to upload vivid videos on YouTube that

would be censored on regular television. For example, one of the most popular and successful videos ISIS shared on the platform was the beheading of American journalist James Foley in 2014. The video was eventually removed by a YouTube moderator as violating the platform's policy; however, as the process for removing a video from the platform is not immediate, it achieved its purpose by gaining international attention and reaching millions of people worldwide. Finally, YouTube allows users to comment on videos, making it an instrument that facilitate Jihadist networking (Weimann 2014, 10). This concept creates communities where like-minded individuals are able to communicate, share thoughts, and influence one another with the purpose of increasing the terrorist organization's recruiting base.

Demographics Targeted by Terrorist Organizations

Not only has social media enhanced recruitment numbers, but it has also improved the quality of the recruits. While al-Qaida pioneered the use of social media as a way to expand its base, ISIS has been making use of a method called narrowcasting, which aims at sending specific messages to a target audience that are defined by values, preferences, demographic attributes, or subscription (Weimann 2014, 4). Recently formed terrorist organizations no longer aimlessly recruit on a quantitative basis; instead they focus their efforts in creating propaganda that is personalized and appeals to specific segments of the population. In a study analyzing recruitment methods used by terrorist organizations, Gerwehr and Daly (2006) argue that the strategy most often used on social media allows them to use unrestricted remote communication over the physical contact with the audience. This method, which the authors identify as the "seed crystal," relies on inputting a message into a population. Within the targeted population, certain individuals will respond to the message and will continue the recruitment process. In *Leaderless*

Jihad, Sageman (2008) argues that self-radicalized groups of Muslims living in the West have replaced al-Qaida as the main jihadist threat. Klausen (2014, 6) expands on this theory by pointing out that individuals who are recruited through social media tend to share content from other individuals rather than posting their own original content, creating a snowball effect aimed at enlarging the base.

The reasons for joining terrorist organizations are numerous and sometimes unique to a particular individual, making it difficult to easily identify targeted demographics; however, terrorist organizations' recruitment efforts through social media have followed predictable patterns that pundits have observed and attempted to explain. In a study that analyzed how demographics are affected by ISIS recruitment, Tse (2016, 16) finds that because social media users are predominately young people, they will consequently be a primary target for terrorist recruiters. Another study that analyzed supporters of videos promoting jihadi content on YouTube finds that the majority of users are younger than 35 (Weimann 2014, 12). Krueger and Malečková (2003) add to previous research by arguing that terrorist organizations tend to focus on young, middle-class and well-educated men. The reason is that men with a college degree or higher can be more easily persuaded into joining if they believe they will be given a leadership position. This study departs from other literature that associates poverty and a low education level as factors causing people to join terrorist organizations. Haq (2014) argues that young people are more likely to join terrorist organizations because they are able to find their identity. Terrorist organizations' propaganda particularly targets those young men who have been disappointed in life and they are looking for ways to feel accomplished. Similarly, Gerwehr and Daly (2006, 85) argue that current distress or dissatisfaction, lack of a religious belief or value

system and some degree of dysfunctionality in a family are among the variables that affect the decision of an individual to join a terrorist organization. In his book *The Psychology of Terrorism*, Horgan (2005, 103) finds that individuals are often motivated to join terrorist organizations because their personalities are affected by a sense of dissatisfaction or disillusionment. Hafez and Mullins (2015) further argue that the radicalization process resembles a puzzle and its pieces—which the authors identify as grievance, network, ideology, and enabling environment—have to come together to result in terrorist action. Guadagno et al. (2010, 32) point out that terrorist organizations have been able to appeal to this young, dissatisfied, male demographic through the use of advertisements that highlight positive terms and with which the individual wants to identify. Hopeless individuals are able to see a glimpse of hope in these organizations that offer them a better future compared to their current situation.

Women constitute another demographic that terrorist organizations have been focusing on for recruitment purposes through social media. While women have been long participated in terrorist organization, terrorist groups have predominantly been made up of men. Khelghat-Doost (2017) argues the main obstacle encountered by terrorist groups based in the Middle East in recruiting women is reconciling women in militant positions with the society's conservative views. Similarly, Lahoud (2014, 783) argues that jihadi discourse has long excluded women from combat, but that they are instead paramount in the success of jihad through non-combatant roles.

In recent years, however, this trend seems to have reversed, and numerous studies have started to analyze female involvement in terrorism. This interest originated following observations that more recent terrorist organizations are recruiting women, especially through the

use of social media. In a study focused on al-Qaida's suicide bombers, von Knop (2007, 399) argues that women, especially Muslim ones, are evading from the private sphere they are restricted in to actively participating in political violence. The author further argues that women are motivated to join terrorist organizations to seek vengeance for the loss of a family member or to gain power and access to the public realm. Similarly, Cunningham (2003) offers two major explanations as to why women join terrorist organizations. First, women may have personal reasons, such as an intimate relationship or a family tragedy; second, women tend not to be perceived as threats by society, thus making it easier for them to carry out terrorist attacks.

While previous studies have focused on understanding the reasons women decide to join terrorist organizations, little attention has been paid to the motivations the organizations cultivate in filling their ranks with women. Khelghat-Doost (2017) argues that more recent terrorist organizations are more complex machines that need educated women to run parallel institutions in the economic or healthcare sector. Tse (2016, 8) points out that women are often not placed in the front line but are employed to recruit other women through social media. This allows terrorist organizations to utilize women while not creating a conflict with the Islamic religion and law. On the other hand, Von Knop (2007) argues that women used for terrorist acts are more effective in spreading the message than their male counterparts, as they represent an element of surprise capable of attracting widespread publicity while at the same time reaching a wider audience with their actions. In a study by the Institute for Strategic Dialogue analyzing women's use of internet and social media platforms, women were found to be more active than men, which suggests that women's role in terrorist organizations is increasing ("Radicalization").

