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BACHELOR THESIS

**Can Club Model Explain the Rise of the
Islamic State?**

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Declaration of Authorship

The author hereby declares that she compiled this thesis independently, using only the listed resources and literature.

The author hereby declares that all the sources and literature used have been properly cited.

The author hereby declares that this thesis was not used to receive a degree from any other institution.

Prague, May 13, 2016

Signature

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Abstract

The Islamic State of Iraq and the Levant has become a major threat of the contemporary period. It is therefore important to find the efficient way how to fight this group successfully. Besides political, social and psychological approaches to the counter-terrorism topic, there is also the club model in economics of religion that can surprisingly well model behaviour of radical extremist units and that proposes implications for counter-terrorism policy. It implies that terrorist organizations that provide social services can function as clubs. They introduce prohibitions such as dress code to ensure active participation and use sacrifices to screen out free-riders. Both of these practices make these groups unusually successful. This thesis has two main goals. Firstly, we show that ISIL has all the necessary attributes to fit into the club model framework, which we confirm by suggestive evidence that this organization uses escalated violence to select loyal members. Secondly, based on the club logic, we claim that efficient policy measures to fight ISIL should be focused on improving provisions of public goods in Syria and Iraq, creating better paid jobs and encouraging education.

JEL Classification D2, H41, H56, O17, Z12

Keywords ISIL, club model, social services, prohibitions, sacrifices, violence

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Abstrakt

Islámský stát v Íráku a Levantě patří mezi jednu z největších hrozeb současné doby, proto je důležité najít efektivní způsob jak s touto skupinou úspěšně bojovat. Kromě politologie, psychologie a sociologie se tématu boje proti terorismu věnuje také model klubu v ekonomii náboženství, který umí překvapivě dobře modelovat chování radikálních extrémistů, a který navrhuje protiteroristická opatření. Tento model tvrdí, že teroristické organizace, které poskytují sociální služby mohou fungovat jako klub. Aby zajistily aktivní účast svých členů, zavádějí různé zákazy jako např. dress-code. Za účelem odfiltrování freeriderů navíc vyžadují různé oběti. Obě zmíněné praktiky je pak dělají velmi úspěšnými. Tato práce má dva hlavní cíle. Nejdříve ukazujeme, že ISIL splňuje všechny předpoklady teroristické skupiny, která funguje jako klub. Což pak dokazujeme potvrzením předpokladu, že skupina používá své násilí pro výběr loajálních členů. V závěru práce, na základě teorie klubu, poukážeme na to, že úspěšná opatření pro bojování s ISIL by měla být zaměřena na podporu projektů, které zlepšují poskytování sociálních služeb v Sýrii a Íráku, zvyšují platy a podporují vzdělání.

Klasifikace JEL

D2, H41, H56, O17, Z12

Klíčová slova

ISIL, model klubu, sociální služby, zákazy, oběti, násilí

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Acronyms

bpd	barrels per day
SSP	Social Service Provision
GTD	Global Terrorism Database
JTJ	Jama'at al-Tawhid wa'al-Jihad
AQI	Al-Qaeda in Iraq
ISI	Islamic State of Iraq
ISIS	Islamic State of Iraq and Syria
IS	Islamic State
ISIL	Islamic State of Iraq and the Levant
MB	Muslim Brotherhood

Bachelor Thesis Proposal

Author	Bc. Kristýna Matoulková
Supervisor	PhDr. Lubomír Cingl
Proposed topic	Can Club Model Explain the Rise of the Islamic State?

Topic characteristics The Islamic State of Iraq and the Levant has become a major threat of the contemporary period. Understanding what is behind its success and unusual brutality is essential for successful counter-terrorism measures. Besides political, social and psychological approaches to the topic, there is also the club model in economics of religion that can surprisingly well model behaviour of radical extremist groups. It implies that terrorist organizations that provide social services can act as a club. They introduce prohibitions such as dress code or dietary restrictions to ensure active participation and use sacrifices to screen out free-riders. Berman and Laitin (2008) successfully applied the club model on Hamas, Taliban and Hezbollah. My intention is to follow their example and to test whether the model can explain the rise of ISIL, too. Firstly, I would like to analyse if the group has necessary attributes to fit into the club model framework: a social service provision in places where state governments fail, prohibitions and sacrifices, a well thought-out funding system and an efficient defection deterring strategy. Secondly, I am going to find out whether my assumption based on the club logic is valid: the more wealth ISIL has, the more people want to join it, on which the group reacts by a higher level of violence. Finally, I am going to conclude with policy implications on the problematic of the Islamic State using the knowledge I gained during the research.

Hypotheses

1. Does ISIL have all the necessary attributes to fit into the club model framework?

2. Does the group react on the increased inflow of fighters by a higher level of violence?

Methodology The thesis will use information from relevant sources and employ the online media database ProQuest.

Outline

1. Introduction
2. Literature Review
3. Methodology
4. Application of the Model on Terrorist Groups
5. The Islamic State of Iraq and the Levant
6. Testing The Relevance of the Model
7. Policy Implications
8. Conclusion

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Chapter 1

Introduction

Fighting the Islamic State of Iraq and the Levant (ISIL) is one of the greatest challenges world governments face in the second decade of the 21st century. This group which started with capturing substantial territory in Iraq and Syria in the beginning of 2014 currently occupies many strategic cities and large oil fields in both countries. It is still unknown why the phenomenon has emerged with such a high intensity and why it is still thriving despite many counter-terrorism measures. Indisputably, the thousands of victims, the constant destabilization of the Middle East and the frequent attacks on Western targets confirm that ISIL is a serious threat.

Among the greatest puzzles concerning ISIL is its apparent irrational behaviour. The organization destroys thousands of years old, priceless monuments in the Middle East and publicly beheads or burns to death hostages and local minorities. Its fighters proclaim that their steps are governed by faith in Allah, however, millions of people in the world with the same religion do not commit such atrocities. Psychologists state that among the main motives of ISIL is the desire to make history and to become a hero fighting against unbelievers (Kruglanski 2014). Political scientists see it as a means of provocation that should escalate the conflict with Western countries and further radicalise other Muslims (Gardner 2015). Even though these psychological and political theories might be useful, they do not seem to fully address the complexity of the Middle Eastern Conflict.

However, there is the economics of religion that can provide the missing explanations because it surprisingly well models behaviour of extremist and terrorist organizations. The ground work in this field of study is the application of the club model on Christian denominations from Iannaccone (1992).

His paper for the first time economically rationalized the surprising success of religious groups that require demanding prohibitions and sacrifices. Several applications followed such as testing the club model on Ultra-Orthodox Jews in Israel (Berman 2000) or on Asian Islamic sects (Berman and Stepanyan 2004). After the application of the model on religious cults, economists realized that the approach might explain the puzzling behaviour of extremely religious groups, as well. Thirteen years after Iannaccone's pioneering work, the club approach was used to model behaviour of the Taliban, Hamas and the Jewish Underground (Berman 2005). The application proved that these thriving religious militias have similar features as successful religious sects. Knowing this, finding solutions to deal with them efficiently has become easier.

In this thesis, I contribute to the academic literature by being the first to apply the club model on the religious terrorist group Islamic State. In order to show that the model is accurate I am putting down the essential attributes of ISIL and proving that they fit into the club model predictions. Moreover, I make a hypothesis based on the club logic, that as this organization gains resources, it will attract more members, which will result in higher levels of violence committed by the group to deter potential free-riders. To check the accuracy of this claim, I conduct extensive research on the funding and flow of foreign fighters and make a media analysis of ISIL's violence. The results confirm that the club model can explain the success of the Islamic State. In the final section, I suggest policy implementations that could potentially induce the organization's fall. Because of the limited scope of this thesis, the entire analysis is restricted to Iraq and Syria.

The outcome of this thesis can be beneficial for economists and governmental officials because if policy makers know that ISIL functions as a club, they can fight with this group more efficiently. In addition, understanding how the Islamic State emerged could prevent the rise of other, similarly strong, terrorist organizations in the Middle East. Last, but not least, this thesis might serve as a future template for other researchers who would apply the club model on newly formed terrorist organizations.

The thesis is organized as follows: Chapter 2 shows how terrorism, ISIL and the club model have been addressed in academic literature. We follow with Chapter 3 which mathematically describes the club model and its extensions to religious sects and terrorist groups. Application of the club theory on the Taliban, Hamas and Hezbollah based on Berman and Laitin (2008) is presented in Chapter 4. Chapter 5 investigates whether ISIL meets all the

necessary criteria to fit into the club model framework: a social service provision, prohibitions and sacrifices, defection deterrence and efficient funding. Chapter 6 is devoted to testing the relevance of the model. We do a simplified analysis of media coverage on ISIL violence and make conclusions on flow of foreign fighters and funding. After putting individual outcomes to one common framework, we make a statement about the relevance of the club model for ISIL case. Chapter 7 follows with policy implications and finally, Chapter 8 provides the conclusion of the thesis.

Chapter 2

Literature Review

In this chapter, we first refer to the literature on the research of terrorism in general. Then, to show how academic sphere has paid attention specifically to ISIL, we present in detail five of the most frequently addressed topics: the origin of the group, recruiting fighters, fighting ISIL, funding, and goals. For the purpose of understanding the connection between the club model and terrorism, the section 2.3 focuses mainly on literary sources which include development and application of the club theory on religious sects and terrorist groups. Finally, we provide a short summary of core literature in the economics of religion, of which the club model is an integral part.

2.1 Terrorism Addressed in Academic Literature

First, we outline literary contributions on the origin and evolution of terrorism and our understanding of this phenomenon over time. Second, we refer to different kinds of terrorist attacks and to factors that influence their selection. In order to understand motives for the terrorist activity, a summary of prominent fields in the psychology of a terrorist is provided. The last three sections describe funding, counter-terrorism and the decline of terrorist groups. These provide insight into how scientists have searched for the source of terrorist organizations' success and for strategies of how to deal with them efficiently.

2.1.1 History of Terrorism

The analysis of terrorism evolution can be, for simplification, divided into two main streams. Both include economic, sociological and psychological studies. The first, less frequently used, approach studies terrorism generally and puts

it into broader political, historical and social context. This includes an extensive history, how the understanding of terrorism has changed with time, the development of different spheres and changing definitions. This method makes it easier for a reader to understand the overall concept of terrorism and how to respond to it. One of the main representatives of this stream is Law (2009).

The second approach focuses predominantly on the modern period (usually after the WWII) and covers a wide range of specific topics such as type of attack, development and a structure of modern terrorism. One of its major representatives, Shughart (2006), stated that the contemporary terrorism originated in unstable states that were created in times of war. Very common in this field is the orientation on individual radical groups, their ways of recruiting, decision making and fighting strategies. Among the most studied organizations have been recently ISIL (e.g. Katagiri 2015), al-Qaeda (e.g. Long and Wilner 2014) and Nigerian Boko Haram (e.g. Chothia 2015).

2.1.2 Concrete Forms of Terrorist Aggression

Terrorists choose different kinds of attacks based on various factors including the type of target, funds, territory, etc. Many researchers have realised that understanding their decision processes can help to predict and prevent attacks.

Rosenthal (2003) focused on the study of suicide attacks. He came up with the claim that the more difficult the targets become, the more often leaders consent to the loss of devoted members and use them as suicide bombers. Berman and Laitin (2008) showed that if a terrorist organization serves as a provider of public goods, it uses suicide attacks with higher frequency than other groups. Faure (2003), on the other hand, examined the choice of hostage taking. The main outcomes of his study were intended to improve a negotiation process. However, the author himself pointed out that dealing with hostage takers brings always uncertain outcomes. Other types of terrorist incidents such as skyjacking have been subject of frequent research, as well (e.g. Sandler 2013).

2.1.3 Terrorism and Psychology

Psychology of a terrorist represents a relevant field within the terrorism research. Among the most frequently examined topics is whether members of terrorist groups act rationally or are mentally disturbed. A general public would consider the latter alternative more probable, an attitude shared by the

scientific community in the very beginning of this research. Jongman (1988) claimed that behind perpetration of brutal terrorist attacks there must be a mental defect or deviation. Many psychological studies ensued with the aim to define features of a typical terrorist personality (Borum 2010).

With more attention devoted to the topic, however, the conclusion that there does not exist any “typical inborn terrorist character” has prevailed. For example, Kruglanski and Fishman (2006) showed that a strategic decision to perpetrate terrorism explains a terrorist behaviour far better than the assumption that there exists a terrorist personality. In addition, Horgan (2008) confirmed empirically that terrorists are “normal”.

Within this topic, there has been frequent emphasis on proving the rationality of suicide attackers and finding out their real motives. Kruglanski (2002) pointed out that behind terrorist suicide attacks, there is not a psychological illness, but rather internal motivation, group pressure and limitation of outside options. Pape (2003) showed that suicide motives are based mostly on acquiring new territories and on remuneration paid.

When talking about the motives of terrorist activity, it is necessary to realize the difference between a sectarian member and a terrorist. Iannaccone (1992) claimed that people stay in a cult mainly because it gives them positive returns from religious participation (despite many restrictive measures). Their actions are then motivated mainly by religious belief. On the other hand, terrorists can participate in the group for many other reasons such as strategic choice, motivation, or belief that they can enact change (Wintrobe 2006).

Other, though less frequently researched, topics in the psychology of terrorism concern the vulnerabilities of terrorist groups and how terrorist organizations are formed (Borum 2007).

2.1.4 Funding

The existence of a terrorist group is highly dependent on acquiring financial resources. Shapiro and Siegel (2007) explained how understanding terrorist funds leads to efficient counter-terrorism measures. In their hierarchical terrorist organization model, they show how money is delegated from upper “governing” class to the middle class which is difficult to control. This middle class tends to cheat and embezzles part of the money. If the organization has limited resources and members frequently keep funds for themselves, its financial system

will eventually collapse. To fight such groups, governments should refrain from action until this turning point occurs.

The source of funds vary greatly from foreign donors, kidnapping for ransom and extortion, to taxing occupied locations (Biersteker and Eckert 2007). Recently, attention has been drawn to newly developed methods of funding. Namely, Poe (2014) discovered that terrorism in Asia earned between \$7 billion to \$10 billion from poaching.

Many researchers have analysed funding of specific groups. Peters (2009) explained that the Taliban draws a majority of its money from opium trade. He modelled how much narcotics had influenced the political situation in south Afghanistan and pointed out that Western countries still incorrectly perceive opium cultivation as a minor problem. In funding of other big groups such as al-Qaeda or Hamas, foreign donors frequently play the main role (Giraldo and Trinkunas 2007).

2.1.5 Counter-terrorism

The efficiency of counter-terrorism has been the subject of many discussions and publications. There are two main ways of approaching the topic. The first – more common one - defines tactics for fighting terrorism in general. The second attitude analyzes fighting with concrete groups.

Among relevant representatives of the first stream belong Gardner (2007) and Miller et al. (2008). The former highlighted that for successful counter-terrorism it is essential to predict a behaviour of a terrorist group and to consider all possible threats it can impose. Moreover, she stressed the need to shut down terrorist funds. Miller et al. (2008) evaluated the counter-terrorism measures that have been introduced worldwide after 9/11 and found out that many of them have not met governments' expectations. His conclusion was that aggressive response is not always the answer and that the efficient counter-terrorism strategy depends on many different circumstances such as a character of the group.

As for the second approach, the suggested counter-terrorism measures are by far more specific because they have to face a concrete threat. Aghedo and Osumah (2012) analysed how Nigeria should respond to Boko Haram: since the terrorist insurgency resulted from poor state governance and low-security measures, the state should focus on improvement of these issues and avoid further aggressive steps.

2.1.6 Groups' Decline

Studying groups' failure is essential for finding the clue how to defeat them. Phillips (2009) investigated how al-Qaeda lost its dominant position in Iraq. He claimed that the group's main problem was its extremism and reluctance to respect other individuals and communities. Weinberg and Perlinger (2010) in their research paper *How Terrorist Groups End* referred to four main reasons why terrorist units have ceased to exist: internal collapse, public rejection, external repression, and success of the group. Gaibulloev and Sandler (2014) undertook the research on the terrorist organizations operating between 1970 and 2007. They not only confirmed Weinberg and Perlinger (2010) findings about the reasons for the decline but also stated that the factors of groups' survival varied before and after the year 1990.

2.2 ISIL in Academic Literature

ISIL has been addressed in the world press repeatedly, especially in connection with its brutality, foreign fighters and wealth. Because of the limited scope of this thesis, we focus only on the most frequently mentioned themes in the academic sphere: the origin, recruitment of fighters, the fight against ISIL, its funding and goals. The organization is known under different names such as Daesh,¹ Islamic State, Islamic State of Iraq and Syria or ISIL. All hold true since there has not yet been any consensus on the name.

2.2.1 The Origin

Gulmohamad (2014) and Chulov (2014) studied the origin of the organization. Each chose a different approach. The former, Gulmohamad (2014), examined the group's initial interaction with other terrorist organizations, such as Jabhat al-Nusra, and its policy implementation in occupied regions in Iraq and Syria. She pointed out that ISIL's strict enforcement of Sharia law and disrespect to culture has created significant displeasure and resistance from occupied population. In order to maintain its strength, ISIL will have to temporarily cooperate with other smaller groups in the future. Chulov (2014) interviewed former Iraqi prisoners arrested by the US army in 2003 in order to find out the circumstances of the organization's origin. He discovered that American

¹Arabic equivalent to ISIS or ISIL. Literally, it means Islamic State in Iraq and al-Sham (Buchanan 2015).

detention centres served as meeting points for a majority of future ISIL leaders who could plan there their conspiracy easily. Mooney (2014) summarized the further development of the group and pointed out that expansion of ISIL is tightly linked to its ability to gain resources quickly and efficiently.

2.2.2 Recruiting Fighters

Recruiting new fighters is essential to ISIL expansion and necessary to supplement the losses from previous fights. Recent reports have claimed that the group has between 19,000 to 25,000 fighters (Martinez 2016).² The character of members vary greatly from the Middle-East fighters to housewives in Europe.