DATA COLLECTION AND ANALYSIS

Due to challenges in collecting original and accurate information ISIS and Boko Haram recruitment numbers, the data used for this analysis is from a collection of data from existing studies. In the case of ISIS, there are several data sources available focusing on general recruitment numbers, but not specifically on social media recruitment. Because ISIS has primarily relied on the use of social media as a recruitment strategy, it will be inferred that the data in this analysis includes internet recruitment. This approach was utilized to mitigate the challenges encountered in the collection of original and accurate data. Further, as a result of the process to conduct an empirical study, the data used in the analysis may still be imprecise. To look at the geographical breadth of the organization's recruitment, data sets utilized come from a previous study by the Soufan Center titled "Foreign Fighters: An Updated Assessment of the Flow of Foreign Fighters into Syria and Iraq." The 2015 study is supplemented by a 2017 study Richard Barrett titled "Beyond the Caliphate: Foreign Fighters and the Threat of Returnees." The two studies are used to both compare the number of recruits over time and to determine whether there is a trend in where the recruits come from. Further, another study by the Brookings Institute entitled *The ISIS Twitter Census: Defining and Describing the Population of ISIS Supporters on Twitter* performed a census on ISIS demographics that make use of Twitter. This study looks at the number of recruits over time through the number of tweets, their geographic location (by GPS, time zone, and claimed by the individual) and their genders by display name. Recruitment by gender is also analyzed with a study by Marnique et al. (2016) "Women's Connectivity in Extreme Networks." This study offers data on the importance of women recruits in pro-ISIS online network. Another study by Wintter (2016) titled "Terror on Twitter: A Comparative

Analysis of Gender and the Involvement in Pro-Jihadist Communities on Twitter” was used to analyze data on female recruitment and their level of social media activity. Finally, to analyze whether there is a relationship between economic inequality and ISIS recruitment, data from a study by Benmelech and Floor (2016) titled “What Explains the Flow of Foreign Fighters to ISIS?” was used.

The collection of recruitment data for Boko Haram was also challenging. Similar to ISIS, there is limited data available on the geography of recruitment for this organization. Contrary to ISIS, Boko Haram has not used social media as its primary tool for recruitment. Instead, Boko Haram has focused on recruiting using traditional methods, such as propaganda from a charismatic preacher—who aimed to spread and promote an ideology—and spectacular terrorist actions—aimed at attracting international media attention (Onuoha 2014, 3). To analyze the extent of Boko Haram’s recruitment success in countries outside its main operational area two reports from the International Crisis Group were used, “Fighting Boko Haram in Chad: Beyond Military Measures” and “Cameroon: Confronting Boko Haram.” While accurate numbers on recruitment by country are not available, these reports help to show the geographical breadth of Boko Haram’s operations and from what regions the organization has been successfully recruiting. “Nigeria: Fear of Boko Haram” is a 2015 report compiled by the Independent Advisory Group on Country Information (IAGCI) that also provides information regarding Boko Haram’s recruitment areas. Further, a 2015 report by the Training and Doctrine Command (TRADOC) provides additional information on Boko Haram’s recruitment. Data from a 2014 report by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) argues that connections between Boko Haram and other terrorist organizations with

similar ideologies can help recruiting efforts. Collection and analysis of data relative to Boko Haram recruits gender and age was done in a 2015 report by the Mercy Corps titled “Motivations and Empty Promises: Voices from Boko Haram Combatants and Nigerian Youth.”

Finally, an analysis on the relationship between recruitment success and economic inequality was done by using a 2016 Mercy Corps titled “Gifts and Graft: How Boko Haram Uses Financial Services for Recruitment and Support” and a 2017 policy brief by Ewi and Salifu titled “Money Talks: A Key Reason Youths Join Boko Haram.”

ISIS

Geographical Breadth

ISIS formed following the Iraq War in 2003 and had grown steadily until 2014 (Durr, 7). As the name of the group implies, its operations have been mostly concentrated in the Middle East region and particularly in Syria and Iraq, where the organization has attempted to claim a new caliphate. For this reason, it is reasonable to assume that the majority of recruits would come from these two countries or surrounding countries. Table 1 looks at the number of ISIS foreign fighters from foreign countries and it is obtained by the 2015 Soufan Center study. The table includes the 25 countries in the world with the official highest number of ISIS foreign fighters. Further, the official numbers were provided by each government over the time period 2014 to 2015. While these numbers do not specify if the foreign fighters were recruited through social media, they provide a picture of where the terrorist group has been most effective with its online propaganda.

Table 1 shows that the countries with the highest number of foreign fighters recorded in the years 2014 and 2015 are found in the Middle East and North Africa region (MENA). The data supports the assumption that while ISIS attempts to spread its message beyond the geographical area of its operations, it tends to be more successful in areas that are close to the terrorist organization's location. Saudi Arabia (2,500), Turkey (2,100), Jordan (2,000), and Lebanon (900) are four of the top eight countries with the highest number of foreign fighters that share a border with either Syria or Iraq. Interestingly, Russia is among the countries with the highest number of recruits, thus creating a conflict in the pattern of geographical proximity linked to recruitment success. A significant number of foreign fighters come from Western

Europe. Among Western European countries, France counts the highest number of foreign fighters (1,700) while Germany (760) and the United Kingdom (760) follow. Data relative to the number of foreign fighters in Western European countries, however, could be explained by other factors that are addressed later in the paper. The United States, on the other hand, only counted 150 foreign fighters.

Table 2 is an updated study by the Soufan Center that shows countries with the highest number of foreign fighters recorded in 2016 and 2017. The analysis of this data is important for two reasons: first, it allows a comparison of ISIS recruits over time; second, it allows an analysis of ISIS recruitment's success by country by comparing numbers in each country over time. Further, these numbers are considered more accurate compared to the earlier study due to better data records available by each country on the number of foreign fighters. While the data continue to show that ISIS recruitment success continues to concentrate in the MENA region, surprisingly Russia (3,417) has the highest number of foreign fighters. Saudi Arabia (3,244), Jordan (3,000), and Turkey (1,500) are countries that directly share a border with either Iraq or Syria with the highest number of foreign fighters. It is important to note that Lebanon, which had an official number of 900 in the 2014-2015 census, does not appear on this table, probably due the lack of information provided by the country on the number of foreign fighters. Generally, it can be argued that the number of foreign fighters has increased in countries where the phenomenon was previously present, thus signifying success in the organization's recruitment efforts. Further, the United States (129) has been omitted from table 2, as it shows a decreasing number of foreign fighters compared to the 2014-2015 study.