Foreign fighters come mainly from Tunisia, Saudi Arabia, Russia, Jordan and Turkey (Kirk 2016) and are lured either by ISIL's intensive media campaign or personal motivation (Glazzard 2015). Berger and Morgan (2015) explained that ISIL frequently uses Twitter and Facebook for recruitment because these social network services offer access to many potential sympathizers, provide an easy way to spread information quickly and can be used to influence how the general public perceives the group. Zakaria (2015) studied organization's media strategy on the internet in general and referred to especially brutal videos and websites that ISIL purposefully propagates to attract members.

When recruiting fighters from Syria and Iraq, the strategy is quite different. Luqman (2016) pointed out that adults are recruited mostly by Muslim clerics preaching Jihad in mosques, which in turn serve as the main recruitment centres. Bloom et al. (2016) focused on children recruits and discovered that ISIL has increasingly used the young from local populations for the fight, especially in suicide missions. Indeed, in their study, they proved that the monthly instance of child suicide attackers increased from six in January 2015 to eleven one year later. Palmer (2015) claimed that children between the ages of 10 - 14 are stolen from families and brought to special camps where they are brainwashed and then sent to fight.

2.2.3 The Fight against ISIL

Fighting ISIL is like a long-distance run. Commanders from America claim that it will take from 10 to 20 years to defeat the group utterly (Beyer 2016). Since the beginning of the major fights in 2014, many new sides have joined

²Information on the size of ISIL usually avoids specifying the proportion of local to foreign fighters, since the exact number is quite difficult to obtain.

the conflict and made the war more segmented. Because of the limited scope of this thesis, we focus solely on ISIL and its opponents in the air and on the ground.

With the rapid advance of ISIL in Iraq, mid-2014, many national governments realised the need to respond militarily - namely with air strikes. As a result, a US-lead coalition consisting of about 60 countries was formed in early autumn 2014. Since then, about 8,000 air attacks have been launched in Iraq and Syria (as of November 2015). In October 2015, Russia - until that time inactive - entered the game with their own air strikes. Three months later, 30 odd Islamic nations made their own coalition against ISIL. A wave of intensified air strikes focusing specifically on ISIL prospering oil infrastructure began in October 2015 (Wilson Center 2016).

On the ground, ISIL has been clashing mainly with Kurdish peshmerga, Iraqi security forces, voluntary Yazidis and small independent insurgency groups in Iraq (Fantz 2015). In Syrian territory, the situation is more complicated due to the ongoing civil war. Mainly the Kurds and Syrian Democratic Forces, backed by the US, fight ISIL. Syrian president Assad, despite officially claiming war against the group, focuses the most of his power on countering Syrian rebels. In October 2015, the US president after the long refusal finally consented to send ground troops to Syria in order to help Kurdish and Arabic rebel forces (Cass 2015).

Opinions on an efficient fight with ISIL vary greatly. Paton Welsh (2015) pointed out that major problem for coalition forces is to decide whom they support. Syrian rebels are mixed with terrorist radicals from al Nusra Front. The Kurds do not get along with the Sunnis, therefore, clashes between them will be inevitable if ISIL falls. Turkey fights against the Kurds and is not capable of closing borders with Syria. The military expert Welsh concluded that air strikes should be the most efficient way how to bring ISIL down. Thompson (2015) added that sending ground troops to the Middle East would be a strategic mistake for several reasons; the foreign troops will become easy to attack (with air attacks this threat is negligible); kidnapping of fighters and contingent blackmailing will demotivate Western cultures; the coalition will be forced to openly support one of the fighting parties. In addition, once the troops leave the afflicted countries, new radical groups will emerge as they have repeatedly in the past. Phillips (2014) proposed the US coalition join forces with the Kurds because their "friendship" could create a stable link between the West and the problematic region. Cronin (2015), on the other hand, suggested that

instead of using military power against ISIL, the US should choose diplomacy. The New York Times (2015) stated that the main resistance should come from local states backed financially by the US, France, Russia and others. They also stressed the importance of destroying major sources of revenues and closing Syrian - Turkish border. Many other researchers have followed with their own ideas. There has not yet been any clear agreement on solving ISIL issue.

2.2.4 Funding

Once we find out how ISIL finances itself, the group will become easier to fight. In comparison with other terrorist organizations, the Islamic State is not dependent on foreign help. It draws a majority of its funds from the sale of crude oil and from criminal activity in occupied regions. Other minor sources include foreign donations, money from smuggling antiques and kidnapping for ransom (Levitt 2014).

Daragahi and Solomon (2014) analysed oil-smuggling. They pointed out that majority of ISIL's oil ends up in Turkey, Iran, Jordan or in Assad's hands. High level of corruption in northern Iraq where the stolen oil passes through only worsens the situation. The conclusion of the work is that the group cuts out the middleman in oil sales and as a result must transfer large volumes on its own, a process that makes it more observable. Amr Al-Azm and Daniels (2014), who concentrated on looting antiques, claimed that ISIL does not actively plunder historical sites but rather let locals do it and then taxes them. Kaplan (2015) studied the misuse of the banking system. He found out that specifically Mosul must be a great source of money because of its large number of banks.

The proportion of total money ISIL gets from different sources is changing fast as counter-terrorism strategies target ISIL's funding. Recent changes have been analysed by, e.g. Wintour (2016), who pointed out that the group more and more relies on donors from the Gulf States.

2.2.5 Goals

In June 2014, ISIL proclaimed the establishment of a caliphate, the state in which people live in accordance with Islamic or Sharia law. The group has demanded all the Muslims in the world to come to the caliphate and to be devoted to ISIL's leader Abu Bakr al-Baghdadi. Moreover, all other jihadist groups are supposed to become submissive (BBC News 2015b). Withnall (2015)

added that an extensive expansion is on the list of priorities too, along with fighting old enemies such as Iran and the United States.

2.3 The Club Model of Religion

The religious club model belongs to one of the most frequently studied fields within the economics of religion. It provides an explanation for puzzles concerning the success of restrictive religious sects. Moreover, its extensions are useful for the study of radical terrorist groups. The model, as we know it today, appeared in academic literature in the early 1990s.

2.3.1 The Club Model in General

Until 1960s, goods were strictly delineated into public and private which left a lot of specific cases unexplained (Samuelson 1995). The first person to cover a wider range of options - a partial excludability - was Buchanan (1965). He developed a club model, though not yet applied to religion and referred to its application on communities in which membership can be restricted. The author also admitted possible limitations in the model's utilization and suggested useful implications on property rights.

2.3.2 The Club Model of Religion

Iannaccone (1992) for the first time applied the club model on religious institutions, focusing specifically on Christian religious sects. He used it to explain that some denominations are more successful than others because they introduce prohibitions and sacrifices that encourage participation and screen out free-riders respectively. Moreover, he stated that membership in a religious sect is based on rational choice and that it produces mostly positive externalities (in contrast to DeSerpa and Happel (1977)).

This club model approach went strictly against the stable psychological point of view of Galanter (1982) who claimed that only unbalanced or irrationally behaving individuals, possibly with traumas, become members of religious cults.

Becker and Murphy (2009) have been frequently cited in connection with the religious club model because their social multipliers provided an explanation for the success of such communities. They added social environment as a

third variable into the stable utility function (along with goods and services) and assumed that social capital and related behaviour are close complements. This conjecture left little space for individual decision-making, which goes directly against Iannaccone (1992) and Berman (2000). These scientists believed that participation in communities is based solely on the rational choice of an individual. Moreover, the social multipliers covered neither prohibitions nor free-rider problem.

2.3.3 Applications

After Iannaccone (1992), many applications followed. Berman (2000) applied the club model supplemented by the subsidy effect on a community of Ultra-Orthodox Jews in Israel. In his study, he tried to expound three confusing facts:

1. During the economic emancipation in the 19th century, a majority of European Jews eased observance of religious prohibitions. The Israeli Ultra-Orthodox community, however, raised restrictions.
2. In 1980s, when the working conditions, as well as wages, of women improved considerably, Israeli Ultra-Orthodox mothers became more fertile.
3. In 1990s, there was a surprisingly low labour supply of young Ultra-Orthodox Jews.

Berman (2000) explained with the religious club model each of these three puzzles and stressed the effect of subsidies that rapidly influence Ultra-Orthodox Jews' decisions. He also pointed out that the club theory works sometimes better than the traditional microeconomic approach. Berman and Stepanyan (2004) followed with their study of Indonesian, Bangladeshi and Indian radical Islamic sects. They revealed a positive correlation between the membership in religious schools (implying lower salary) and fertility and justified it with the club model.

To the best of my knowledge, the first significant application of the club theory on religious militant organizations came from Berman (2005). He used the model to explain destructive behaviour and substantial effectiveness of the Taliban, Hamas and Jewish Underground fighters. In addition, he also focused on the historical development of the extremist religious groups and compared

their destructiveness with other secular radical militias. The simplified mathematical model from Iannaccone (1992), which I use in the methodology part, is described in Berman's paper. Iannaccone and Berman (2006) summarized their views on the club model in connection with religious extremism. Compared with previous studies, the paper provided more theory on fundamental concepts. Terms such as "demand for the supernatural", "organizational forms of denominations", "risk" or "free-rider problem" were explained in detail.

Berman and Laitin (2008) developed new testable applications, focusing on suicide attacks. They used very similar methodology as Iannaccone (1992) and applied the model on the Hamas, Hezbollah, and Taliban. Their three hypotheses were:

1. There is a positive correlation between the provision of public services and attacking more "dangerous" targets.
2. When a value and protection of targets increase, suicide attacks are chosen more frequently.³
3. The more public goods provided by the club, the higher the lethality and the proportion of suicide attacks.

Using the club model, Berman and Laitin (2008) described the above statements. They also considered reasons why terrorist leaders opt more and more often for suicide attacks as a fighting tactic.⁴ Their conclusion was that suicide attackers operate more frequently in richer countries with well protected and more difficult targets. Insurgencies, on the other hand, arise in easily accessible rural areas with rough terrain and opportunity to hide.

2.3.4 Drawbacks of the Model

There is one frequently mentioned drawback of the club model approach connected with the correlation between wage, education and participation. Iannaccone (1992) and later Berman and Laitin (2008) explained that sects and radical extremists choose recruits with low wages and insufficient education since these poor outside options reduce risk of defection. However, Berrebi

³Recent suicide attacks in Brussels subway station Maalbeek indicates that the hypothesis need not always hold since there were not any significant security measures in the stop.

⁴Berman and Laitin (2008) point out that since 1999 suicide attacks have been preferred over the other attacking methods.

(2007) pointed out that education and wage are positively correlated with participation in terrorist activities including suicide attacks. Similarly, Krueger and Malečková (2003) found a positive relationship between education and hate crimes (which can be viewed as a proxy for terrorism).

The explanation for this positive correlation might be a selection process (Berman and Laitin 2008): higher educated people are chosen for a terrorist mission because they are more likely to succeed. However, these members have a wider range of outside options available, therefore they can be trusted only under the assumption that they do not care about alternatives.

Another explanation might be differing motives for suicide attacks in Palestine and Iraq. In the former case, the attacker is perceived as a martyr and if his mission is successful, his family receives monetary compensation and admiration (The Washington Post 2009a). On the other hand, in Afghanistan, suicide attackers are seen predominantly as a powerful weapon (Berman and Laitin 2008). Because of this, poor people without education are frequently recruited.

2.4 The Economics of Religion

The economics of religion is a relatively new field of economic research. Interest in this area has been, after a slow start in the 18th century, fully manifested since the 20th century. New approaches and investigations have begun to focus on the application of market behaviour on religious institutions, religious behaviour and interactions among those believing in God. As a result, religion is no longer solely a domain of philosophy, sociology or psychology, but it belongs to elaborately investigated areas of economics.

The first significant literature in this field was *The Wealth of Nations* by Adam Smith. He argued that basic macroeconomic and microeconomic principles can be applied to religion too. Namely, he showed that priests are driven by their needs the same way as secular people, and that religious denominations have to face the same market constraints as secular firms. Moreover, Smith defined economically differences between sects and prevalent churches (Iannaccone 1998).

Weber (1958) pointed out that Protestants with their typical economical behaviour and dutifulness - which stem from their religious belief - stand behind the rise of the capitalistic society. His work in fact defined Protestants as a religious sect with special qualities. Kanter (1972) discovered that in the

19th century utopist communities with higher religious activities and sacrifices had higher success than other religious groups. Stark and Bainbridge (1985) referred to the strong persistence of religious sects in modern secular societies and supported their findings with historical case studies and social data. Roof and McKinney (1987) pointed out in their book *American Mainline Religion: Its Changing Shape and Future* that small, more prohibitive and demanding cults grow faster than well-established churches. Consequences of religious restrictions such as a higher conversion rate of sects in comparison with non-sectarian religion examined e.g. Argyle and Beit-Hallahmi (1975).

Significant attention has been also paid to the study of religious determinants, in other words, why do people join denominations and sects. Azzi and Ehrenberg (1975) provided the first systematic econometric approach on the topic. They came with the study of the household allocation of time based on Becker (1965) and claimed that among the main motives for being a believer belong after-life consumption (so-called salvation motive), church benefits and a social pressure. Their analysis focused mainly on the first mentioned. In the two-member household utility function, non-believers derived zero utility from salvation and therefore devoted no activity to religion.

Among other remarkable fields of study belong the study of microeconomic and macroeconomic aspects of religion, Islamic economy, connection between politics and religion as well as a cultural evolution of religion (Iannaccone 1998).

Chapter 3

Methodology

Firstly, we provide a description of the general club model, then we show its implication for religious sects and radical extremist groups.

3.1 The Club Model in General

The methodology in this section draws fully from Buchanan (1965), the author of the club model. Until the 1960s, there was a strict line between purely private and purely public goods with no alternative categories. In the former case, the optimal number of people who possess the good is one (or one unit), in the latter case, infinity. It is quite common to encounter the pure private good nowadays (e.g. personal computer). On the other hand, finding an example of a good owned by the entire population is almost impossible (Buchanan 1965).

The utility function of a person with private goods looks like:

$$U^i = U^i(X_1^i, X_2^i, \dots, X_n^i),$$

where each X stands for the quantity of purely private goods consumed for a given period and i refers to an individual. This function is then extended in order to cover both the pure private and pure public goods:

$$U_i = U^i(X_1^i, X_2^i, \dots, X_n^i, X_{n+1}^i, X_{n+2}^i, \dots, X_{n+m}^i),$$

where subscripts $n + 1, n + 2, \dots, n + m$ represent public goods. This approach supposes that all goods can be classified into two main categories, private and public (Buchanan 1965). Private goods can be divided among people $i =$

1, 2, ..., s and satisfies:

$$X_j = \sum_{i=1}^s X_j^i$$

Public goods cannot be divided among people and its condition is:

$$X_{n+j} = X_{n+j}^i$$

There is, however, a third option not covered by the equations above: the good which is shared by a group (or club) consisting of more than one and less than an infinite number of members, e.g. a gymnasium. The question becomes, what is the optimal size of this club in order to meet the needs of all its members yet not cause a congestion problem at the same time?

Firstly, it is necessary to construct a new utility function that would include this alternative. An argument that denotes the size must be added to the term X_j . This is essential because the individual's utility newly depends on the size of group he or she has to share the assets with.¹ A variable of a club size N_j is therefore included alongside each X_j and it represents the number of individuals (members) who participate in the sharing of X_j for given time period. For simplification, it is assumed that an equal amount is shared. The new utility function is then:

$$U^i = U^i [(X_1^i, N_1^i), (X_2^i, N_2^i), \dots, (X_{n+m}^i, N_{n+m}^i)]$$

Let X_r be a numeraire (e.g. money), then $\frac{u_j^i}{u_r^i}$, where u is a partial derivative, represents the marginal rate of substitution in consumption between X_r and X_j for person i and $\frac{u_{N_j}^i}{u_r^i}$ is the marginal rate of substitution between the size of the group and the numeraire (Buchanan 1965).² The production function, which applies to each individual in the group, is:

$$F = F^i [(X_1^i, N_1^i), (X_2^i, N_2^i), \dots, (X_{n+m}^i, N_{n+m}^i)]$$

N is present in the equation above because of the congestion effect (e.g. the more people that participate in dancing courses, the less free space each individual has for dancing).

With both the utility and the production (cost) functions, conditions for

¹E.g. a swimmer might enjoy swimming with other people more than when he is alone. However, when there is too many swimmers around, swimming becomes uncomfortable.

²Ratio, in which person is willing to exchange money for a new member of the group.

Pareto optimum can be derived. According to Buchanan (1965), the first condition says that the marginal rate of substitution in consumption between X_j and X_r has to be the same as the marginal rate of substitution between X_j and X_r in production:

$$\frac{u_j^i}{u_r^i} = \frac{f_j^i}{f_r^i}$$

The second condition is:

$$\frac{u_{Nj}^i}{u_r^i} = \frac{f_{Nj}^i}{f_r^i}$$

This equation shows that the marginal rate of substitution between X_{Nj} (the size of the group that shares X) and X_r in consumption has to equal to the marginal rate of substitution in production. When combining the two conditions, we get:

$$\frac{u_j^i}{f_j^i} = \frac{u_r^i}{f_r^i} = \frac{u_{Nj}^i}{f_{Nj}^i}$$

If this equation holds, then the conditions for utility maximization of consumption X_j are met. In other words, a group member will have optimal amount of goods X_j that he will share with an optimal number of people.