Table 1: Ranking of ISIS Foreign Fighters by Country Based on Official Count (2014-2015)

COUNTRY	FFs COUNT (Official Number)	COUNTRY	FFs COUNT (Official Number)
Tunisia	6,000	Tajikistan	386
Saudi Arabia	2,500	Bosnia	330
Russia	2,400	Austria	300
Turkey	2,100	China	300
Jordan	2,000+	Kazakhstan	300
France	1,700	Sweden	300
Morocco	1,200	Kosovo	232
Lebanon	900	Netherlands	220
Germany	760	Maldives	200
United Kingdom	760	Algeria	170
Indonesia	700	United States	150
Egypt	600+	Macedonia	146
Belgium	470		

Note: Data obtained from the Soufan Center (2015)

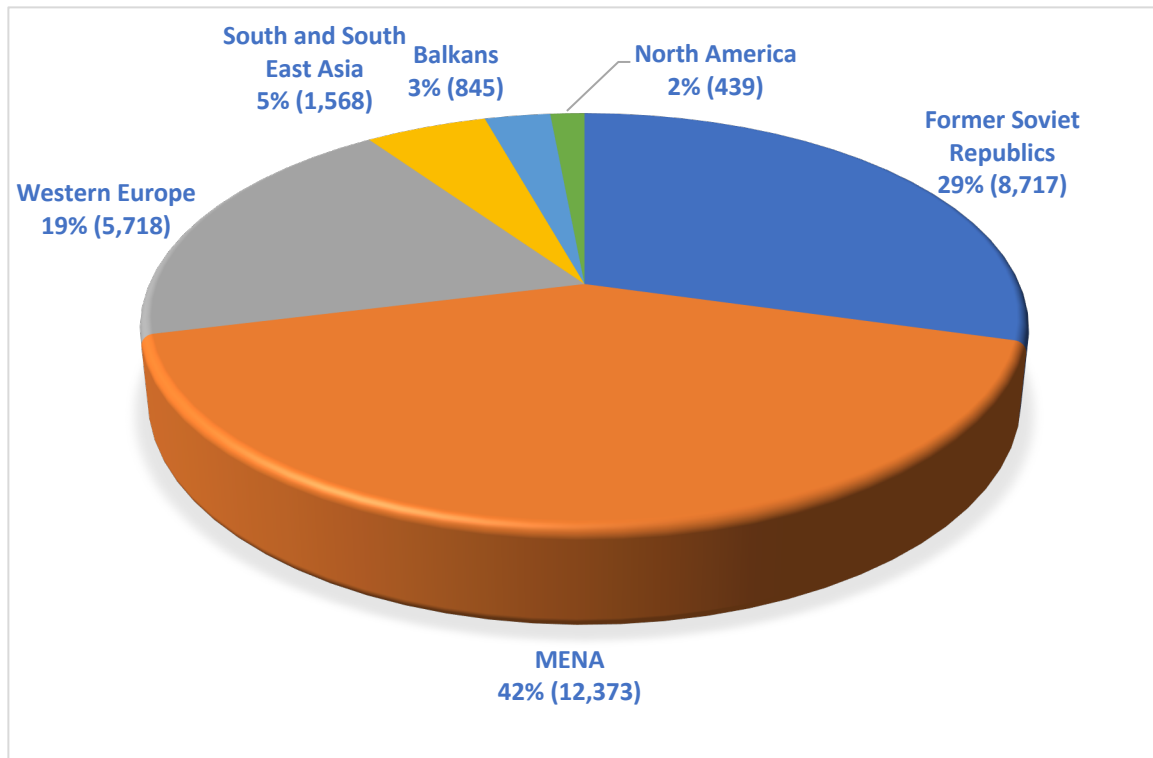
Table 2: Ranking of ISIS Foreign Fighters by Country Based on Official Count (2016-2017)

COUNTRY	FFs COUNT (Official Number)	COUNTRY	FFs COUNT (Official Number)
Russia	3,417	Egypt	600
Saudi Arabia	3,244	Indonesia	600
Jordan	3,000	Libya	600
Tunisia	2,926	Kazakhstan	500+
France	1,910	Belgium	478
Morocco	1,623	Turkmenistan	400+
Uzbekistan	1,500+	Kosovo	317
Turkey	1,500	Sweden	300
Tajikistan	1,300	Austria	296
Germany	950+	Netherlands	280
Azerbaijan	900+	Bosnia	248
United Kingdom	850	Georgia	200+
Pakistan	650+		

Note: Data obtained from the Soufan Center (2016)

Figure 1 summarizes data from a 2017 study by the Soufan Center and provides a ranking of foreign fighters by world region. This is important to take into consideration because it gives a general picture of where ISIS recruitment efforts are concentrated and successful. In line with both the 2014-2015 and 2016-2017 studies, figure 1 shows that the MENA region (12,373) is the region with the highest number of foreign fighters recruited by ISIS. The region of the former Soviet Republics (8,717) has the second highest number of foreign fighters, while Western Europe (5,718) follows. North America (439), on the other hand, has the lowest number of foreign fighters among the six world regions that were analyzed.

Figure 1: Number of Foreign Fighters by World Region (2016-2017)

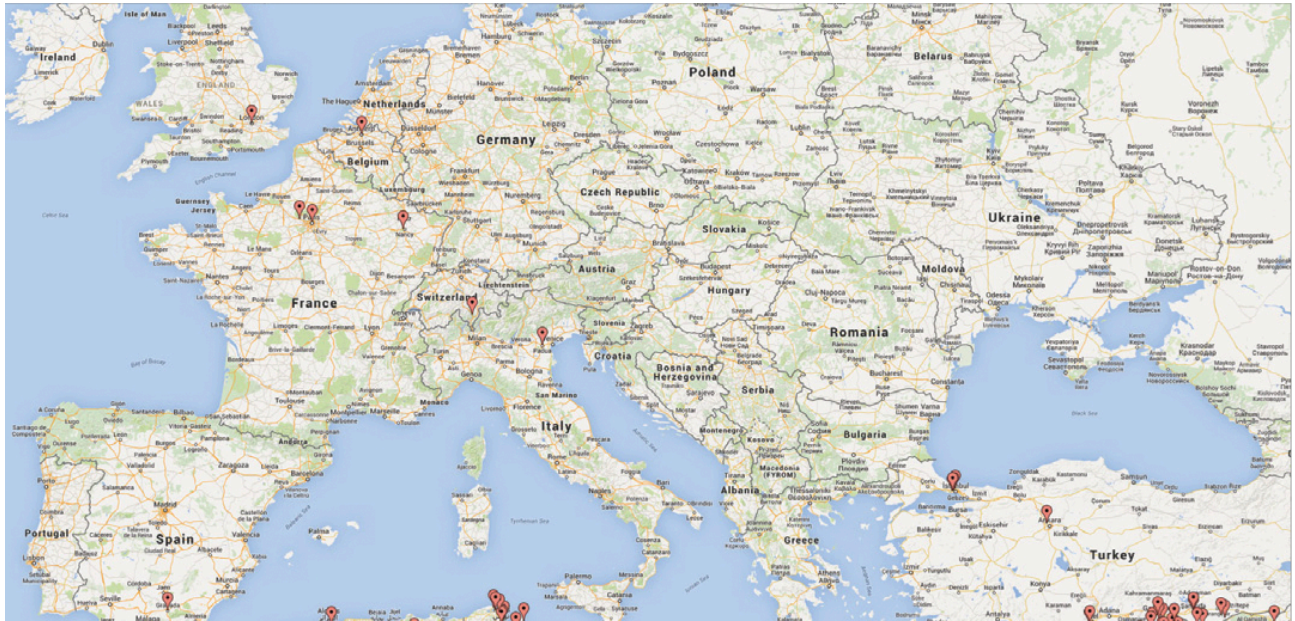


Note: Data obtained from the Soufan Center (2017)

A 2015 study by the Brooking Institution also provides important information on the geographical location of ISIS recruits. This study used a variety of methods to locate ISIS supporters and define ISIS recruits' demographics. Figure 2 shows the geolocation of ISIS supporters in the MENA region and Western Europe that tweeted at least once while a GPS feature was enabled on their device. In line with other studies, the maps show that a majority of ISIS supporters are concentrated in the MENA region, and particularly in Syria and Iraq. Very few Twitter accounts had GPS active in Western Europe, while none were recorded in the United States.

Figure 2: GPS Location of Likely ISIS Recruits that Have Sent at Least One Tweet While Metadata Feature was Enabled (2014)

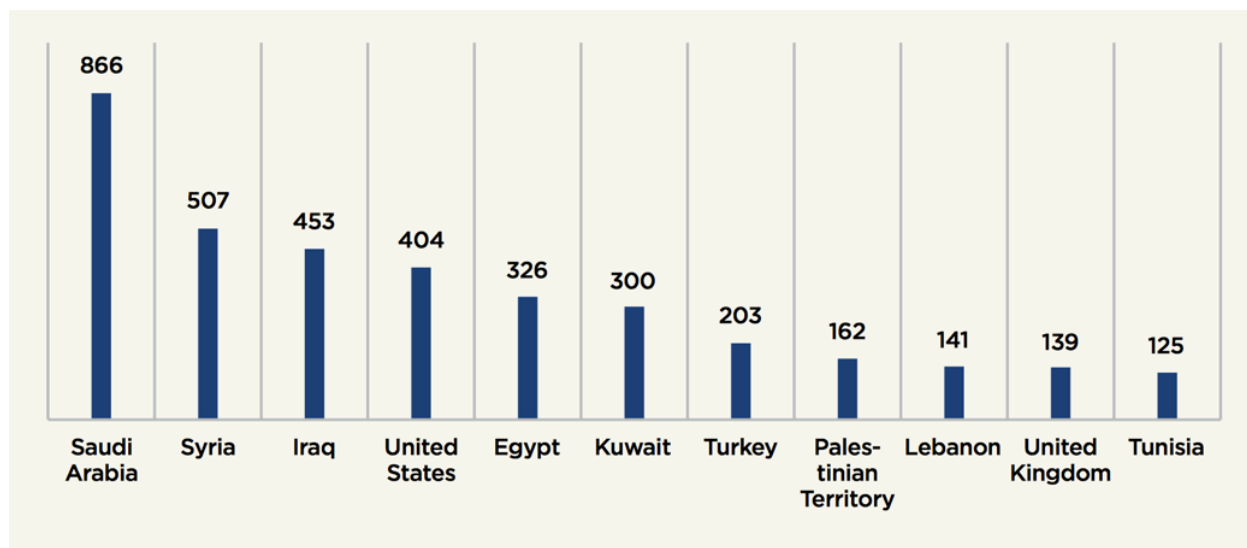




Note: Maps obtained from the Brookings Institutions (2015)

Another criterion used to observe the geographical location of ISIS support is by referring to the location claimed by users on their profiles. This type of data is useful to give a general idea of a trend if taken into consideration with other data; however, it is not reliable if considered by itself as Twitter and other social media give users the liberty to claim any location. This approach can be used both by ISIS officials and its supporters to create a deceptive image that raises the issue of possible homeland attacks in certain countries (Berger and Morgan, 13). Figure 3 shows the geographical location claimed by ISIS supporters in their Twitter accounts' description. While it is prudent to consider the accuracy of this data for the reasons previously described, the figure is in line with other studies focused on the geographical location of ISIS supporters. Once again, the MENA region claims the majority of ISIS supporters, with Saudi Arabia (866) claiming the most and Syria (507) and Iraq (453) following. Interestingly, when just considering the geographical location claimed by Twitter users on their profiles, the United States (404) is an outlier compared to other data. However, this deviation could be explained by taking into account a number of users who claim a false geolocation in order to falsely raise concerns of a threat (Berger and Morgan 2015, 13).

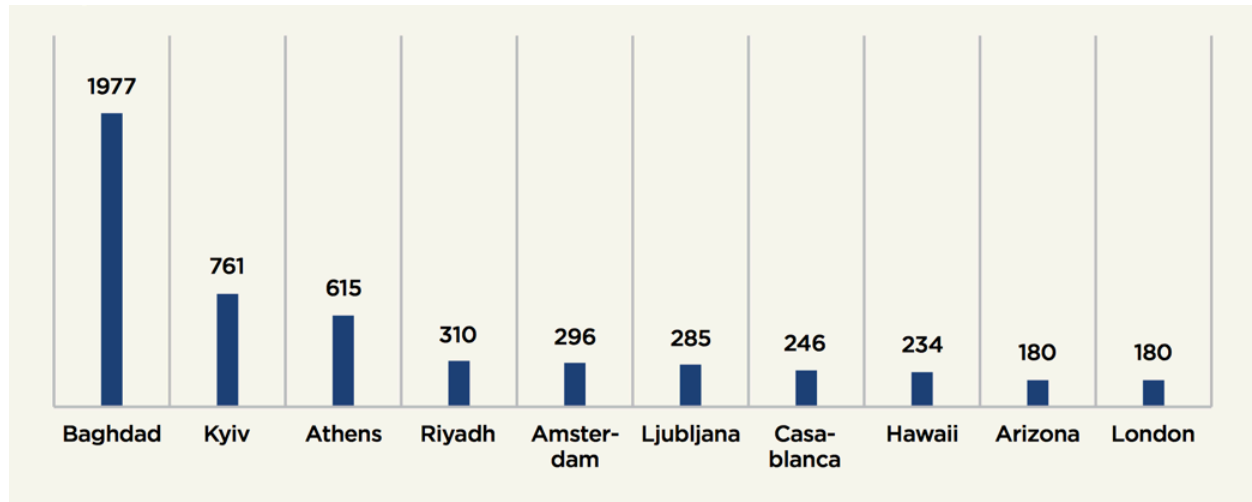
Figure 3: Main Locations Claimed by Users in Their Twitter Accounts' Description (2014)



Note: Figure obtained from the Brooking Institutions (2015)

A final measure used to analyze the geographical breadth of ISIS recruits is the time zone specified in their Twitter account. Similar to the data on claimed geolocation, claiming a time zone is not mandatory when creating a Twitter account and it does not necessarily reflect the effective location of the account. As shown in figure 4, Baghdad (1977) is the time zone with the majority of Twitter accounts supporting ISIS, while a small number of accounts were recorded in Hawaii (234) and Arizona (180) time zones. Once again, while the qualitative aspect of this data is not always reliable, the general trend is in line with previous data and shows a high number of ISIS recruits concentrated in organizational hotbeds. Further, because the number of supporters who claimed a time zone within the United States is not consistent with the number of supporters that had sent at least one tweet when their GPS location was enabled, it does not necessarily raise concerns of a growing number of ISIS supporters in the United States.