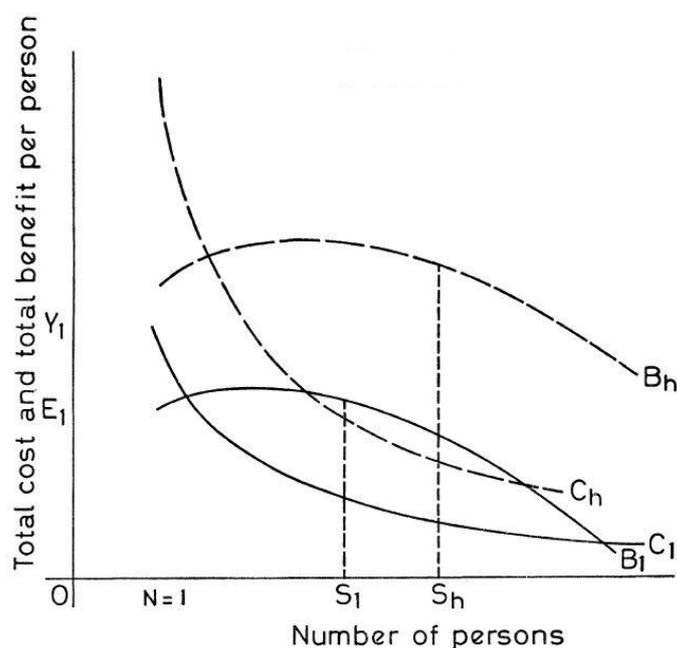
To better illustrate the optimal size of the club, a geometric analysis from Buchanan (1965) is provided. To determine the optimal quantity of goods, the approach is quite similar, therefore we omit it.

Let us have an individual who decides to rent a gym. He wants to have a comfortable exercise facility with enough space, but on the other hand, he does not want to pay for the entire place himself. Therefore, he needs to find an optimal number of people that would share the costs with him but at the same time not disturb him in his activity. For the purposes of this model, all individuals are identical. Firstly, we assume that the gymnasium has a size S_1 , which is determined by a number of people who can fit in. In the figure 3.1, a vertical axis shows total costs and benefits per person.³ A horizontal line shows how many people are present in the gym. The lines B and C represent benefit and cost functions respectively.

As more people join the gym, the benefit will, after some time, decline because of the congestion effect (not enough space for exercise, noise, etc.). More members also mean lower rent costs. Therefore, cost function is declining as well. For the S_1 size, the optimal number of people in the gym (club) is

³Benefit evaluation is based on how much the individual values the visit of the gym in money.

Figure 3.1: Geometrical Analysis of the Club Model



Source: Buchanan (1965).

shown by the point on the horizontal axis where the derivative of total benefit function equals to the derivative of the total cost function. In the figure, this situation is represented by the vertical line that goes from S_1 . If the size of the gym increases to S_h , both cost and benefit function shift upwards because renting fee will be higher as well benefits from exercising.

Buchanan (1965) stated that only unique values of goods and services can satisfy the conditions, which presupposes identity of persons and certain cost-sharing schemes. (These assumptions are, for the purposes of thesis, relaxed.) According to him, the model developed above is only applicable to groups that can exclude members. These exclusions might result, for instance, from specific property rights. The example can be when ship captains must be licensed to berth a ship at harbour.

In the final part of his paper, the author claimed that property rights do not always allow for optimal exclusion, which could result in a free-rider problem. He suggested that this issue can be solved by introduction of exclusionary tools and by more flexible property agreements. In following part, we show how religious sects deal with this free-rider problem by requiring prohibitions and sacrifices.

3.2 The Religious Club Model

Iannaccone (1992) was the first to use the club model on religious organizations. Despite the fact, he proceeded from Buchanan (1965), his work analysed the use of prohibitions and sacrifices in greater detail. Iannaccone and Berman (2006) then continued with the application of religious club model on religious extremist groups. In this section, we introduce a simplified economic theory of the religious club model, based mostly on Iannaccone (1992), Berman (2000) and Berman and Laitin (2008). Subsequently, the model's application to terrorist groups by Berman and Laitin (2008) is outlined.

3.2.1 The Logic of Prohibitions

This section explains why some religious sects and denominations use prohibitions such as dietary restrictions and dress code, etc. Let utility of a community member be based on three basic variables: S - private secular consumption, R - religious participation, characterized by the time spent on religious activities (e.g. praying), and Q - quality of the club, determined by the size of the group and average participation of the other members (Iannaccone 1992). Q is defined as follows: $Q = \sum_{j \neq i} \frac{R_j}{N-i}$. The utility function of an individual then looks like:

$$U_i = U(S_i, R_i, Q), \quad U_1, U_2, U_3 > 0$$

for $i = 1$ to N . In later studies of e.g. Berman and Laitin (2008), Q is sometimes substituted with a non-rival and excludable club good A : $A = G + C(\{R_i\})$, where $\frac{\partial C}{\partial R_i} > 0 \quad \forall i$, G is services provided by the government and C stands for club goods.

As in any utility maximization problem, club members have to face a budget constraint: $wT = pS_i + wR_i$, where $T = H_i + R_i$, S is the secular goods bought at price p for full wage w and H represents time spent on secular activities (e.g. work, school, family). The maximization of the utility function subject to budget constraints results in:

$$\frac{w}{p} = MRS_{RS}(R^*) + MRS_{QS}(R^*)$$

where $MRS_{RS}(R^*)$ is the marginal rate of substitution between R and S and $MRS_{QS}(R^*)$ is the marginal rate of substitution between Q and S (Berman and Laitin 2008).

In the model, the production of the religious club goods C is based on the willingness of members to participate. This participation generates positive externalities.⁴ Consequently, there is an insufficient amount of religious participation R in a competitive equilibrium because a member of the community does not realize a positive impact of his or her participation on the other members. In other words, the term $MRS_{QS}(R^*)$ in the equation for competitive equilibrium would be missing. Whereas, as derived above, in the social welfare optimum of the club model, this term is included (Berman 2000). The information stated above provides the basis for why conventional microeconomic theory is replaced in this case by the club theory, that explains religious behaviour better.

In order to achieve the optimal condition, a religious community needs to ensure an optimal level of religious participation R^* (Berman and Laitin 2008) because an individual's satisfaction from the membership is dependent not only on his own participation but also on participation of the other members. For example, the more people pray and sing psalms with us, the higher the satisfaction we derive from a sermon (Iannaccone 1992). The question becomes, how to "force" individuals to participate in religious activity to achieve R^* (so that they would work less and spend more time with R).

One solution could be internalization of externalities by charging a fee for membership. This serves essentially as a tax on secular activities. Later, the collected money can be used for a financial subsidy of individual participation of active members. The tax introduction $\tau = p^* - p$ would result in a choice of $R^* > R$ (Berman and Laitin 2008). However, this procedure requires proper monitoring of individual participation, which is quite difficult to perform. For instance, observation of monetary donations is inefficient because commitment is not correlated to income. Similarly, controlled frequency of attendance does not necessarily show individuals' religious inputs (Iannaccone 1992).

If the club cannot tax secular activity of its members directly (which is usually the case), it can instead impose religious prohibitions. The generated effect is the same; higher participation rate R and less time spent on outside activities. For example, Jews during Shabat cannot use any electrical devices, travel or cook, therefore they have to spend a majority of time at home with their community (Berman and Laitin 2008).

⁴Buchanan (1965) supposed that after some time benefits from participation decrease because of the congestion effect as shown on the gymnasium example in the general club model.

Individuals choose to join the club only if the utility forgone from secular consumption is compensated sufficiently by club goods $Nx(R^* - R)$ (Berman and Laitin 2008). Logically, the stricter are the prohibitions, the fewer members the religious organization has. Moreover, with higher requirements, the religious group members become excluded from the secular environment. The resulting differences among believers and non-believers may engender social and political tensions. A community may actually profit from this situation since such animosity represents another limitation of outside options of its members (Berman and Laitin 2008).

To conclude, religious communities are dependent on committed participation of their members because the more people are actively involved in the group, the better the overall quality of the club becomes. Prohibitions are an efficient way to indirectly tax secular consumption since members must reduce work and increase participation in religious activity (Berman and Laitin 2008). The prohibitions include dress code, dietary restriction, celibacy, etc.

3.2.2 The Logic of Sacrifices

Unlike religious prohibitions that serve as an indirect tax on secular consumption, a club uses sacrifices to prove the commitment of its members (Berman and Laitin 2008).

Let us have two wage types: a high wage type w^2 and a low wage type w^1 . The opportunity cost of participation in a religious activity is greater for the high wage type than for the low wage type therefore, the rich will try to "cheat".

The utility of club members depends on Q , quality of the club, which is defined as $Q = \sum_{j \neq i} \frac{R_j}{N-i}$ for i to N members (Berman 2000). The standard of the club declines if high wage profiles free-ride on the religious activity of low wage profiles and enjoy benefits without "paying" for them.⁵ Low wage members can address the issue by requiring sacrifices such as time or initiation rite in order to screen out high wage free-riders (this excludability is one of the attributes of the club model). As a result, average R increases and therefore also Q (Berman and Laitin 2008).

The set-up of this model, which derives mostly from Berman (2000) and Iannaccone (1992), is basically the same as that of prohibition. However, the

⁵High wage profiles provide suboptimal level of R and would rather participate in secular activity.

time constraint contains additional voluntary sacrifice K :

$T = H + R + K$, $K \in (0, \kappa)$, where $\kappa =$ sacrifice of time/initiation rite.

The optimal level of sacrifice can be defined as the level where only low wage individuals decide to stay in the group and gain high club quality Q^1 :

$$V(p, w^1, Q^1, K = \kappa) \geq V(p, w^1, Q^2, K = 0)$$

Q^2 equals to the quality of the club when $K = 0$ and V is an indirect utility function. At the same time, high wage individuals should be deterred by the requirement of κ and stay out of the club with low R :

$$V(p, w^2, Q^2, K = 0) \geq V(p, w^2, Q^1, K = \kappa)$$

Iannaccone (1992) defined the conditions for existence of κ as follows: firstly, religious activity of low wage individuals has to be larger than high wage individuals: $R^1 > R^2$. Secondly, people with high wages have to value Q less than the rest. To conclude, optimal κ^* in the separating equilibrium is the lowest κ that keeps individuals with low R out of the club:

$$V(p, w^2, Q^2, K = 0) \geq V(p, w^2, Q^1, K = \kappa^*)$$

(This holds under the condition that “indifferent” people with w^2 decide not to join (Berman 2000)). The implications of the model according to Iannaccone (1992) are:

1. The similar requirements on prohibitions and sacrifices should result in similar characteristics of groups, irrespective of their historical, geographical or cultural background.
2. There is a positive correlation between K and R .
3. a) People from low social strata supposedly are more likely to join a sect or cult than a well-established religion; b) recessions and public crisis are more beneficial to the rise of new sects than to big denominations.
4. Sects have higher conversion rate than other denominations.
5. Sects have fewer members than more church-like organizations in order to keep monitoring costs low.

To conclude, sacrifices serve as proof of commitment and help groups screen out free-riders because only devoted cadres will consent to lose resources without utility. Such include circumcision, long starvation periods, etc.

3.3 Application on Radical Extremist Groups

Berman and Laitin (2008) pointed out that besides religious sects, extremist religious groups can be perceived as clubs, too. They observed the Taliban, Hamas and Hezbollah and noted common features. All of these well-funded organizations are very efficient in their terrorist activity. They provide basic social services such as schools or infrastructure where national governments have failed. Moreover, all three impose religious prohibitions and sacrifices (e.g. initiation rites).

To connect these with the club model, it is necessary to realize that the mentioned terrorist groups provide social services on the basis of mutual aid (health insurance, food, income...) or donations funded from successful group activity. The more people actively participate (fight), the more positive externalities (social services) are generated. This is why organizations introduce prohibitions to tax the secular activities of members and force them to participate in the club. Some of the individuals only consume the social services and do not contribute properly. As a result, the quality of the community goes down. Because of that, the groups use sacrifices in order to exclude free-riders (Berman and Laitin 2008).

Terrorist organizations are vulnerable to defection because exposure of their plans can threaten their existence. If they can screen out disloyal members, the risk of betrayal decreases significantly. That is why radical extremist groups with social service provisions are more efficient than their secular alternatives. They can efficiently filter out non-committed members through religious sacrifices. A good quality of the club is also a defection deterrence, since members with low outside options have low incentives to betray (Berman and Laitin 2008).

Berman and Laitin (2008) further extended the model by suicide attacks and the choice of targets. In general, they concluded that terrorist groups with social service provision use a higher proportion of suicide attacks which are also more lethal than organizations that do not provide anything. Moreover, they attack more difficult targets. All of these claims stem from the religious club model approach.

3.4 Data

There are several different sources of information used in this thesis. All of them are available online, however, sometimes a private account is necessary. A majority of data was used to test if application of the club model on ISIL is relevant. The rest was utilized as supporting material for Chapter 4.

Testing the accuracy of the club model required data on three main topics: funding, media monitoring of ISIL violence, and the number of fighters. In the first case and the latter case, information from the world press was the most useful because newspaper articles provide frequently updated information concerning the theme. In order to ensure the relevancy of the source, only academically recognized newspapers and broadcasters such as the BBC, CNN or the Wall Street Journal were employed. Besides information in media, maps from the Institute for Study of War were utilized for the funding section. We used them to analyse the territorial advance of ISIL and related gains and losses in oil and mineral fields.

As for media monitoring, the ProQuest Database was used. It provides an extensive digital archive of newspapers, journals, reports, etc., thus it was found fully adequate for the purposes of the thesis.

To find information about the number of attacks perpetrated by different radical groups, we used the Global Terrorism Database (GTD). It lists over 140,000 terrorist cases from 1970 to 2014 and is updated annually (GTD 2016). It gives information about the date, location, perpetrator, type of target, type of weapon, number of injuries and fatalities. We employed this database to analyse the efficiency of different terrorist groups based on injuries per attacks and fatalities per attack (see Chapter 4).

Chapter 4

Application of the Model on Terrorist Groups

In order to understand the application of the club model on ISIL, it is useful to identify how the method has been used on other terrorist organizations - the Taliban, Hamas and Hezbollah. In these three cases four main attributes of the club model were successfully shown by Berman and Laitin (2008):

1. **Social Service Provision** – it is usually provided either in a form of mutual help among members or financed by club ancillary activities. It serves as a proxy for the quality of the club. The better the provision, the more loyal the people are to the group - especially if their outside options are low (= poor state governance). If organization realizes this fact, it tries to have the highest quality possible by filtering out inactive members. Among public goods provided are: schools, law and order, better infrastructure and hospitals.¹
2. **Prohibitions and Sacrifices** – in order to keep the quality of the group (club) high, its members have to actively participate. To ensure this involvement, radical terrorist organizations introduce prohibitions in order to tax time spent on secular activities. With these restrictions, individuals have no other choice then to stay in the community and do religious or other duties that produce positive externalities.

In order to avoid free-riders, organizations demand sacrifices (e.g. initiation rites) as proof of commitment. Those who pass are devoted members

¹In many cases, fighters receive income for fighting and other remunerations for successful attacks (Berman and Laitin 2008).

who can perpetrate terrorist attacks without defecting and therefore make the group more lethal and stronger. Moreover, some of these sacrifices may actually contribute to the quality of the club. For instance, if the initiation rite is to hit a high-value target, a successful outcome improves the overall welfare of the group.

3. **Defection Deterrence** – besides the fact that prohibitions and sacrifices serve as a sort of taxation on secular activities and a proof of commitment respectively, they can also make a member easily identifiable (e.g. dress code). If the distinction is significant (it can concern a group as a whole or just some individuals), tensions between members and non-members may arise. The potential animosity between the two camps is desirable because it further lowers outside options of a member and supports his participation in religious or other activities in the club. Besides restrictions on, for example: dress code, the group can intentionally present itself negatively in newspapers, and the outcome is the same. For example, if the Taliban displays its atrocities publicly (e.g. online), its members will face difficulty leaving the group because other people would despise them.
4. **Funding** – to be able to provide social support, a group needs to have generous donors or its own profitable sources of capital. Generally, the more money the club earns, the more members it gains. However, more sources lure more free-riders, therefore stricter sacrifices and prohibitions must follow in order to maintain the high quality of the club.

With examples of the present time,² we show that the Taliban, Hezbollah and Hamas still have the following attributes and therefore fit into the club model framework, which we further confirm by opium smuggling route (section 4.1) and lethality evidence (table 4.1).

²For the description of groups' history, we drew mostly from (Berman and Laitin 2008).

4.1 Taliban

Status: active

Theory

In 1979, the Soviet Union invaded Afghanistan and set up a controlled government. Nine years later, the occupier was expelled by the Mujahedeens, the anti-regime Islamic militants, with support of the USA and the Gulf States. Despite the appointment of the new administration in 1989, local militias fought frequently for power, which pulled down the country's economics (Aljazeera 2009). By 1995, no trade was possible in the north of Afghanistan because of heavy fighting. The southern part was controlled by unstable government of Mujaheddin lords who ignored the terrible conditions of the country (Berman and Laitin 2008).

Despite being in a downturn, the south provided the only possible route for merchants and smugglers to transport their goods from Pakistan to Iran. The main obstacles for the traders were assaults by bandits on Afghani territory that resulted in the loss of transferred goods and the death of its carriers. The Pakistani government and Pakistani Intelligence tried to solve the issue by strengthening security measures along the route in autumn 1994. Yet the first trial convoy was immediately assailed. And that was the time when the Taliban emerged (Berman and Laitin 2008).

The group of inexperienced radical Islamic students managed to free the captured convoy. After this first big success, the students easily bribed the southern leaders and conquered the biggest city of the south, Kandahar. The Taliban quickly recruited thousands of members and gained 12 out of 31 Afghan provinces. By the end of the year 1994, it had warranted a secure southern trade route in return for a toll from its users. In the period of the Taliban's highest expansion, the group conquered about 80% of Afghanistan and was accepted as a justifiable ruler by Pakistan and Saudi Arabia (Berman and Laitin 2008).

After September 11th, 2001, everything had changed; the Taliban lost its great political power to the US established government and devoted its existence to fights with foreign militias. As for now, the group is still active, promising to fight until foreign – namely the US – troops leave (BBC News 2015a).