Figure 4: Main Time Zones Claimed by Users in Their Twitter Accounts (2014)



Note: Figure obtained from the Brooking Institution (2015)

Gender and Age

One of ISIS' distinctive characteristics is its focus on recruiting women. While terrorist organizations are generally composed by male individuals, women have started to represent a significant portion of the recruits. In a report by The Carter Center (2017), disillusionment with national governments, the opportunity to contribute in a struggle for a higher cause, and feelings of estrangement from a culture are some of the factors targeted to leverage female recruitment. Berger and Morgan (2015) created the most accurate data available to date on recruitment by gender. However, because women are becoming a prominent demographic in ISIS recruitment, other criteria are used to analyze the phenomenon of gender-based recruitment, such as women's level of participation in terrorist organizations.

In their analysis of 20,000 accounts, Berger and Morgan (2015, 15) found that 239 users (1 percent) identified themselves with the female gender due to the appearance of the words “umm” (mother) or “bint” (girl) in their accounts. This number is in contrast with the 4,536 users (23 percent) that identified themselves with male gender due to the appearance of the word “abu” (male) in their accounts. The same inaccuracy issue as the geolocation may arise for the display name identifying the gender as the display name is not necessarily reflective of the real gender.

Wimter (2016) analyzed 750 Twitter accounts that showed support for pro-jihadist groups like ISIS. While the sample included Twitter accounts supportive of other pro-jihadist groups, such as Al-Qaeda and Jahbat al-Nusra, for the purpose of this study only data relative to ISIS supporters were analyzed. The independent variable for the study was the gender observed on the Twitter account, while control variables were the age, self-disclosed nationality, and self-disclosed location of the accounts. Table 3 illustrates the demographics of users by gender showing online support for ISIS. Male and female users almost evenly divide when controlling for age, claimed nationality and geographic location. This could show a changing trend in the recruitment process of terrorist organizations by gender, which had traditionally favored recruitment of male forces in the past. Further, when controlling for age, women tend to show support for ISIS at a younger age than their male counterparts.

Table 3: Demographics of Sample of ISIS Supporters by Gender, by Percent

	Male	Female
Age		
15-19	7	9
20-24	21	18
25-29	32	44
30-34	21	13
35+	19	17
Total	100 (68)	100 (71)
Nationality		
North American	9	13
European	18	21
African	4	7
Middle Eastern	25	28
Asian	11	7
Unknown	23	24
Total	100 (141)	100 (150)
Location		
North American	11	17
European	11	22
Africa	1	6
Middle East	22	17
Syria/Iraq	20	15
Asia	9	5
Unknown	26	18
Total	100 (141)	100 (150)

Note: Data obtained from Wintter, Eric W. (2016)

Due to an increase in women's recruitment, it is important to observe the level of activity women have in terrorist networks. In his study of gender involvement in pro-Jihadist communities on Twitter, Winder (2016) also measured the level of activity supporters have on the platform by gender. Table 4 shows the activity of male and female users on Twitter who support ISIS. In general, when controlled for a number of total tweets, male users (868) appear to be slightly more active than female users (639). When controlled for other variables, however, female users show the same level of activity than male users. Interestingly, female users appear to have larger networks than male users when the number of following accounts is measured, with women following 132 more Twitter accounts than men.