Taliban and the Club Model

How is it possible that a small group of inexperienced young men managed to seize power over the majority of Afghanistan? What is the secret behind their efficiency? The Taliban evolved quickly from a benign group into one of the most deadly terrorist organizations ever (Berman and Laitin 2008). The following facts show that the Taliban's success fits perfectly in the club model framework:

1) Social Service Provision

The expansion of the organization was based on the provision of public goods in unstable and conflicts ridden areas. The group facilitated necessary trading routes via Afghanistan, stopped the production of opium (for a while), provided basic safety measures and rules of order, and established religious schools (Rashid 2000). By doing this, the Taliban satisfied bare necessities of life for the local population that the Mujahedeen warlords had been ignoring for a long time. Therefore, it should not be a surprise that only a few months after its first appearance, the group gained great popularity and attracted more than 12,000 members (Berman and Laitin 2008). Despite losing some of its influence due to increased state security and the Islamic State in Afghanistan, there is an evidence that the Taliban continues to significantly influence the public service provisions and runs the current opium smuggling route (Stancati and Totakhil 2014).

2) Prohibitions and Sacrifices

Immediately after its rise, the Taliban strictly enforced Sharia law, imposing many religious prohibitions on all adherents and citizens of occupied zones (Berman and Laitin 2008). Among restrictions and laws introduced on the new territory were: banning women from working, punishments such as stoning to death, amputations, no television, music or cinema (to avoid potential negative Western influence), and requiring men to grow long beards and women to cover themselves completely in a burka. Girls over 10 years old were not allowed to attend schools (BBC News 2015c). Moreover, Berman and Laitin (2008) pointed out other sacrifices, claiming that young members of the community had to undergo physically and psychically demanding initiation rites to show their commitment. Recently, the situation probably has not changed

much. The newly appointed leader of Afghanistan, Mohammad Mansoor, proclaimed in August 2015 continued compliance with Sharia law, which includes all connected prohibitions (Fox News 2015).

3) Defection Deterrence

The organization has drawn attention to itself by many video recordings and other media sources full of brutality. Taliban fighters has publicly violated women's rights and perpetrated massacres on civilians (Clark 2010). By these propagated atrocities, the group differs itself significantly from "normal" society and non-members start to despise members. As a result, the Taliban fighters have much lower outside options - because they have no other place to go - and participate more actively in religious or other activities of the club.

4) Funding

The first money came to the Taliban from Iran, Saudi Arabia and the United States in order to support the Mujahedeens against the Soviet Union in 1980s. Nowadays, the main sponsors are Iran and the Persian Gulf countries including Saudi Arabia and the United Arab Emirates. Their main goal is to spread their political and religious influence to the Middle East. The US and other Western countries act as indirect sponsors via their trading with Saudi Arabia (Stancati 2015).

Even though foreign donations to the Taliban are substantial, the group's main source of income comes from the smuggling of opium and minerals (Eltaf 2015). Experts claim that opium forms 40 % of the Taliban's funding and yields \$3 billion a year (CBS News 2015). The expected revenue from minerals accounted for about \$120 million in 2015 (Eltaf 2015).

5) Smuggling Road in Afghanistan

The Taliban serves as a great example of a group that functions as a club. Berman and Laitin (2008) showed how low outside options of its members guarantee high efficiency in securing the opium smuggling route from attacks.

Suppose that a valuable convoy drives on a smuggling road and it is worth M in the last stop and nothing in the first stop. Along the road, there are checkpoints with the Taliban members who must ensure the convoy passes safely. Each member has a time constraint $H_i + R_i = 1$, where H stands for working hours and R is a (religious) participation. R_i takes either value 0 =

defection and stealing M or $1 =$ remaining loyal and securing the road. The public good is defined as:

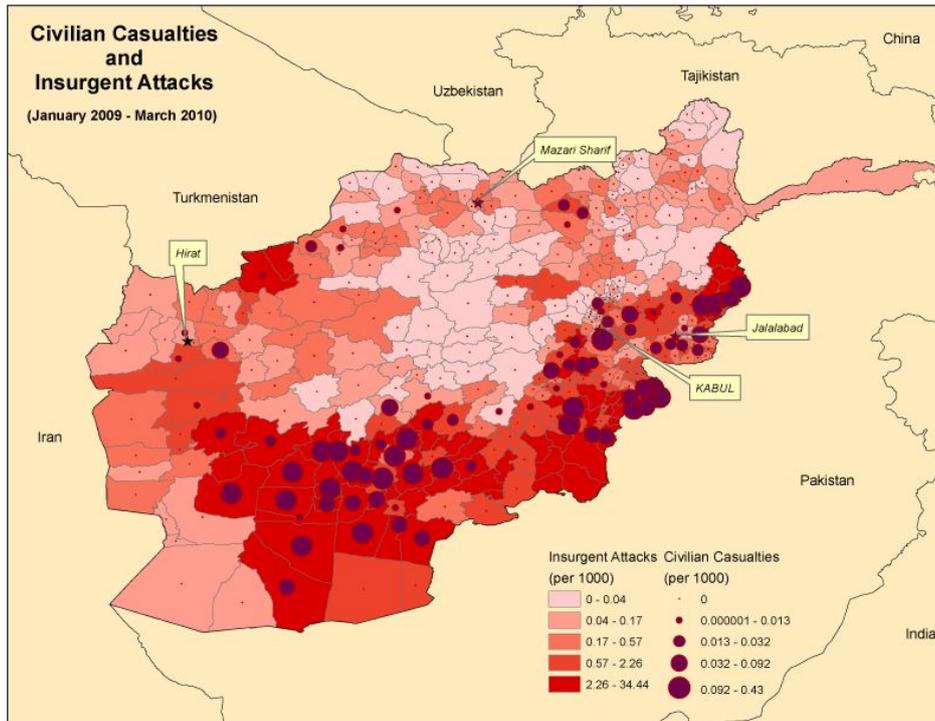
$$C(\{R_i\}) = C\left(\prod_{i=1}^N R_i\right)$$

$C(1)$ means a secure path, $C(0)$ defection and $C(1) > C(0)$. If all of the members choose $R_i = 1$, the convoy will safely get to the final stop. The multiplicative term is used because if one of the members defects and steals the convoy, the rest get nothing (Berman and Laitin 2008). When reaching the final stop, M is split equally among members: $\frac{M}{NP}$. If one of the members defects, he will steal all the surplus M and earn income from a secular activity $w_i > 0$ but he will lose access to the road (which serves as an equivalent to club goods) (Berman and Laitin 2008). The condition for the loyalty of the member is:

$$U\left(\frac{M}{NP}, 1, G + C(1)\right) \geq U\left(\frac{M + w_i}{P}, 0, G\right)$$

Apparently, a member who prefers $R = 1$ will have lower consumption than the defector $\frac{M}{NP} \leq \frac{M+w}{P}$ but he will enjoy the club good $G + C(1) > G$ (Berman and Laitin 2008).

Figure 4.1: The Map of Insurgent Attacks in Afghanistan



Source: Berman (2016).

Assume two wage types (as in the methodology part): a low wage type w^1 and a high wage type w^2 such that w^1 remains loyal because of his low outside options and w^2 defects. If the Taliban can screen out high wage types (potential free-riders who will defect if better options are available) by prohibitions and sacrifices, it can successfully secure the road and enjoy M , otherwise, it would lose control over the route (Berman and Laitin 2008).

The example with the smuggling road perfectly fits into the club model framework; the group that provides public goods can become very efficient if it can screen out defectors. In the figure 4.1, the areas with frequent insurgencies correspond with the smuggling road. If the Taliban members defect, other groups will succeed in their assaults and this route will eventually cease to exist.

4.2 Hamas

Status: active

Theory

Hamas is a terrorist organization that evolved from the Muslim Brotherhood (MB), a radical Sunni group established in Egypt in 1928 (Berman and Laitin 2008). The MB's main goals were restoring the obedience to Islam and the prevention of the perceived negative influence of Western ways of life. Soon after its rise, the community ordered branches to be created all around Egypt. Each Egyptian subdivision was in charge of running a mosque, a religious school for boys and girls, and a sports center (BBC News 2013). As a result, its adherent base grew incredibly fast. In 1948, a group of fighters called Secret Apparatus splintered and perpetrated a series of terrorist attacks on British and Jewish interests. Consequently, the MB was prosecuted by Egyptian government and officially ceased to exist, however, it still held an unofficial public presence. In the 1950s, the MB started to settle subdivisions in the West Bank and Gaza. In 1971, Sheikh Ahmed Yassin founded a political party called Congress which was connected with MB. His main goal was to liberalize Palestine non-violently. Because the Israeli government had not offered the provisions of hospitals, schools, charities etc., the public support for the party rose quickly (Berman and Laitin 2008).

Hamas resulted from the first violent revolt against the Israeli occupation

in 1988, Intifada. In order to not lose political influence to secular nationalist party Fatah at that time, Yassin authorized a military wing Hamas to support the rebellion (Berman 2009). Hamas soon got out of control; it started to promote a violent resistance against Israeli occupiers, which in the end, resulted in its persecution and frequent arrests. However, the group managed to survive with a strong base of devoted members and detrimental efficiency in suicide attacks till now. As peace processes towards a secular Palestinian State proceeded, Hamas became even more radical, setting its goals of violating the peace and establishing the Islamic state in Palestine (Berman 2009). Nowadays, it is a governing party of the Gaza Strip.

Hamas and the Club Model

As in the case of the Taliban, the efficiency of Hamas in suicide attacks and its ability to train disciplined and committed fighters can be explained by the club model approach.

1) Social Service Provision

When the peace process between Israelis and the Palestine Liberalization Organization remained deadlocked, the economic situation was considerably aggravated in the West Bank and Gaza. At this time, Hamas was able to provide public services via its welfare and administrative branch *dawa* and to launch terrorist attacks against Israel (Gray 2010). The great popularity the group had won since the late 1990s resulted in its victory in the Palestinian Legislative Council in 2006 (Berman 2009). Despite losing a majority of its power due to Israeli invasion, Hamas has still been active since then. The Washington Post (2009b) claimed that the organization had a yearly budget of 70 million in 2009 for the purpose of social service provisions in schools, etc., and that families of suicide fighters were promised to get about four thousand dollars and high level of respect if their attack was successful.

2) Prohibitions and Sacrifices

In modern history, Hamas made the most significant efforts to Islamize society in Gaza in 2009: men had to wear long sleeves in public places, traders were forbidden to display underwear on figurines in windows, unmarried people of different genders could not meet openly and women were banned from driving

motorbikes (McCarthy 2009). However, the resistance from local inhabitants towards imposed prohibitions resulted in a loosening of requirements (BBC News 2010b).

In the period of Hamas's greatest terrorist aggression, the potential suicide attackers were naturally chosen with great attention. They had to attend religious seminars, endure long starvation periods and undergo ideological indoctrination (The Washington Post 2009b).

3) Defection Deterrence

The Hamas organization is well known for violating of human rights. Despite the fact that it represents a ruling party in the Gaza Strip, it is perceived as a terrorist organization by many countries. Already its acquisition of power in 2007 is questionable. The organization brutally murdered political opponents and brought down the governing Palestinian Authority by pushing its members from rooftops (Prosor 2009). Its corrupted justice system can be seen as an example of a violation of human rights, too. BBC News (2012) referred to constructed processes, torture and long detentions without a proof of guilt and attacks on civilians.

4) Funding

In the past, a majority of the money Hamas received came from Persian Gulf donors and Palestinian emigrants. Financial support also arrived from charities (zakat). By today, the flow of capital has decreased rapidly because of the closure of borders along Gaza, Egypt and Israel. Moreover, Hamas distanced itself from Iran since Tehran supported the al-Assad regime. These and other financial problems resulted in Hamas reconciling with its main secular opponent Fatah in 2014 (Laub 2014).

4.3 Hezbollah

Status: active

Theory

Hezbollah, a political and military-terrorist group calling itself the Party of God, was founded in the 1980s with the main goal being to expel Israeli soldiers from Lebanon (BBC News 2010a). It is considered to be the first terrorist organization to use suicide attacks – in 1982 - as the main fighting strategy (Berman 2009).

Hezbollah emerged on the south of Lebanon from a group of former Shiite students attending schools in Iraq and Iran. Many of them were forced to leave their homelands by the Iranian government or by Saddam Hussein's regime. Soon after their arrival to Lebanon, they founded religious schools, mosques, clinics, etc. first in tourist city Baalbek and later moving to the poor Beirut districts. The money for the provision of public services flowed generously from the Iranian Islamic government (Berman and Laitin 2008).

The regions under Hezbollah control quickly became radicalised, with restrictive religious codes imposed on its citizens. By 1998, the group had won great popularity and formed a political Shia party in the Lebanese government. Along with expanding its political influence, Hezbollah also spread its territorial control over the other regions by using aggressive military force (Berman and Laitin 2008).

After the withdrawal of Israeli troops from Lebanon in 2000, the group remained clearly defined against Israel (BBC News 2010a). Despite initial support, public approval of the group dropped significantly when the war gained momentum. The kidnapping of Israeli soldiers in 2006 played an especially large part (BBC News 2010a). Hezbollah has been labelled as a terrorist group by Western and Arab countries as well as by Israel (BBC News 2016b). It remains a political party in Lebanon.

Hezbollah and the Club Model

In fights against Israel, Hezbollah proved itself to be deadly efficient, using many new strategies such as suicide attacks (Berman 2009). The group meets all the criteria to fit into the club model framework as I will argue in paragraphs below.

1) Social Service Provision

During Lebanese civil war between the 1970s and 1990s, the country's government run the state poorly not being able to provide the suppressed Shiite's minority in southern Lebanon their basic social needs. Hezbollah at this time served as a government substitute that satisfied the Shiite's wants for charity, hospitals, sports centres etc. In 2009, about 14,000 students were reported to be attending schools funded by Hezbollah (Flanigan and Abdel-Samad 2009). The social support has been used as an incentive for people to further back Hezbollah as a political party and for the recruitment of new members (Cassman 2016).

2) Prohibitions and Sacrifices

Soon after its settlement, Hezbollah had imposed strict Islamic rule on locals. Women were forbidden to go out without burkas and were not allowed to talk to men. Additionally, the licenses for the production of alcohol were invalidated, citizens had to pledge their obedience to the Koran, and moreover, Western cultural influences were strictly prohibited (Levitt 2015).

In modern history, the situation has not changed much. Melamed (2012) from The Times of Israel described prohibitions in the Hezbollah's private dominion on the suburbs of Beirut in 2012 as follows: the Shiites in the colony differentiated themselves from others by wearing specific clothes. The women who were the most subordinated to the religious code wore full body coverings of black cloth called abayah. The others wore scarves that hid their cleavage and hair. Any commercial posters with women, showing off "too much" were immediately destroyed. Hezbollah male members wore clothing reminiscent of Iranian military uniform and grew their beards carefully. The cultural life in the dominion was significantly suppressed. Attending all the theatres and clubs was forbidden since Shiites should live their lives in misery and be open to sacrifices (Melamed 2012).

3) Defection Deterrence

Hezbollah has been constantly attacking Israeli military and civilian targets including women and children (BBC News 2016a). The group has been involved in Syrian civil war, supporting Al-Assad's regime against Sunni insurgents. During its engagement, the world media has released several articles and videos referring to Hezbollah's atrocities on the Syrian population. The main targets

are usually refugee camps where women are frequently beaten and raped by war fighters (Greenwood 2013). The relevant evidence from the media supports the western countries claims that Hezbollah is a dangerous terrorist group that should be defeated.

4) Funding

Hezbollah is funded not only by Iran, Syria, Saudi Arabia but also by Europe and the United States. The majority of money stems from private sources and from both legitimate and non-legitimate businesses. One of the main suppliers are the Revolutionary Guards from Iran. Since Hezbollah is also a political party, it is difficult to estimate the real size of its budget. The estimates vary from \$60 thousand to \$200 million per year (Cassman 2016).

The table 4.1 shows that both Hamas and Hezbollah, the religious groups that function as clubs, were more lethal between 2000 and 2014 than their secular variants that do not offer any services. A frequent argument is that the lethality is simply connected to the size of the group. However, if Hamas is compared to its secular alternative Fatah that has a similar size, Hamas is clearly deadlier.

Table 4.1: Terrorist Organizations Active in Israel, West Bank and Gaza and Lebanon between 2000 and 2014

Organization	Attacks	Injuries	Fatalities	Inj/attack	Fat/attack	SSP
Hamas	298	2210	295	7,41	2,37	Yes
Hezbollah	54	184	106	3,41	1,96	Yes
Fatah	36	40	38	1,11	1,05	No
Al-Aqsa Martyrs Brigades	149	955	247	6,4	1,65	No
Palestine Islamic Jihad	188	1113	295	5,92	1,57	No
PFLP	57	295	75	5,17	1,31	No
DFLP	27	26	12	0,96	0,44	No
Popular Resistance Committee	61	64	31	1,049	0,51	No

Source: Based on author's computations from GTD (2016).

4.4 Common and Distinct Features of the Groups

Despite the fact that these successful groups operate in different areas and have differing origins and goals, they have club attributes in common. The economic and living conditions in the countries under their influence were on a low level before they had appeared. This fact helped the groups gain popularity quickly

because they gave the local people what they needed. The more the organizations provided, the more people wanted to join them. Introducing prohibitions became an inseparable part of their governing process. Restrictions included dress code, culture life, women's rights etc. Moreover, each group used media in order to promote their main interests, recruit new members and display to the world their power. Funding methods reveal other common features such as rich foreign countries including the US and Saudi Arabia playing crucial roles in the rise and development of these radical religious groups.

As for differences, Hamas and Hezbollah considered people in occupied zones as potential new members, while the Taliban treated them as subjects (Berman and Laitin 2008). Hamas and Hezbollah are still actively engaged in politics whereas the Taliban remains an insurgent group that is no longer accepted in the Afghani government.

Chapter 5

The Islamic State of Iraq and the Levant

The Islamic State of Iraq and the Levant is a Salafi¹ militant terrorist organization that operates mainly in Syria and Iraq. However, it has spread its influence to North Africa, Indonesia, Russia and Arabian Peninsula (Intel Center 2016).

We believe that the best way to assess the success of the organization is the club model analysis. To see if our assumption is relevant, we examine whether ISIL meets 4 main criteria of the club model: 1) social services provision, 2) prohibitions and sacrifices, 3) defection deterrence, and 4) funding. We also take into account another aspect that the organizations, which the model has been applied on, had in common:

- The condition of the country at the time when ISIL originated.

To understand the overall context, the history of the group will be briefly explained based on Stanford University (2016) source.

5.1 History

AQI

The origins of the group date back to the beginning of the 21st century. However, its first main leader, Jordanian Abu Musab al-Zarqawi, appeared on the terrorism scene much earlier – as an insurgent in Afghanistan during the end

¹Salafi = orthodox Sunni Muslim movement which preaches a return to the early Islam (Oxford Dictionaries 2016)

of the Soviet invasion. After the withdrawal of the Union in 1989, Zarqawi moved to Jordan and founded a Salafi movement there. His radical statements reached Bin Laden, the founder of al-Qaeda. Despite having different visions of the future, the two men started to cooperate. As a consequence, Zarqawi provided with funds from al-Qaeda, started to train Salafi terrorists in camp Herat in Afghanistan. After the US air strikes in 2001, Bin Laden flew to Pakistan and Zarqawi's units moved to Iraq, Syria, Lebanon and Jordan where they became the internationally infamous anti-Shia oriented group, Jama'at al-Tawhid wa'al-Jihad (JTJ) (Stanford University 2016).

After the US invaded Iraq in 2003, JTJ became one of the most radical militia units in the country with the main goal of expelling coalition forces. In 2004, Zarqawi's group officially joined al-Qaeda and formed Al-Qaeda in Iraq (AQI). Many Salafi jihadists from abroad, as well as disbanded Hussein's army and Sunni civilians who disfavoured newly established government, joined the new formation. AQI started to use a lot of violence and brutality, targeting civilians and humanitarian aid. As a consequence, their wave of supporters gradually weakened. Zarqawi was killed by the US air strikes in 2006 (Stanford University 2016).

ISI

Between 2006 and 2011, AQI was almost defeated by the coalition forces. Under the new leadership of Abu Umar al-Baghdadi, the group changed its name to Islamic State of Iraq (ISI). Its main goals still centred on defeating coalition forces and the subsequent creation of a caliphate in the Middle East. Developed cooperation between locals and the US led to significant weakening of ISI. By 2010, a majority of the organization leaders were killed, including Abu Umar al-Baghdadi. The current ISIL leader, Abu Bakr al-Baghdadi, became the head of the weakened ISI at that time. In 2011, the US troops withdrew from Iraq. By 2013, thanks to the absence of foreign militias, ISI had gained power again (Stanford University 2016).

ISIS

In 2011, the Arab Spring began in the Middle East. Syrian president Bashar al-Assad had been using brutal security measures against protesters who responded to his brutal reign. As a result, the civil war began. Baghdadi saw the conflict as an opportunity for expansion and founded an ISI branch in Syria

called Al-Nusra in 2012. One year later, he proclaimed the takeover of all groups allied to al-Qaeda and gave a new name to the organization - Islamic State of Iraq and Syria (ISIS). Both al-Nusra and al-Qaeda leaders rejected Baghdadi leadership and started to fight him and his military units. The official separation of the groups happened in February 2014. In Syria, Assad supported ISIS, because the stronger the terrorist organization became, the more foreign coalitions forgot about his detrimental influence (Stanford University 2016).

IS

ISIS ended up fighting against Syrian and Iraqi governments, al-Nusra, Kurdish militias, and other rebel groups. Since the beginning of 2014, it has conquered large territories both in Iraq and Syria and changed its name to Islamic State (IS), proclaiming occupied zones a caliphate, with Baghdadi being a caliph. The US and coalition forces have lead air strikes against the group since autumn 2014. Despite significant resistance from Syrian militias, Iraqi Shiites, and Kurdish peshmerga, IS had managed to maintain the majority of its territory by May 2015 (Stanford University 2016).

It is also worth mentioning that the US unintentionally contributed to the rise of ISIL. After their invasion of Iraq in 2003, they imprisoned many Iraqis, and among them were many radicals. The newly established detention facilities, such as a camp Bucca, served as meeting points for future terrorist leaders. There, they could easily plan conspiracies right in front of American wardens. Without the detention camps, it would never have been possible for so many conspirators to meet under the same roof, due to the security measures throughout Iraq (Chulov 2014).

5.2 State Conditions before ISIL Emerged

Terrorist organizations that provide public goods thrive in places where these services are not offered by the governing state authority. Many people want to join these groups because the membership means a better life standard. If outside options for members improved sufficiently (e.g. new government established, the end of civil war), the group would have to either tighten prohibitions or enhance the “quality” of the community (club). Otherwise members would defect.

In Iraq, living conditions became critical after the US invasion in 2003, when many radical groups emerged (e.g. JIJ) and started to fight for power. The violent conflicts between disbanded Sunni army and rebel Sunni and Shia groups as well as coalition forces have produced thousands of victims and poor provision of public goods. It does not matter if we date the rise of ISIL in Iraq to 2004 when AQI emerged or, for example, to 2013 when ISIS was proclaimed because the insurgencies and especially ethnic violence have never really stopped (Stanford University 2016).

In Syria, president Bashar al-Assad has frequently suppressed population, Amnesty International (2013) referred to frequent corruption, discrimination, torturing, and constructed processes as well as poor living conditions of millions of people during the president's governance. ISIL in Syria started after Baghdadi sent AQI troops to Syria to fight the Assad regime. At that time, the country in civil war was plagued by frequent fights between the government forces and insurgency groups. Moreover, there was a serious ongoing humanitarian crisis (Amnesty International 2013).

It should not be surprising then, that people both in Syria and Iraq welcomed ISIL initially. The group managed to provide better security, basic law and order, stable water and food supply, etc. Those who joined the group enjoyed respect and special financial benefits from membership. Due to intensified clashes between ISIL and its opponents, however, the situation has worsened significantly. Occupied cities have been suffering from high unemployment, lack of food, and basic social services. The group has started to treat non-members with disrespect (Hawramy et al. 2015).

Nowadays, becoming a member in occupied zones grants at least some basic social needs and a small salary. Other options are either to escape (highly improbable), or to live under ISIL's rule in poverty (Hawramy et al. 2015).

To conclude, ISIL membership has always represented a better alternative for people living in critical conditions. In the beginning, the group provided basic needs in regions driven by conflicts. After intense fights began, becoming a member meant having better, though still insufficient, conditions for living in comparison with the other people under occupation.

5.3 Social Service Provision

A provision of public services is essential for ISIL because it ensures a steady inflow of new members and serves as a motivation for fighters to stay loyal. As

explained in the methodology part, social services in the group act as a proxy for the quality of the club. The higher the standard, the lower the incentives of members to defect (under the condition that their outside options are less appealing, see 5.2).

Social service provision is based either on mutual aid among members or on donations. In the former case, the optimal situation is that members with high participation rate stay in the organization, increasing the quality through intensive participation, and free-riders are filtered out. This is typical mainly for voluntary religious sects (Berman and Laitin 2008), nevertheless, radical extremist units are not an exception. The other possibility is that the group uses funds earned from its terrorist activities (oil sales, bank-looting, etc.). Again, the aim is to help only the members who are beneficial to the group - devoted fighters, doctors, etc. These people can further contribute to increase the overall welfare and quality of the club while the rest are screened out. ISIL, similarly to the majority of other terrorist groups, uses a combination of these methods.

The group's governing system is perceived as highly developed. Based on the financial documents from 2005 to 2010 captured from ISIL, Shapiro and Jung (2014) stated that the organization has a similar hierarchical arrangement to big corporations. There is an upper management class (ministries) that delegates power to administrations in autonomous geographical sections. BBC News (2014) wrote that when ISIL captures a city, it immediately seizes all water supplies and the majority of staple food (such as flour). It denotes the administration that redistributes these objects to locals for money, which makes the city dependent upon the group. All the individuals under the rule have to obey Islamic law.

Each active member of the organization gets paid for his or her work. The estimated salary is about \$400 per month (Swanson 2015). Other financial contributions depend on marital status, number of children, or on extra help to ISIL - such as renting a house (Shapiro and Jung 2014).

Besides giving financial remuneration for services, the group establishes religious schools, police and free health care or food donations in order to gain support. In addition, preachers incite hatred for ISIL's enemies, explain the Koran for free, as well as the benefits of jihad. Children are given special attention because they are perceived as potential future fighters. The group gives them valuable gifts and organizes many religious seminars and clubs for them (Zelin 2013).

As coalition forces intensify air strikes and economic blockades continue, ISIL gradually loses power and funds. As a result, provision of social services becomes insufficient. Electricity is available only for certain hours, there is a lack of food, prices for fuel and gas increase considerably. Because of that, more and more people try to escape from ISIL occupation (Hawramy et al. 2015). This fact fits perfectly in the club model framework: when the quality of the club decreases, people start to leave the group.

5.4 Prohibitions and Sacrifices

5.4.1 Prohibitions

In order to be successful, ISIL needs the full commitment of its members. The more people participate actively in the daily life of the group, the stronger the organization becomes. Knowing this, ISIL prevents its members from spending time outside the club by implementing religious prohibitions. Fighters and other members will not mind these prohibitions until the benefits they enjoy from their membership (quality of the club) exceed benefits they would get from secular activity.

The eyewitness accounts from Raqqa, the capital of the Islamic State, show that locals are cut off from the rest of the world because the group has forbidden the use of internet at home, in addition to closing a majority of public places that allow cyberspace access. Similarly, mobile phones, cigarettes and listening to music are not allowed. The group dictates to teachers exactly what they should teach children at schools (Mathematics is substituted with religious texts, many subjects concern fighting strategies). Women have to follow a strict dress-code - their body has to be covered fully in black without any light colour accessories, otherwise, they will be subject of punishment by local police. Men must wear loose clothing and cannot shave. Penalties for violation include whipping and executions. In bigger cities, ISIL has cameras in order to make sure that people observe the rules. Praying has become an inseparable part of the day. People in certain occupations, such as taxi drivers, cannot work while praying time (Hawramy et al. 2015).

The result of all these restrictions and excessive surveillance is that people stop meeting each other, going out only if necessary and trying to obey the rules in order to avoid punishment. ISIL becomes infiltrated in the lives of the whole occupied population, whether they are members or just subordinate

locals. Those who join the group are under exaggerated control and therefore have to observe the rules even more strictly. On the other hand, they enjoy benefits such as better treatments and higher salaries that non-members do not have access to (Hawramy et al. 2015).

Apparently, ISIL has sufficiently taxed outside options of members by imposing many prohibitions so that they have no other choice than to participate in the community life.

5.4.2 Sacrifices

As explained, sacrifices should serve as a proof of commitment. If ISIL wants to perpetrate attacks on high-value targets (e.g. Western targets) successfully, it first needs to screen out disloyal members who might defect and divulge the whole operation. Free-riders only take advantage of public goods that the group provides and do not “contribute” equally.

In 2014, ISIL paid its fighters negligible amounts of money when compared with the intensity and danger they had to go through. This poor income could serve as a screening device (Shapiro and Jung 2014). Only devoted members were willing to receive the low remuneration, the others did not want to join. In 2015, the group used different tactics and increased wages considerably in order to lure more fighters. Denver (2016) stated that the income of fighters accounted for about \$400 to \$600 in the end of 2015, which was about twice as much than the minimum wage in Syria. With the gradual loss of resources in 2016, ISIL’s leaders had to reduce salaries again. As a result, low wages are again their tactic for screening loyal members.

The violence ISIL presents itself with might be used to test the commitment too. The more the world finds out about ISIL atrocities (via media), the more non-members form a negative opinion about members of the group. So that, if individuals join the organization and participate in the violence, they essentially destroy their outside options. In addition, they must abandon their most basic moral principles. In other words, people joining ISIL prove their commitment simply by applying for the membership.

5.5 Defection Deterrence

The incentive to leave ISIL is lower due to the fewer opportunities outside the group and the benefits of membership. Therefore, if the group wants to keep a

stable base of members, it has to suppress their outside opportunities or ensure that its quality remains desirable. ISIL can use its violence for the first option. However, there are also other methods: in March 2016, Cockburn (2016) stated that one of the ISIL members defected and stole from the group secret files that contained entry questionnaires of 22,000 foreign fighters from 51 countries in the end of 2013. National security agencies were given information of great importance and could, as a result, better analyse their citizens who had flown to join ISIL. The question remains whether the files were authentic, and, if yes, why did ISIL not prevent such information leakage?

One of the possibilities, connected with the club model, is that the group let information escape intentionally. Recently, it has faced many losses (see 5.6). This decrease in resources could have resulted in attrition of members because they would prefer their outside options. ISIL wanted to avoid this situation and therefore released the names of its fighters. By doing this, it made it impossible for members to leave the group because their governments knew about them. In order to not endanger fighters operating secretly in Europe, the files contained data only from late 2013.

Another possibility is that as ISIL lost resources, its lucrativeness decreased and as a result, members decided to leave the organization. To earn some money, they stole secret information and handed it over to the group's enemies. This is a basic example of a club whose members start to prefer their outside opportunities due to a low quality of the community.

The content of the files suggests another explanation that also fits into the club model framework: There were 23 questions each fighter had to fill in before joining the group. Some of them asked for basic information such as first and family name or nationality, some of them, however, inquired about levels of education, former job or security deposit (Cockburn 2016). Our conjecture is that ISIL chose these kinds of questions on purpose in order to check fighters' financial background and estimate their opportunities outside the group.

5.6 Funding

Unlike other terrorist organizations such as al-Qaeda, ISIL is not reliant on foreign donors. The UK government estimated that the group has about 40% of funds from oil sales, a similar proportion from extortion and remaining 20% from the rest, including kidnapping for ransom, foreign donations, sales of antiques, renting buildings, human trafficking etc. (Wintour 2016).

ISIL needs stable funding in order to finance its terrorist activities, lure new members and provide public services. Without proper financing, the “quality” of the group goes down. As a result, people start to prefer their outside options and defect.

5.6.1 Oil Sales

Oil is considered to be ISIL’s principal source of revenue. Indeed, the group controlled about 10% of Iraqi and 60% of Syrian oil production in 2014 (Brisard and Martinez 2014). By autumn 2015 the situation had not changed much, despite frequent U.S. coalition lead air strikes.

The tables 5.1 and 5.2 show the biggest oil fields in Syria and Iraq held by ISIL since 2014.

Table 5.1: Oil Fields in Syria

Oil Field	Estimated Production (bpd)	Gained	Lost
al-Tanak	11,000-12,000	July 2014	active
al-Omar	6,000-9,000	July 2014	active
al-Tabqa	1,500-1,800	August 2014	active
al-Jabsah	3,000	2014	January 2016
al-Kharata	1,000	May 2014	active
Deiro	600-1,000	July 2014	active
al-Shoula	650-800	2014	active
al-Taim	400-600	July 2014	active

Source: Solomon et al. (2016), Institute for the Study of War (2016), author’s computations.

Table 5.2: Oil Fields in Iraq

Oil Field	Estimated Production (bpd)	Gained	Lost
Ajjil	28,000	June 2014	April 2015
Ain Zalah	20,000	July 2014	Oct - Dec 2016
Qayara	7,000	June 2014	active
Himreen	5,000-6,000	June 2014	April 2015
Najma	-	June 2014	active
Batma	-	July 2014	Oct - Dec 2016
Al Jafra	-	December 2014	active

Source: Solomon et al. (2016), Institute for the Study of War (2016), author’s computations.

The information describes that ISIL got a majority of oil fields around mid-

2014, which indicates that at this time, there was a quick expansion of the group's budget. In total, the organization produced about 80,000 – 120,000 bpd within the occupied territory at the price ranging from \$25 to \$50 for a barrel in the second half of 2014 (Brisard and Martinez 2014). In Syria, the majority of oil fields is still active, in Iraq, on the other hand, some of the bigger ones were recaptured in 2015.

The tables 5.3 and 5.4 show the refineries that have been either seized or bought by ISIL since 2014:

Table 5.3: Refineries Held in Syria

Refinery	Gained	Lost
al-Bukamal	mid 2015	active
Mayadeen	mid 2015	active
Khsham	-	active
al-Tayyaneh	mid 2015	active
Tabqa	mid 2015	active
Raqqa	January 2014	active

Source: Solomon et al. (2016), Institute for the Study of War (2016), author's computations.

Table 5.4: Refineries Held in Iraq

Refinery	Gained	Lost
Qayyara refinery (Mosul)	June 2014	active
Fallujah	January 2014	active
Baiji	June 2014	October 2015
Tikrit	June 2014	April 2015

Source: Solomon et al. (2016), Institute for the Study of War (2016), author's computations.

Apparently, the production of petrol and mazut had not been a centre of interest before mid-2015. However, since then, ISIL has begun to frequently purchase Syrian refineries in Deir Ezzor province, which suggests that oil fields have not been a sufficient source of money since the frequent air strikes began.

To summarize, ISIL has been using oil as a source of money since late 2012 (Mroue 2014). By the end of 2013, the group had seized small oil fields around Raqqa and Mosul so that its revenues gradually rose. In 2014, it took over fertile Deir Ezzor province. Similarly in Iraq, capturing Mosul and other big cities with surrounding oil fields and refineries brought a lot of money. The

estimated profit per day from oil sales in summer 2014 ranged between \$2 million to \$4 million (Brisard and Martinez 2014).

Since then, however, the oil prices on the market have dropped from \$114 per barrel to only \$44 per barrel (by the end of 2015). Moreover, the frequent air strikes focused on oil production lead by Russia and coalition forces, which began in late October 2015, have harmed ISIL's oil wells and plants, too.² As a result, the production of oil had dropped from estimated 80,000 – 120,000 bpd in mid-2014 to about 40,000 bpd in the end of 2015 (Ellyatt 2015).