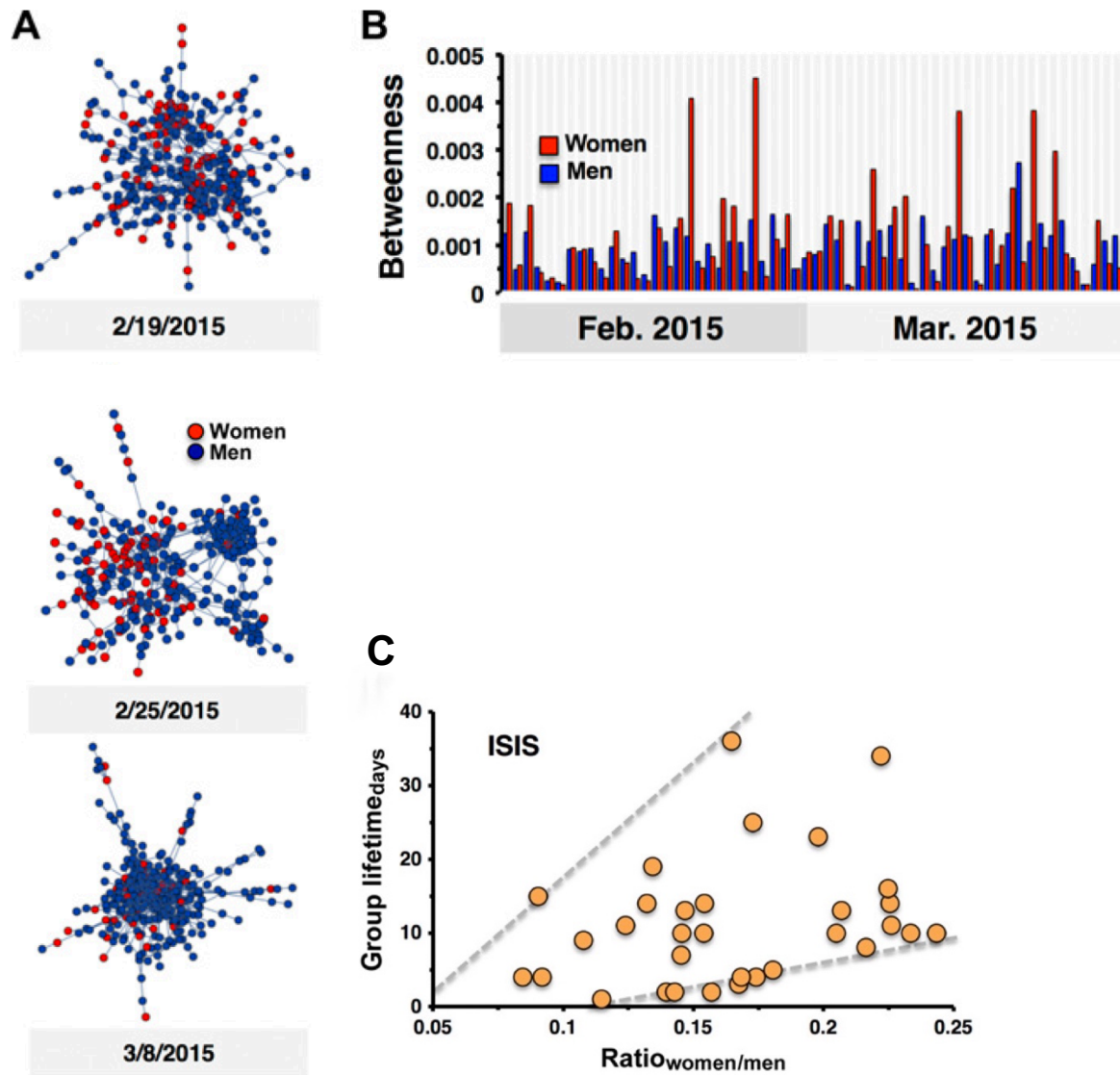
Table 4: Activity Level by Gender

	Male	Female
Total Tweets	868	639
Tweet to Retweet Ratio	2.5	2.5
Tweets per Day	3.5	2.8
Followers	324	311
Following	302	434
Followers to Following Ratio	3.1	1.9
Account Length	11	11

Note: Data obtained from Winder, Eric W. (2016)

The growing phenomenon of women's connectivity in terrorist organizations has also been observed by Manrique et al. (2016) in the study "Women's Connectivity in Extreme Networks," which observed gender interaction in a pro-ISIS online network over a period of two months. Figure 5A shows the connectivity inside the pro-ISIS online network over time. Although women (red dots) are numerically lower than men (blue dots) in the network, they maintain more contacts with more users at the same time. This is in line with Wimper (2016), which showed that women (434) follow more Twitter accounts than their male counterparts (302). Figure 5B shows the betweenness centrality (BC) inside the network. For the purpose of this study, the standard definition of BC is used. BC is defined as the "fraction of the shortest paths from all nodes to all others that pass through that given node (Manrique et al. 2016, 1). Results from figure 5B show that women (red dots) have a much higher level of connectivity when compared to their male counterparts (blue dots). This outcome demonstrates that while women are not as numerous as men in terrorist organizations, they are more valuable because they represent safer and more reliable points to pass information inside the organization. Finally, it is important to analyze whether greater connectivity between women in online extreme networks translate in a longer lifetime for the organization itself. Figure 5C shows that a larger number of women in an extreme network organization and a closer connection between each other translates to a higher longevity of the organization itself.

Figure 5: Pro-ISIS Online Extreme Network and its Lifetime (2015)



Note: Figure obtained from Manrique et al. (2016)

Economic Inequality

Previous studies on the phenomenon of terrorism have associated the likelihood of an individual to join a terrorist organization with economic inequality and the level of dissatisfaction resulting from it (Krieger and Meierrieks 2010; Piketty 2015). However, terrorist organizations that use the internet for recruiting purposes and coordination of their operations do not seem to recruit fighters based on this principle. On the contrary, they are more likely to recruit people with higher levels of education and from countries with lower income inequality gaps.

Benmelech and Klor (2017) looked at a country's GDP per capita, human development index, Gini, and unemployment to understand whether there is a correlation between economic inequality and the likelihood of joining ISIS. The list of countries used for this study are the same from Table 1; in addition, countries without an official count of foreign fighters were included. Column (1) of Table 5 looks at the relationship between a country's GDP per capita and the likelihood for an individual to join ISIS. Column (2) looks at the likelihood of an individual to join ISIS based on a different measure than GDP per capita—the Human Development Index—in non-Muslim countries. The Human Development Index is an aggregate of statistics produced by the United Nations Development Programme (UNPD) that looks at many criteria—such as life expectancy, education, and income per capita—in order to advance human development (United Nations Development Programme). Table 5 shows that there is a strong relationship between the GDP per capita of all countries and the likelihood of an individual to join ISIS. An even stronger relationship is shown when looking at the Human Development Index in non-Muslim countries. This data shows that economic inequality is not a factor that drives individuals to join ISIS. Contrarily, as shown in column (2) of Table 5, non-

Muslim countries that score higher in the Human Development Index are very likely to have at least one fighter to join ISIS.

Table 5: Likelihood of Joining ISIS

Sample	(1)	(2)
Dependent Variable:	All Countries Pr(fighters>0)	Non-Muslim Countries Pr(fighters>0)
Log(GDP per Capita) ₂₀₁₀	0.216*** (0.040)	
Human Development Index		1.622*** (0.533)
Unemployment	0.022** (0.009)	0.025** (0.010)

Note: “The dependent variable is a dummy variable that takes the value of 1 if there is a positive number of ISIS foreign fighters, and zero otherwise. (2017). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively” (Benmelech and Klor 2017, 22). Data obtained from Benmelech and Klor (2017).

BOKO HARAM

Geographical Breadth

Boko Haram began as a non-violent organization in 1995 that rejected most of Western ideas and institutions (Onuoha 2014, 348). The organization turned to violence in 2003 and has been on the United States Department of State's list of designated Foreign Terrorist Organizations since 2013 (*Foreign Terrorist Organizations*). While a majority of recruits have come from Boko Haram's area of operations in the northeastern Nigerian region, its message has found support among individuals from other countries, especially those immediately bordering Nigeria.

The IAGCI (2015) report finds that Boko Haram's main operations and recruitment areas are concentrated in the northeastern part of the state, especially in the regions of Yobe, Kano, Bauchi, Borno, and Kaduna and has its main operation in the city of Maiduguri. Figure 6 shows areas where Boko Haram was most active in its operations and recruitment in Nigeria during its 2013 peak. The figure reflects the IAGCI's report but also shows the organization being highly active in the Gombe, Amadawa, and Plateu regions. Because of continued attacks on the northern region of Nigeria, several people fled the country to neighboring states ("Nigeria: Fear of Boko Haram").

Figure 6: Map Where Boko Haram was Most Active in Nigeria (2013)



Note: Figure obtained from Encyclopædia Britannica, Inc. (2013).

Table 6 is compiled from the analysis of different reports on Boko Haram's recruitment. Particularly, the data shows that Boko Haram limits its recruitment to countries bordering its main operation.