The main revenue drop must have come after the intensive air strikes began because before October 2015, according to Solomon et al. (2016), ISIL's profit from oil were still exceeding \$1,5 million per day. In March 2016, Wintour (2016) claimed that oil production ranged between 20,000 to 30,000 bpd and one barrel was sold for only \$10. Table 5.5 summarizes ISIL's oil revenue timeline:

Table 5.5: Oil Revenue Timeline

Year	Revenue from oil per year
2012	<i>Oil as a source of money since late 2012</i>
2013	<i>The revenue rises along with occupied zones</i>
2014	\$700 mil - \$1,450 mil
2015	< \$540 mil
by March 2016	\$18 mil - \$27 mil (\cong \$100 mil per year)

Source: author's computations.

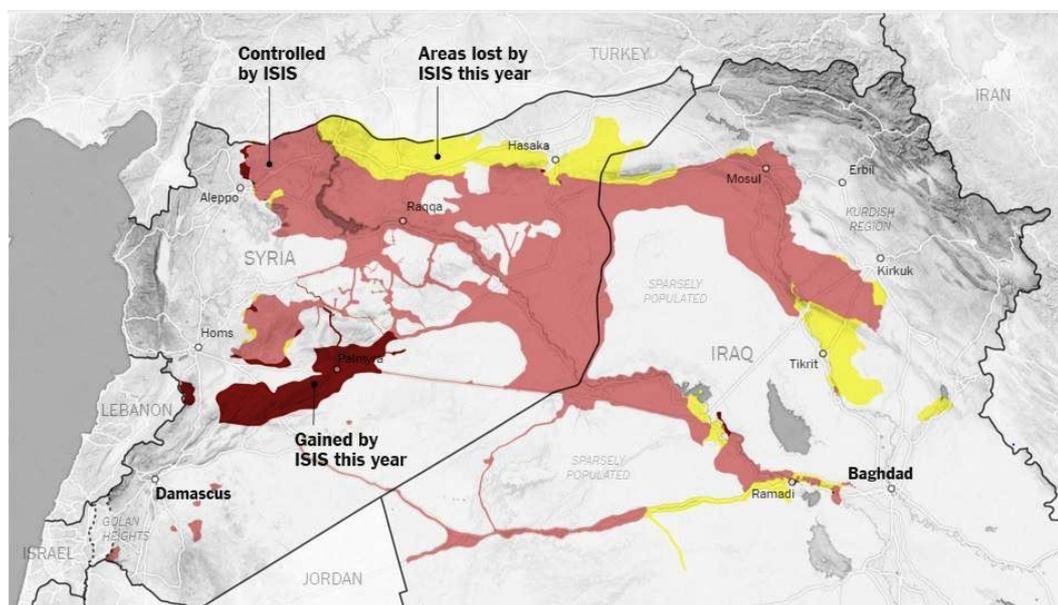
5.6.2 Economic Activity in Occupied Territory

Taxes

In May 2015, ISIL captured half of the Syrian area and made substantial gains in Iraq, too (John 2015). This great territorial expansion considerably increased the group's budget. One of the reasons why the organization has been getting wealthier and wealthier with every hectare it gains is that it has taxed local populations. Some of the taxes imposed are similar to government duties, however, some of them resemble more extortion. The duty applies to water, electricity, products sold, salaries, money withdrawals, roads and even to looted antiques (Swanson 2015).

²The first air strikes on ISIL began in September 2014. However, they were targeted on ISIL strategic bases in general, not specifically on oil (John 2015).

Figure 5.1: ISIL's Progress between January 2015 and December 2015



Source: Pecanha and Watkins (2015).

In 2014, 5% tax was levied on all salaries, driving on the road in Northern Iraq cost \$200, crossing borders to Iraq either from Syria or Jordan accounted for \$800. As for antiques, the administration in Raqqa charged smugglers 50% tax and 20% tax in Aleppo. From Mosul alone, ISIL was supposed to collect about \$8 million per month. The experts estimated the overall profit from taxation and extortion to \$360 million at that time (Brisard and Martinez 2014). In August 2014, Obama authorized air strikes, and one month later bombardment began. However, ISIL did not seem to be affected much as their occupation of civil areas made it harder for coalition forces to choose targets efficiently (John 2015).

By 2015, the taxation had become even stricter - some of the taxes increased and additional taxes were imposed (Pagliery 2015). According to tables 5.6 and 5.7, ISIL lost three strategic cities in central Iraq (Tikrit, Ramadi and Sinjar) as well regions in northern Syria (e.g. al-Abyad). On the other hand, it gained substantial parts of land in central Syria (e.g. Palmyra). When compared geographically, losses moderately prevailed over gains. According to the figure 5.1, the group was worse off by about 14% in December 2015 in comparison

with the beginning of the year (Pecanha and Watkins 2015).

As for the demography, the loss of Ramadi, Hasaka and Tel-Abyad, with a combined population of about \$1,8 million in 2015, brought a great loss to ISIL. However, the seizure of Palmyra must have colossally increased revenues from smuggling. Moreover, recent advancement in the Aleppo province (October 2015) due to Russian bombarding of Syrian Free Army should have resulted in a new influx of money (Shaheen 2015).

By the end of 2015, the moderate estimates state that ISIL had 2 million civilians under its control (Wintour 2016). As for the size of the budget, higher taxes and seizure of ancient cities should roughly compensate for the loss of big cities, so that ISIL should have had available approximately similar or slightly smaller budget from extortion by the end of 2015 as in 2014 - around \$360 million.

Bank-looting

ISIL is said to have earned between \$500 million to \$1 billion US dollars from looting subsidiaries of Iraqi state banks in 2014 (Swanson 2015). Under the assumption that the bigger the city is, the more banks it has, the group got the first big wave of revenues from the banking industry in the beginning of 2014 (see 5.6 and 5.7). Capturing Mosul in June 2014 meant another significant influx of capital. Experts say that before seizing the city, ISIL had about \$875 million in cash and assets, after Mosul - with its banks, people to tax and buildings to rent, it got about \$1,5 billion more (Swanson 2015). The last significant wave of profit came in summer 2015 when ISIL took over Hasaka and Ramadi for a while. Then the group lost control over these two cities that same year (Institute for the Study of War 2016).

It is difficult to determine total bank revenues in 2015 since all the necessary data has not been collected yet. Working with the assumption that once the bank is seized, it is robbed and then possibly closed, the resources from financial institutions should decrease in 2015 since the size of the cities captured in 2014 by far exceeds the size of cities acquired one year later. Moreover, Hasaka was under ISIL's control just for only one month. According to experts, ISIL had looted about \$500 million from Iraqi banks before the seizure of Mosul (Swanson 2015). The population of occupied cities prior to Mosul roughly equals the size of cities seized last year, therefore, the profit in 2015 should still be about half billion.

The tables 5.6 and 5.7 show ISIL's progress in seizing and losing strategic cities in Syria and Iraq:

Table 5.6: Cities Seized and Lost in Syria

City	Population (31.12.2011)	Seized	Lost
Hasaka	1,512,000	June 2015	July 2015
Raqqa	944,000	January 2014	-
Tal-Abyad	130,000	January 2014	June 2015
Palmyra	51,000	May 2015	-

Source: Brinkhoff (2015), Institute for the Study of War (2016), author's computations.

Table 5.7: Cities Seized and Lost in Iraq

City	Population (2016)	Seized	Lost
Mosul	1,739,800	June 2014	-
Ramadi	274,539	May 2015	December 2015
Fallujah	190,159	January 2014	-
Tikrit	42,477	June 2014	April 2015
Sinjar	38,294	August 2014	November 2015
Hit	31,901	October 2014	-

Source: WPR (2016), Institute for the Study of War (2016), author's computations.

The population figures for Syria are added for better orientation of the reader about the general density of the cities. Since the beginning of the civil war in 2011, thousands of people have left the sites. Unfortunately, there is currently no precise research on the current population available.

5.6.3 Other Sources

The money ISIL gets from antiques is difficult to determine, since some of the ancient pieces will have appeared on the market years from now. The realistic estimates say that the group earns about \$100 million per year from smuggling artefacts from Syria and Iraq (Swanson 2015).

Another significant source is kidnapping for ransom. Despite frequent abducting of western civilians, the majority of blackmailed families are rich Christians and Yazidi people from Syria and Iraq. Many countries have agreed to not give ransom that would further encourage kidnapping and fund the group. However, some of the states are still willing to make a payment - such as France

and Italy. Local families will also pay for ransom, in order to not lose their closest relatives (Pagliery 2015).

The table 5.8 summarizes the other sources of ISIL's funding and expected revenues (if available).

Table 5.8: Other Sources of Revenue

Source or revenue	2013	2014	2015
Minerals	-	\$350 mil	\$350 mil?
Agriculture	\$200 mil	\$200 mil	\$200 mil
Antiques	-	\$100 mil	\$100 mil
Kidnapping for ransom	\$40 mil	\$40 mil	\$40 mil?
Wealthy donors	\$20 mil	\$20 mil	-

Source: Swanson (2015), Pagliery (2015), author's computations.

It is clear that ISIL gained a lot of money from phosphate, cement and sulphur in 2014. Among its most lucrative segments were the Akashat Phosphate Mine close to Rutba (Brisard and Martinez 2014). According to the figure 5.1, it was still under the group's control in 2015, along with the sulphur and phosphate production company in Al-Qaim. The seizure the Khnaifess mines in May 2015, the second largest phosphate mines in Syria, must have contributed to the budget, as well (Global Post 2015). Moreover, ISIS still holds, according to the figure 5.1, four major cement plants in Syria and Iraq: Al-Raqqah Guris Cement Plant, Al-Falluja, Kubaisa, and Al-Qaim (Brisard and Martinez 2014), even though it lost the lucrative Al-Jalabiah Plant on the north of Syria. In conclusion, the year 2015 should have brought similar revenues from the mineral resources as the previous periods. The figure contains a question mark because the conclusion is based solely on my assumptions.

Similarly, the figure with the question mark for the year 2015 in the "kidnapping category" indicates that the number is only approximate. Since the kidnapping trend had not changed much according to media information from 2014 to 2015, I believe, the revenues from this practice should be approximately the same.

Chapter 6

Testing The Relevance of the Model

In Chapter 5, we discussed how ISIL meets all of the necessary attributes that characterize groups on which the religious club model can be applied: social service provisions, prohibitions and sacrifices, defection deterrence, successful funding, as well as the critical condition of the country before ISIL emerged. In this section, we try to find the supporting evidence that would indicate that the group indeed functions as a club.

6.1 Hypothesis

There are multiple ways to test the club model. Iannaccone (1992) focused on Christian sects and gathered data which showed that members of small restrictive religious cults have on average lower incomes, are less educated and have higher participation rate than members of well-established, for example Protestant, denominations. The statistically significant results proved the claim that restrictive religious communities choose members with low outside opportunities who participate actively in order to enjoy positive externalities generated from the common activity.

Berman and Laitin (2008) compared the lethality of radical religious groups that provide social services with those who do not. They confirmed empirically that the “social providers” are more efficient both in injuries per attack and fatalities per attack because they can deter defection efficiently.

We decided to choose a different approach and developed an assumption based on the club model predictions: the greater volume of resources a club

acquires, the more people want to join it in order to free-ride. The group needs to filter these free-loaders out, however, because monitoring is too costly, it introduces prohibitions and sacrifices to select only active members.

Our conjecture is that ISIL escalates its level of violence to make this selection of . As described in 5.4.2, the more of its atrocities appear in newspapers, the more people get a negative opinion of the group. This lowers the possibilities of members to return home when they join ISIL. Moreover, fighters have to accept that their names will be connected with the atrocities, which in return will shame their families. Therefore, if ISIL wants to increase the level of sacrifices, it simply escalates its acts of brutality. The media will then immediately react and will send the information to the general public.

Members show their commitment by joining the group because membership destroys their outside options and tests their moral values. Thus, our hypothesis is:

1. The more sources ISIL gains, the more people want to join it. As a result, the group reacts with escalated violence.

To test this claim, we do a simplified media analysis of ISIL violence. Moreover, we use information on funding from 5.6 and information on the flow of foreign fighters to the Middle East.

It is important to realize that ISIL has publicly proclaimed that their main goal is retention and expansion of the caliphate through a global war (see 2.2.5). As a result, we assume that the group uses violence only as a means of achieving its priorities. If atrocities were the declared goal of the organization, ISIL would function more like a firm and our hypothesis would look different: more members results in more violence and subsequently in more funds (the funds are essentially a reward for successful acts of brutality). However, the group's goal is the caliphate, therefore, we can still use our stated hypothesis.

6.2 Media Content Analysis

When analysing the intensity of the group's violence, it is essential to distinguish between ISIL's real brutality and media coverage of ISIL's atrocities. The relationship between them is quite loose. In the first case, many acts of violence pass the media unnoticed, so data should be sought for somewhere other than

the media. As for the second case, journalists pay attention only to certain incidents, usually those that cover either unusually high degrees of brutality (e.g. beheading), a high number of victims or attacks in foreign countries (e.g. Paris attacks).

To find out if our assumption about ISIL's violence is valid, the second option is sufficient. Therefore, we use a simplified media content analysis in order to show some apparent trends in the publication of articles on violent topics.

6.2.1 Goal

Our intention is to find out when media paid increased attention to ISIL atrocities. The ProQuest database, which we have available, can show how many documents contain terms we enter to search, e.g. "beheading". One option, therefore, is to choose certain words connected to violence such as "rapes:" or "mass killings" and search for their appearance in a given period. However, this method has one major drawback: we can forget to include specific violent themes, which might influence our results.

Because of that, a different approach was chosen. We searched for term "ISIS" in general, which can be considered as a default setting, and then analysed all the topics on violence that appeared. This ensured that no important facts would be missing. In each topic, we searched for specific deviations in frequency of articles in time, which would indicate that ISIL escalated its violence. If we found them, we determined what events (e.g. James Foley's beheading) caused this fluctuation.

6.2.2 Default Setting

For the simplified analysis of the media content, we employed the media monitoring database ProQuest. It covers more than 12,000 titles (some of them date back to the 16th century) and is one of the largest digital archives of newspapers and dissertation theses (FSV UK 2016).

Type of sources: Audio & Video Works, Blogs, Podcasts & Websites, Government & Official Publications, Magazines, Newspapers, Books, Conference Papers & Proceedings, Reports (*The types of sources were chosen based on the assumption that the general public would have access to them*).

Type of documents: Article, Audio/Video Clip, Blog, Book, Book Chapter, Commentary, Essay, Feature, Film, General Information, Government & Official Document, Illustration, Image/Photograph, News, Report, Statistics/Data Report, Website/Webcast, Conference, Conference Paper, Front Page /Cover Story, Interview (*Advertisements , Business plans, Catalogues etc. were omitted*)

Language: English

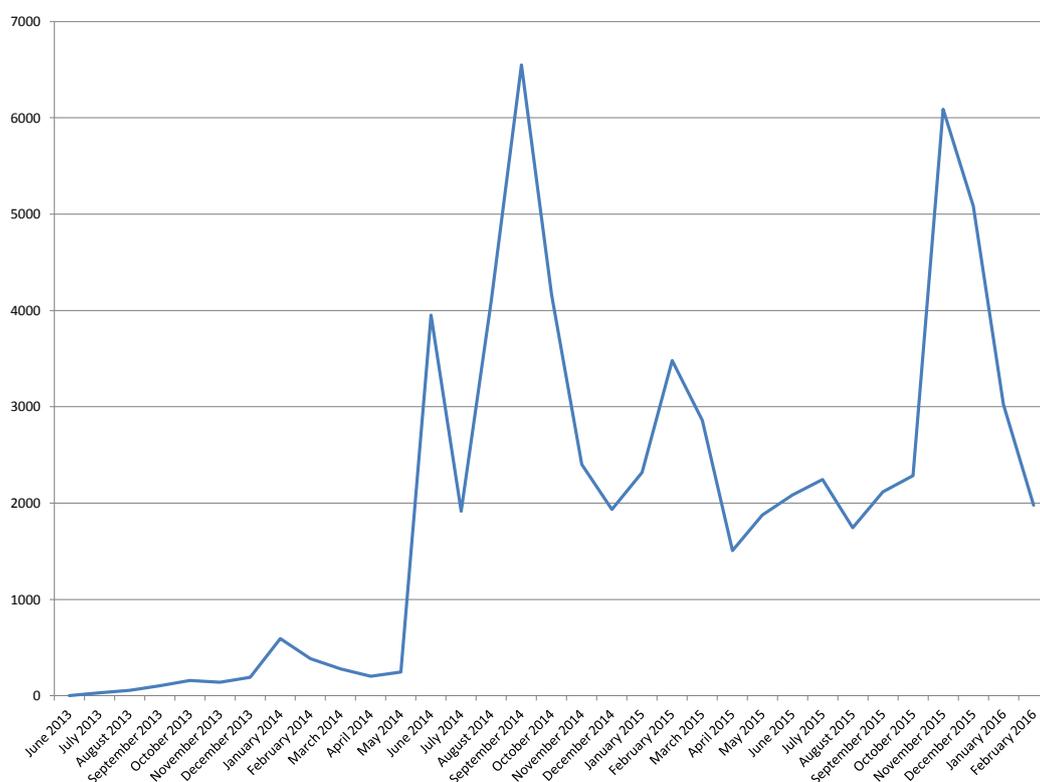
Time period: June 2013 – February 2016 (June 2013 was chosen because the organization started to use ISIS as their name at that time)

Searched terms: terms “ISIS” (AND) “Islamic State” were entered.¹ We chose this combination in order to avoid irrelevant findings because ISIS also means the Israeli Secret Intelligence Service or abbreviations for some universities’ information systems. Moreover, the term “Islamic State” alone does not necessarily refer to the terrorist organization. ISIS was used instead of ISIL, IS, or Daesh because the former appears the most frequently in ProQuest. The other combinations of terms such as “ISIL” (AND) “Islamic State” should, however, show similar outcomes because all the abbreviations share the same meaning.

In total, 66,095 results were found for “ISIS” (AND) “Islamic State”. The fluctuations in the graph 6.1 show the number of the articles in relation to time. In June 2014, there was the first significant influx of information connected with news such as the seizure of the second biggest city in Iraq Mosul, the capture of the strategic Deir Ezzor province in Syria, or the proclamation of an Islamic caliphate. After the drop in August, the number of articles reached its peak in September, levelling at about 6,500. This month included the beheadings of American journalists Sotloff and Haines, advances on the town of Kobani, the first coalition air strikes and the murder of a French tourist in Algeria. The next, though by far smaller, wave of information on ISIL came in February 2015. In this period, the video of a Jordanian pilot burnt alive was released. In addition, 21 Egyptian Christians were beheaded, and about ten times more Assyrian Christians were kidnapped in Syria (coalition forces replied with air

¹AND serves as a condition for searching: only documents that contain both “Islamic State” and “ISIS” at the same time are relevant.

Figure 6.1: Number of Articles with Terms “ISIS” (AND) “Islamic State”



Source: Based on author’s computations from ProQuest Central (2016).

strikes in the same area). Moreover, a great portion of articles still mentioned attacks on the satirical magazine Charlie Hebdo in Paris which had happened a month prior. The last significant fluctuation came between November and December 2015, and included, for instance, terrorist attacks in Paris, and their consequences (such as France launching intense air strikes), and the loss of the strategic Iraqi city Ramadi.

6.2.3 Methodology

Choosing the Topics on Violence

ProQuest summarizes not only the overall quantity of documents that include terms “ISIS” (AND) “Islamic State” in a given period, but also the main themes (topics) of the articles. Moreover, it provides information about their frequency of issuance, type of document (article, news, feature, commentary, etc.), and the name of the publication (e.g. The Guardian).

In order to find the relevant topics on violence in the ProQuest database,

each month since June 2013 different topics' appearance has been recorded (topics that include the terms "ISIS" and "Islamic State"). Based on natural logic, themes with which people were most likely to imagine atrocities or brutalities were chosen. If the number of articles on the topic was below 200, the theme was excluded.

The following topics were chosen: *Terrorism, Rebellion, Sectarian violence, Kidnapping, Massacres, Murders, Violence, Raids, Mass murders, Religious fundamentalism, Displaced persons, Hostages, Genocide, Extremism, Human rights*

Graph Plotting and Checking for Accuracy

For each month, the topics on violence (see 6.2.3) and their quantity were recorded in an Excel table. Subsequently, a graph on each of theme was plotted. The next step was to analyse carefully the peaks of the graphs and find out if the topics included indeed acts of violence committed at that time, or if they were connected with something different. (For example, in topic "Terrorism", we found many articles not referring to violence, such as air strikes or counter-terrorism measures, in September 2014.)

As an example, we can choose the topic of kidnapping. In figure 6.3, it is obvious, that the most articles were issued in September 2014. The next step is to go to the ProQuest database and look for the days in September 2014 with the highest frequency of release, see 6.2.² The dates with the highest issuance have to then be compared with the ISIL timeline of events in order to assign some specific incident, for instance beheading to them. To check accuracy, a headline of each article was analysed as well.

Naturally, in each peak, there were articles written about multiple events. However, sometimes one theme prevailed, e.g. the beheadings of American journalists. We looked for these specific situations when the high frequency of articles on one incident indicated that the violence was extraordinary.

For each topic, we found the most frequently mentioned events connected to violence. Some of the themes such as terrorism had to be removed because they frequently combined information on violence with other different news such as air strikes. As a result, we could not determine any specific, extra violent, events.

²In September 2014, the most information on topic "kidnapping" was published on the 5th, 16th and 25th.

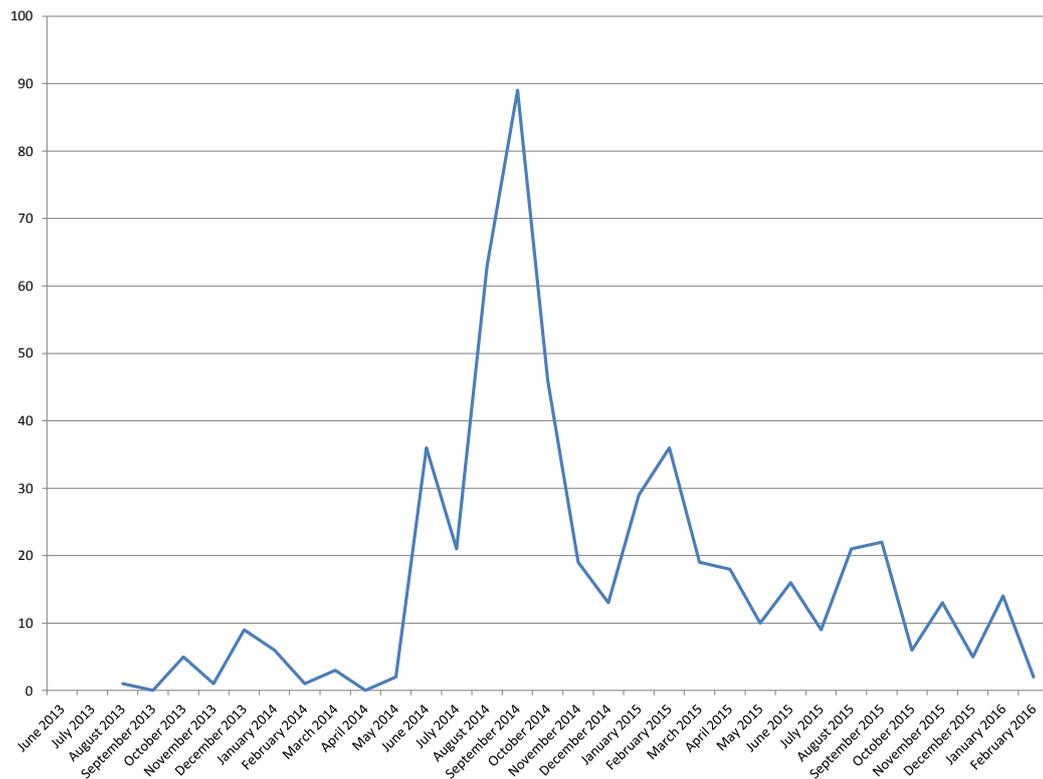
Figure 6.2: September 2014 - Topic “Kidnapping”



Source: ProQuest Central (2016).

The graph and the specific events related to the topic of “kidnapping” are shown here. The other figures and tables are provided in Appendix A.

Figure 6.3: Frequency of the Topic “Kidnapping” in the Media



Source: Based on author’s computations from ProQuest Central (2016).

Figure 6.3 describes that the first significant wave of articles concerning the topic “kidnapping” came in June of 2014. The highest influx per whole period arrived, however, in September 2014, followed by the last distinct fluctuation in January and February 2015. Table 6.1 summarizes the main violent events

Table 6.1: The Most Frequent Events in the Topic “Kidnapping”

June 2014	August 2014	September 2014	February 2015
40 Indians in Iraq kidnapped	Foley executed	Sotloff executed, atrocities in Kobani, Haines and Gourdel executed	70 Christians in Syria kidnapped, Jihadi John identified

Source: Based on author’s computations from ProQuest Central (2016).

including 40 kidnapped Indians in Iraq, execution of American journalists, atrocities in Kobani, etc

Drawbacks of the Analysis

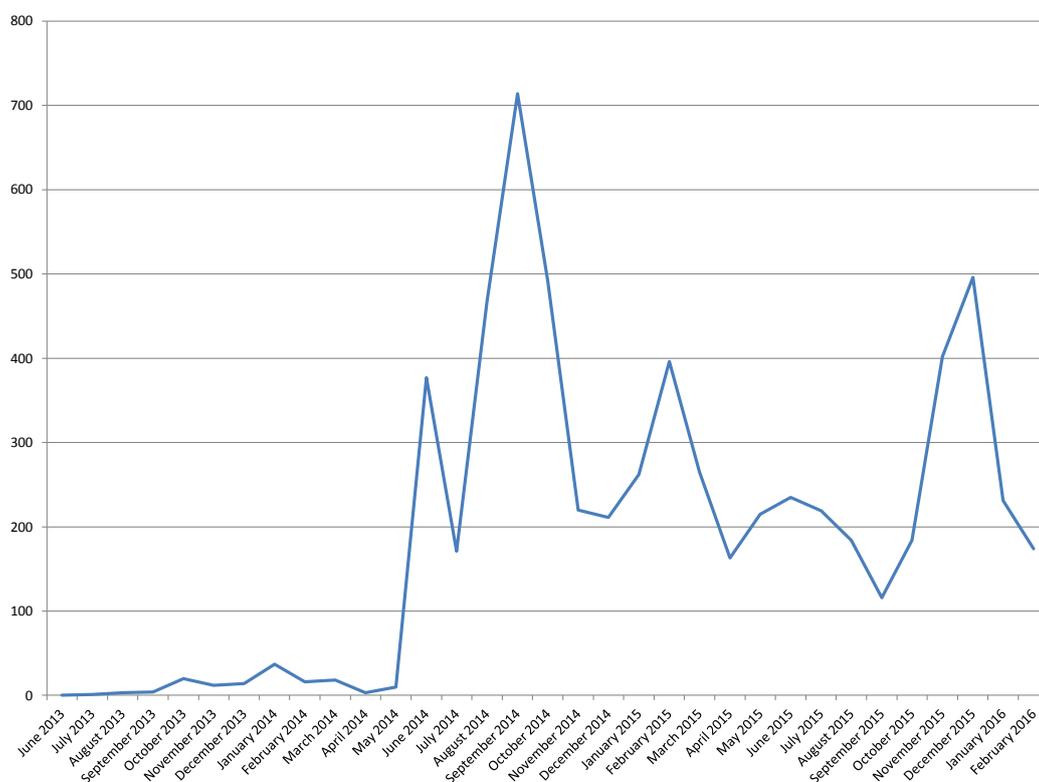
Despite the fact that ProQuest is a very extensive database, it certainly does not cover all of the available media sources. Although the sample of information is lower in the analysis, the majority of worldwide known media sources is included; therefore, the outcomes of the work should roughly reflect the real situation.

6.2.4 Results of Media Analysis

All the numbers for topics “Rebellion”, “Sectarian violence”, “Kidnapping”, “Mass murders”, “Massacres”, “Hostages”, “Religious fundamentalism”, “Extremism” and “Displaced people”, which most reflect the violence ISIL has committed, were added together to show the frequency with which the topics on violence were used. It is necessary to realize that information might have more multiple main topics e.g. “terrorism”, “massacres” and “displaced people”.

According to the illustration, the highest frequency of topics on violence in the media was in September 2014. Information mostly included: beheadings, advances in Kobani, and ISIL media encouragement of terrorist attacks. Two surrounding lower peaks refer mainly to the occupation of Mosul, the killing of hostages and the Charlie Hebdo incident in June 2014 and February 2015, respectively. Higher frequency in June 2015 stems mainly from the topic “religious fundamentalism”. This month combines information on the mass killing in Tunisian Sousse and attacks on Kobani where many people were killed. Fi-

Figure 6.4: Frequency of Violent Topics in the Media



Source: Based on author's computations from ProQuest Central (2016).

nally, the main topics of news in winter 2015 were “massacres”, “mass murders” and “extremism” referring mainly to Paris and San Bernardino attacks.

From the topics, “religious fundamentalism” was used the most frequently appearing in 2,527 articles, followed by “extremism” (900), “kidnapping” (535) and “massacres” (531).

6.3 Flow of Foreign Fighters

Because of data availability, we focused entirely on the inflow of foreign fighters. Among the most frequently cited sources of information belongs a report on foreign fighters in the Middle East from the Soufan Group (Soufan Group 2015). It compares numbers on foreign fighters that joined insurgency groups in Iraq and Syria in 2015 with numbers from May 2014, and observes changing trends. Despite the fact that the report covers all insurgency units, it stresses that ISIL is the most frequent destination.

Some of its key findings include the number of foreign fighters, which had almost doubled from 12,000 in 2014 to more than 27,000 in 2015. From some

countries e.g. from Western Europe, Russia, or Asia, the flow of new members grew substantially. On the other hand, the number of North Americans or Saudi Arabians that left their home to join the fight did not change much between 2014 and 2015 (Soufan Group 2015).

Table 6.2: Foreign Fighters in the Middle East

Country	2014	2015
Tunisia	3,000	6,000
Saudi Arabia	2,500	2,500
Russia	800	2,400
Turkey	400	2,200
Jordan	2,000	2,000
Morocco	1,500	1,200
France	700	1,700
UK	400	760
Germany	270	760
Belgium	250	470

Source: Soufan Group (2015).

The table 6.2 shows which countries the majority of foreign fighters came from. When compared by regions, Soufan Group (2015) states that 8,240 fighters flew from the Middle East, about 8,000 from Maghreb and roughly 5,000 from both Western Europe and the former Soviet Republics (by 2015). When looking at the years 2014 and 2015, it is necessary to realize that the methods of how to identify and monitor foreign fighters have improved considerably, which might have contributed to higher reported total numbers in 2015.

Incentives for joining the groups vary greatly, however, a majority of surveys confirm that personal rather than political motives prevail, mainly in the sense that people do not care that much about who is fighting against whom (Soufan Group 2015).

Many experts assume that the first and possibly the most significant wave of foreign fighters came after June 2014 when Mosul fell, ISIL had many military successes, and the caliphate was proclaimed (Economist 2014; Seldin 2016). To the best of my knowledge, there has not been any similar intense one-time increases since then. In September 2015, US intelligence services estimated that ISIL had 30,000 members or more (Soufan Group 2015). In the beginning of 2016, information on the attrition of ISIL members has begun to appear more frequently. Landay (2016) claimed that in comparison with 20,000 to 31,000

members in 2014, numbers have fallen down to 19,000 - 25,000 as February 2016. The main reasons that he gave were casualties in fight, desertions, lack of new recruits, intense US coalition lead air strikes, as well as issues foreign fighters have to deal with when they travel to the Middle-East.

6.4 Funding

With the information given in 5.6, oil and territory expansion seem to determine the most fluctuations in the wealth of the terrorist group because there were no significant differences in other sources between 2013 and 2015. Since finding concrete numbers for overall funding poses a great challenge, the wealth of the organization is described in comparison with other time periods where numbers act only as a supportive component.

ISIL's wealth has escalated gradually since 2013, with new territories seized in summer 2014. The Washington Post (2015) estimated that the group controlled assets worth more than \$2,5 billion at that time.³ Since then, however, the loss of oil fields due to air strikes, fall of oil prices, and lost cities have resulted in the steady decline of revenue until October 2015, with one exception in late spring of 2015 after a seizure of Ramadi and Palmyra. In autumn 2015, the most significant drop happened because intensified air strikes on oil fields and refineries began. In 2016, when the money from oil stopped flowing plentifully (despite the fact that ISIL bought refineries), the role of foreign donors from the Gulf States must have increased considerably. Nevertheless, it will probably not be enough to compensate for the losses in oil revenues.

To conclude, ISIL's thriving days are probably over. However, under the assumption that the group does not lose any strategic zones and the trading with antiques goes well, it can still be dangerous.

6.5 Suggestive Evidence

In this chapter, we have collected the most important information on ISIL's violence in media, flow of foreign fighters and funding (see the summary in the table 6.3). Our aim was to find out whether ISIL uses violence to screen out free-riders when its wealth increases.

³E.g. Taliban annual revenues accounted in 2009 for \$1 billion (Reuters 2016).

For the study of media coverage, the database ProQuest was employed because it provides an extensive digital archive of newspapers, multimedia and electronic books. The analysis was based on choosing topics connected to violence such as “kidnapping” or “extremism” among which we looked for a high frequency of articles on concrete events, such as the attacks in Tunisian Sousse. The logic was as follows: if media paid increased attention to certain incidents more than to others, it indicated that ISIL has significantly escalated its brutality. From graph 6.4, it is obvious that the months with the most extraordinary violence (at least according to the media coverage) were September 2014, November 2015, and December 2015. In the first case, media referred to the execution of Steven Sotloff, David Heines, and Hervé Gourdel, as well as to the Kobani siege. As for the other months, the attacks in Paris and California were prominent themes.

As for the influx of new members, we focused only on foreign fighters because the information available on this topic was more accurate than estimates on the total amount (locals and foreigners together).⁴ Despite the fact that we drew from the source which analysed how many people joined all the insurgency groups in the Middle East, our results should not be substantially influenced since ISIL attracted the most members. Among the main findings were that the number of fighters from foreign countries in Syria and Iraq had almost doubled between 2014 and 2015, and that the most significant intake came in August 2014 after a seizure of Mosul, Deir Ezzor province and a declaration of the caliphate. The major drop happened in winter 2015/2016, and was connected to intensive air strikes, desertion, and the lack of new recruits.

In Chapter 5, funding was analysed in detail. We focused on ISIL’s main sources of revenue, including: oil sales, taxation of local population and bank looting, as well as on money from antiques, kidnapping and mineral mines. Despite the fact that we did not have concrete numbers available, we made a relatively accurate estimate on the size of the group’s wealth at the time. The main conclusion is that ISIL had the most resources in June 2014 because of the seizure of Mosul and Deir Ezzor province. Since then, however, the flow of money gradually decreased particularly due to the fall in oil prices, air strikes and the loss of cities. The most significant drop came after October 2015 when the air strikes focused on oil production began and Ramadi fell.

If we combine all the information about violence, fighters and funding to-

⁴For the total size of the group, rough estimates from different sources varied from few thousands to hundred of thousands for the same time period.