Table 6: Main Countries of Boko Haram's Recruitment of Fighters Without an Official Count

Cameroon
Chad
Niger

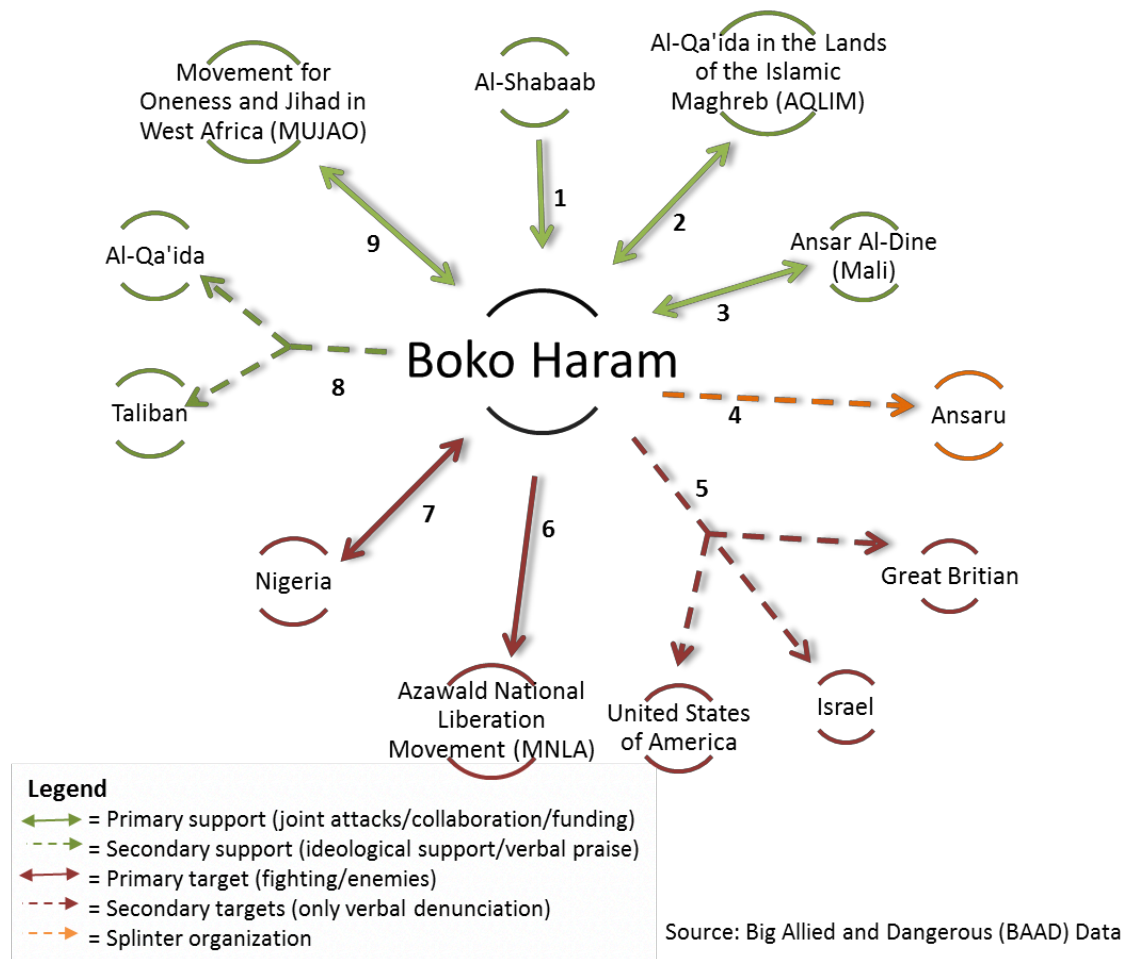
Note: Data obtained from TRADOC (2015)

The TRADOC's report (2015, 17) argues that the reason for non-forced recruiting of soldiers from outside Nigeria and countries surrounding the northeastern region of Nigeria is due to continuous violent attacks in these areas by Boko Haram that caused the displacement of many of its people. Further, Boko Haram has found a particularly favorable recruiting basin in Cameroon due to shared values and beliefs between the ethnicities that historically have been living in these areas ("Cameroon: Confronting Boko Haram" 2016, 3). Finally, a similar report by the International Crisis Group on Boko Haram's presence in the Lake Chad region highlights displacement due to violence in northeast Nigeria and a desire of independence from people living there as factors that have favored the recruitment of Chadians ("Fighting Boko Haram in Chad" 2017).

Information about Boko Haram's geographical extension for recruitment purposes is also obtained by analyzing the organization's collaborations with other terrorist groups active on the African continent and in the MENA region. Figure 7 shows that Boko Haram has collaborated and received direct funding from organizations such as Al-Qaida in the Lands of the Islamic Maghreb (AQIM) and Al-Shabaab, and that organizations that have provided primary support

might have done so by helping in the recruitment of fighters. However, there are no official records showing that Boko Haram extended into the MENA region to recruit fighters.

Figure 7: Boko Haram's Relationships with Other Organizations (2008-2013)



Note: Figure obtained from START (2014)

Gender and Age

While there is not exhaustive information available on Boko Haram's recruiting numbers outside of its main operational area, the organization—primarily due to original members opting out of the group—gained international attention for its forcible recruiting methods specifically targeting women and young people ("Motivations" 2016). In an organization that by the end of 2014 counted between 10,000 to 50,000 soldiers, women made up a significant portion of its militias (Cook 2014, 12). Despite the fact that recruits are still predominately males, the kidnapping of more than 250 girls in Chibok in 2014—followed by smaller but similar kidnappings—shows that the terrorist organization is shifting its recruitment tactics to include women in its operations. Onuoha and Temilola (2015, 6) argue that Boko Haram's interest in women recruitment is primarily driven by the element of surprise they represent in carrying out terrorist attacks. Zenn (2014) adds that as many as 2,000 women may have been abducted by the organization since 2013, with the most famous case being the abduction of more than 250 Chibok schoolgirls.

Research by the Mercy Corp looked at patterns in Boko Haram's forcible recruitment and specifically focused on the gender and age of those who were abducted and subsequently recruited, those who were able to resist recruitment, and family and friends of current and former Boko Haram's fighters. The research included a sample of 145 individuals from the Nigerian regions of Borno, Yobe, and Gombe. For the scope of this research, however, only data on the 47 former Boko Haram's fighters are analyzed. Table 7 shows that among the 47 Boko Haram's former members, 26 were males, 21 were females, and 6 identified themselves as other. While the sample is too small compared to the actual number of Boko Haram's fighters to be able to

identify a pattern, the study shows that women are an important component of the organization's operations. As Bloom and Matfess (2016, 111) argue, women forcibly recruited by Boko Haram are not just employed to run the household and to marry male fighters but are also actively employed in carrying out terrorist attacks. Further, they point out that the deaths caused by female bombers have dramatically increased following the kidnapping of female individuals, especially after Boko Haram started forcibly recruiting women. According to an article published in *The Economist* (2017), the use of women for terrorist attacks amplifies the shock factor, which can directly help the group's propaganda.

In addition to highlighting the growing number of women among Boko Haram's fighters, Table 7 shows how the 47 former members who were interviewed divide by age. The average age of recruitment was between 25-35, while a very small number joined after that age. The data shows that the organization's recruitment message is particularly successful on young members, while people over the age of 35 are less likely to join the organization.

Table 7: Former Members of Boko Haram by Gender (2015)

	Male	Female	Other	Total
	26	21	6	47
Age				
16-24				15
25-35				26
35+				6

Note: Data obtained from Mercy Corps (2016)

Economic Inequality

Perhaps the most observed aspect about Boko Haram's recruitment is the correlation between poverty and the likelihood of an individual to join the organization. Sergie and Johnson (2015) argue that despite the fact Nigeria is rich in resources, its population is one of the poorest in the world. Further, they argue that 72 percent of the population in the northern part of the country, which is where Boko Haram most actively recruits, live in extreme poverty. Data reported by Onuoha (2014, 6) shows Nigeria's poverty rate at 60.9 percent in 2010 and over 100 million out of 186 million Nigerians living in absolute poverty. The TRADOC report (2015, 17) adds that economic inequality in the Cameroon's region where Boko Haram recruits has over 60 percent of the people living in terrible economic conditions. Finally, Pate (2015, 17) argues that Boko Haram has been focusing its recruiting efforts on youths, who tend to make up a portion of the population that is most affected by worsening poverty rate and unemployment.

A study by Mercy Corps (2016) looked at how economic inequality in Nigeria can be used as leverage by Boko Haram to recruit new supporters and fighters. In their study, the authors of this report interviewed 74 community members who reside in Maiduguri, the capital of Borno State and Boko Haram's main operational area. Table 8 shows that among the interviewed sample, 45 individuals claimed they accepted some sort of financial support from Boko Haram, while seven turned it down. The remaining 22 members of the sample represent family and friends of those who accepted financial support. Table 8 also reveals that men are more likely than women to accept financial support. Although outside of the focus of this research, this trend could reveal that Nigeria's patriarchal society is also a factor influencing terrorist recruitment.

Table 8: Members of Boko Haram Who Have Received Financial Support or Declined it (2016)

	Male	Female
Accepted financial support	42	10
Declined financial support	5	2

Note: Data obtained from Mercy Corps (2016)

A more comprehensive and exhaustive study by Ewi and Salifu (2017) also looked at reasons that lead individuals to join Boko Haram. The sample of this study included 1,607 individuals from five different Nigerian cities. The individuals who were interviewed were asked to rank a list of reasons from the “most important” (Ranked 1) to the “least important” (Ranked 3). Table 9 shows that 329 individuals (20.47 percent) believed that people are likely to join Boko Haram because they see it as a venue to make money. Further, 239 people (14.87 percent) ranked it second and 198 (12.32 percent) ranked it as third. Unemployment closely follows the desire to make money: 171 respondents (10.64%) ranked it first, 236 (14.68%) ranked it second, and 152 (9.45%) ranked it as third.

Table 9: Why People Join Boko Haram (2017)

Reasons	Ranked 1	Ranked 2	Ranked 3
Peer pressure	27	31	55
Family and ethnic pressure	30	59	44
For marriage	41	77	43
They are unhappy with the government	61	136	149
For status or prestige	79	109	47
They want to be feared	105	98	54
They want to achieve a religious aim	130	147	137
They lack education	157	182	198
They are unemployed and see Boko Haram as a job	171	236	152
They want to be respected	186	71	51
They want to belong to a group or movement	264	85	63
They want to make money	329	239	198
Other	27	10	26

Note: Data obtained from Ewi and Salifu (2017)

CONCLUSION

The purpose of this research was to examine the success of recruitment efforts through the use of social media and compare them to the success of recruitment efforts through the use of more traditional recruitment efforts.

The data collected and analyzed in this study shows that while there are some differences in recruitment between these two different recruitment methods, both are equally effective in their outcomes. As data on geographical reach of ISIS has showed, social media seem to facilitate the recruitment of people outside the organization's main operational area. When compared to Boko Haram's geographical breadth, ISIS use of social media have resulted in a higher number of fighters joining. However, this phenomenon could be also affected by other factors that were neglected in this study. First, ISIS main operational area is located in a less isolated, more populated geographical area. This factor could be supported by the fact that the majority of ISIS foreign fighters are still predominately coming from countries in the MENA region. Second, while ISIS uses a variety of languages to spread its propaganda and recruiting messages, Arabic is spoken by more than 300 million people, thus facilitating the message adherence ("The Most Spoken"). It is important to note, however, that while Nigeria presents a variety of dialects within the country that could hinder Boko Haram's recruiting message, the national language known as Pidgin presents English terminology and is intelligible by people living in Ghana, Equatorial Guinea and Cameroon ("Pidgin," 2016). Thus, the organization's recruiting message could affect an audience that is not limited to Nigeria and its bordering countries. Further, Boko Haram has recently begun using Arabic in its propaganda message,

following close operation with other jihadist terrorist organizations such as Al-Qaeda in Maghreb and Al-Shabaab (Mahmood 2017, 8).

Data on recruitment based on gender and age for the two organizations shows that they have both focused primarily on recruiting younger people from both genders. Particularly, although reasons for high recruiting numbers among female are not fully explored in this study, terrorist organizations seem to have equally employed women in their operations. While more accurate studies will be necessary to identify specific reasons for this pattern, data collected for this study shows that social media do not exclusively favor the recruitment of women in terrorist organization. Contrarily, women are at least as likely to join an organization like Boko Haram that uses more traditional recruiting methods than one like ISIS that could be potentially benefit from social media platforms.

Finally, perhaps the most interesting finding and difference between the two organizations was recruitment of people coming from different economic strata of society. On the one hand, data about ISIS recruitment shows that the organization is more successful in recruiting individuals from countries with higher GDP per capita and lower unemployment. On the other hand, Boko Haram still primarily draws from people who live in extreme poverty and are in need of money to survive. As a general observation, it can be argued that individuals who join ISIS do so because they are persuaded by the ideological message of the organization, while those who join Boko Haram do so for more materialistic needs.

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