Table 6.3: Summary of the Main Information Related to the Funding, Flow of Foreign Fighters and Acts of Brutality in the Media

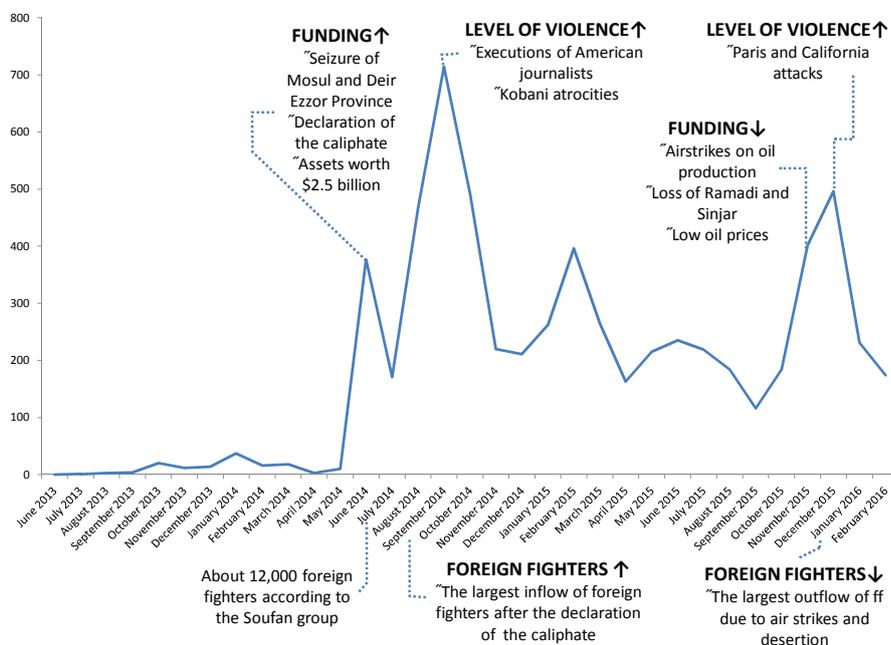
Month	Funding	Foreign Fighters	Events with High Violence
June 2014	Deir Ezzor, Mosul and Tikrit seizure, assets worth \$2,5 billion	About 12,000 foreign fighters	Seizure of Mosul, attacks on Erbil and Kirkuk, clashes between Sunnis and Shiites, 40 Indians in Iraq kidnapped
July 2014	Oil prices start to fall	-	-
August 2014	-	The largest inflow of foreign fighters	Foley executed, Christians flee from Arbil and Sinjar
September 2014	-	-	Execution of the American journalists and Hervé Gourdel, Kobani atrocities
December 2014	-	Between 20,000 to 31,000 foreign fighters went to the Middle East in 2014	-
January 2015	-	-	The Charlie Hebdo incident, ISIL encourages to attack Canadians
February 2015	-	-	Jordanian pilot burnt alive, Jihadi John identified, Egyptian Christians beheaded, Assyrian Christians kidnapped
April 2015	Loss of Tikrit	-	Execution of Ethiopian Christians
May 2015	Ramadi and Palmyra seizure	-	-
June 2015	Loss of Tal Abyad	-	-
July 2015	Loss of Hasaka	-	-
October 2015	Air strikes on oil production begin, low oil prices	-	-
November 2015	Loss of Sinjar	About 28,000 foreign fighters in the Middle East	Paris attacks
December 2015	Loss of Ramadi	The largest outflow of foreign fighters	San Bernardino attacks
January 2016	-	The largest outflow of foreign fighters	-
February 2016	-	Between 19,000 to 25,000 foreign fighters in the Middle East	-

Source: Based on author's computations from ProQuest Central (2016).

gether, we find out that it confirms our hypothesis. The figure 6.5 shows the frequency of topics on violence (in the same way as figure 6.4) and events related to funding and foreign fighters that are the most relevant to the confirmation of our claim.

ISIL obtained the most wealth in June 2014. At that time, the estimated size of the budget accounted roughly for \$2,5 billion. With Mosul seized and with a relatively stable source of income from the oil fields, the group gained confidence and declared the caliphate. Consequently, many people wanted to join the organization in August, either to enjoy benefits stemming from the membership, or to gain fame and become martyrs. To keep the good qual-

Figure 6.5: The Timeline of the Main Events Related to the Funding, Flow of Foreign Fighters and the Media Analysis



Source: Based on author's computations from ProQuest Central (2016).

ity of the club (provision of social services) ISIL had to distinguish between committed cadres who would further contribute to the welfare of the organization by, for example, successful attacks, and people who wanted to free-ride. To make the selection, the group started to behead American journalists and commit crimes in Kobani in September. The atrocities immediately filled the front pages of world media. As a result, significant antagonism towards ISIL emerged amongst the general public. Potential members, therefore, had to decide either to join and be connected with the atrocities, thereby proving their commitment by destroying their outside options, or to stay out of the group.

In winter 2015/2016, the pattern was quite different. ISIL was quickly losing large amounts of money and faced significant member attrition (see 6.3), but at the same time it perpetrated the brutal terrorist attacks in Paris. Our hypothesis addresses the case when sources are on the increase, not on the decrease. However, for this situation, there is an explanation that still fits into the club model framework. Since ISIL wanted to prevent further loss of its members, it reacted to the attrition by lowering their members' outside options by demonstrating brutal acts of violence in France, and by releasing documents

with names of foreign fighters (see 5.5).

To conclude, the collected information fits the club model predictions - ISIL indeed uses higher levels of violence in order to screen out free-riders when its wealth increases. In addition, the example from winter 2015/2016 also demonstrates how, based on club logic, the group prevents further loss of its members when its resources decrease significantly through higher levels of violence.

Chapter 7

Policy Implications

In Chapters 5 and 6, it was shown that ISIL meets all the necessary criteria of a terrorist group to fit into the club model framework. Based on this assumption, we can assume that its success stems from failure of Iraqi and Syrian governments to provide basic social services, high quality of C (group's provision of public goods) and efficient defection deterrence. Knowing ISIL's strengths, it is possible to suggest suitable policy implications leading to its weakening.

ISIL has attracted a large number of fighters because it provides laws, work and social services in places where governments have failed. For many poor people joining the group means a significant improvement in their standard of life. Once they become members, they get better salaries and enjoy many other benefits which they could not have normally afforded. If schools, hospitals and well-paid jobs were available outside ISIL, individual's incentives to become members would decrease considerably (especially if the group wants them to undergo sacrifices and follow strict prohibitions). Therefore, policy makers should focus on the support of projects in Syria and Iraq that enable economic development of undeveloped locations, increase employment, ensure the provision of basic social services as well as improve outside options by offering higher wages and better education.

In order to further encourage attrition of contemporary members, it is also necessary to reduce amount of social services (quality of the club) ISIL offers. People will stay loyal to the group until benefits from membership exceed benefits from choosing outside options. In other words, once ISIL fails to provide water, food or pay salaries, its fighters will start to defect because compliance with strict rules would no longer pay off. The group finances schools, hospitals and other social facilities from its criminal activities such as oil smuggling,

bank looting, and selling priceless antiques. If its financial resources were cut, the quality of the club would eventually fall and the membership would no longer be lucrative. Based on this assumption, targeting ISIL's main sources of revenue has undoubtedly been a great strategy. Indeed, since the frequent bombardment of oil fields in October 2015, the size of the group has shrunk considerably (see 6.3). The air strikes strategy is helpful in defeating ISIL, however, it does not take into account that until living conditions outside the club improve, people will join any other terrorist organization that provides social services. And sooner or later, something similar to the Islamic State will probably emerge again.

Besides reducing the size of the group, it is important to prevent ISIL from military activity that results in thousands of victims and more funds that the group has available. The success of a terrorist mission depends largely on the loyalty of members. If the organization is not able to deter defection, its plans can be revealed to their enemy, which would result in failed attacks. For policy makers, it is important to stimulate incentives for betrayal. Since ISIL functions as a club, its members stay loyal until their options outside the group are lower. The procedure for successful countering of attacks is therefore the same as the one for attrition of group members: a support of economic development and non-discriminatory provision of public goods that would make opportunities outside the club more lucrative and motivate fighters to leave the organization. Similarly, targeting ISIL's sources of money will result in insufficient benefits so that members will start to prefer their outside options and defect more frequently.

To conclude, the US-coalition air strikes targeting ISIL's oil wells should result in a significant weakening of the group because more and more fighters will prefer their outside opportunities and betray ISIL. On the other hand, until both Syria and Iraq are torn apart by frequent fights and humanitarian crises, the risk that similar strong groups that provide social service provisions will emerge is quite high. Therefore, the most efficient way to deal with the problematic situation in the Middle East, is to support government provisions of public goods and improve outside options of people by increasing wages and providing education.

Chapter 8

Conclusion

Can club model explain the rise of the terrorist organization the Islamic State of Iraq and the Levant? Our motivation to analyse this topic was based on observations of ISIL's success and of their irrational behaviour including: ISIL capturing large territories both in Syria and Iraq, how it has efficiently threatened Middle East and Western countries, and how it has openly propagated brutal acts of violence such as beheadings.

In order to explain what is behind ISIL's irrational conduct and efficiency, we first introduced the club model and showed how it explicated the success of three other terrorist groups: the Taliban, Hamas and Hezbollah. For this purpose, we used the Global Terrorism Database and available information from relevant newspapers. Based on the club logic, we demonstrated that all these organizations thrived because they provided public goods in places where local administrations had failed. In order to encourage participation, the groups introduced religious prohibitions that served as a tax on secular activities outside the community. Sacrifices such as costly initiation rites in the Taliban and Hamas were employed to select committed members who could successfully perpetrate criminal activities and bring extra funds for financing the public goods provisions. In addition, the groups lowered outside opportunities of their members by publicly committing brutal acts of violence.

Secondly, we focused in detail on ISIL. After extensive research of reports and newspaper articles, we found that it has the same club features as the three groups mentioned above: social service provision, prohibitions, sacrifices, efficient funding and defection deterrence.

Besides showing that ISIL has all the necessary attributes of a club, we tried to find out if the group really functions in this way. From the club model

predictions, we made a conjecture that with more wealth, more people want to join the group in order to free-ride on its resources, to which the Islamic State then reacts with higher levels of violence (such as beheading). Propagated violence serves, in this case, as a test of commitment because only devoted members would not mind that their names would be connected with atrocities and that the rest of the world will never accept them back.

For the verification of our conjecture, we analysed ISIL's wealth, their flow of foreign fighters, and we did a media coverage of the group's violence. Because of the limited availability of the data on funding and fighters, we decided to focus on comparisons among periods rather than on the provision of concrete numbers on the wealth and the size of the group. We showed that oil sales and seizures of large cities influence ISIL's budget the most and that the group was the most affluent in June 2014 after the declaration of a caliphate. As for the fighters, the largest inflow should have come in August 2014. In the media analysis, we first looked for topics on violence and within them for frequently addressed events such as the Paris attacks. A high number of articles referring to one incident meant that the group used extraordinary violence to which newspaper paid increased attention. We concluded that ISIL showed the most violence in September 2014 with the beheading of American hostages and atrocities in Kobani. When all the information was put together, we could confirm the following hypothesis: more funds result in more members and a higher level of violence. The club model, therefore, can explain the success and atrocities of ISIL rationally as we have shown both theoretically and empirically.

The main contribution of this work is that once we know that ISIL functions as a club, it is easier to find efficient ways to weaken it. We have proposed suitable political interventions in Syria and Iraq such as a provision of social services and improvement of opportunities for people outside the group. We also pointed out that targeting ISIL's funds by air strikes is a good strategy to destroy this particular group, however, until critical living conditions improve in the Middle East, there is a potential for similar organizations to emerge.

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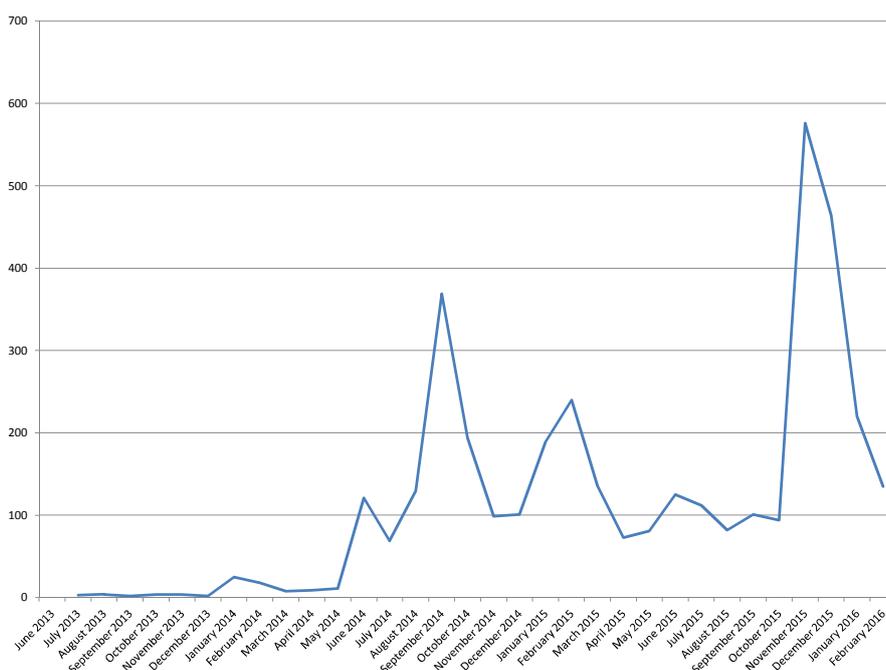
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Appendix A

Figures

Figure A.1: Frequency of the Topic “Terrorism” in the Media



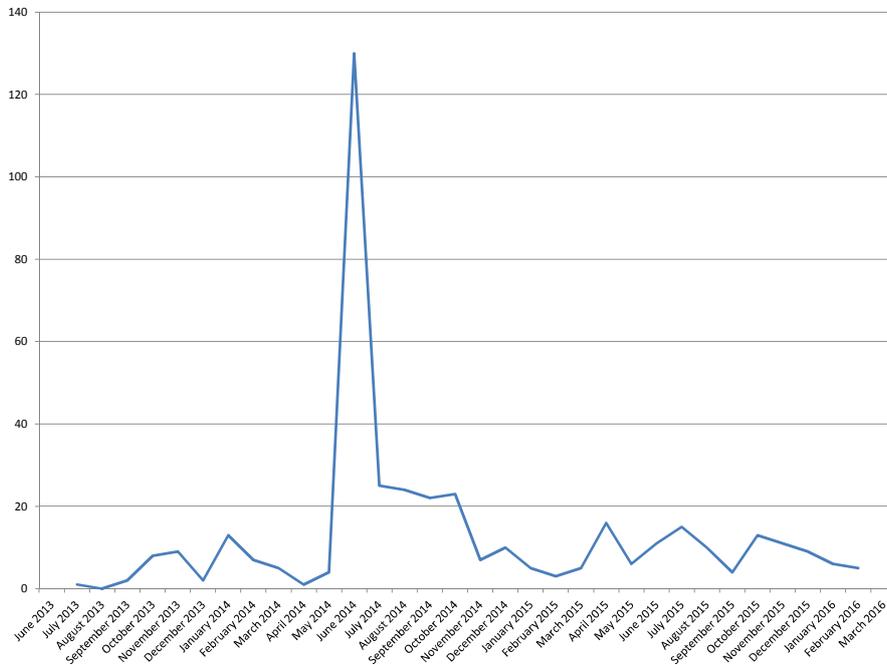
Source: Based on author's computations from ProQuest Central (2016).

Table A.1: The Most Frequent Events in the Topic “Terrorism”

June 2014	September 2014	January 2015	February 2015
Mosul seized	James Foley’s execution	Charlie Hebdo	Jordanian pilot burnt alive
Obama authorizes air strikes	Air strikes begin	ISIL encourages to attack Canadians	Jihadi John identified
Attacks on Erbil and Kirkuk	Obama pledges to destroy ISIL Hervé Gourdel killed		

Source: Based on author’s computations from ProQuest Central (2016).

Figure A.2: Frequency of the Topic “Rebellion” in the Media



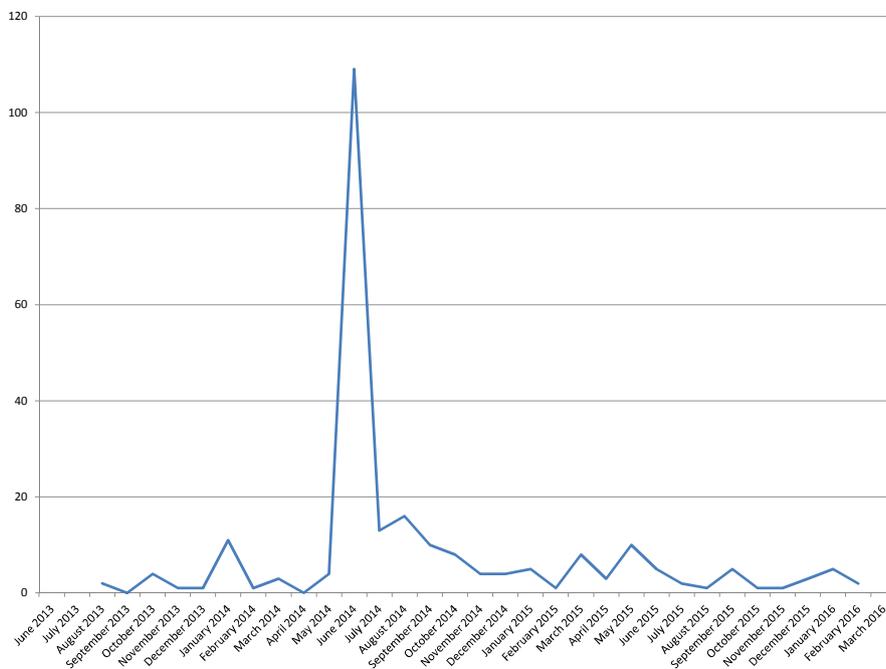
Source: Based on author’s computations from ProQuest Central (2016).

Table A.2: The Most Frequent Events in the Topic “Rebellion”

June 2014
Mosul seized: mass killings of Shiite community, takeover of local banks

Source: Based on author’s computations from ProQuest Central (2016).

Figure A.3: Frequency of the Topic “Sectarian Violence” in the Media



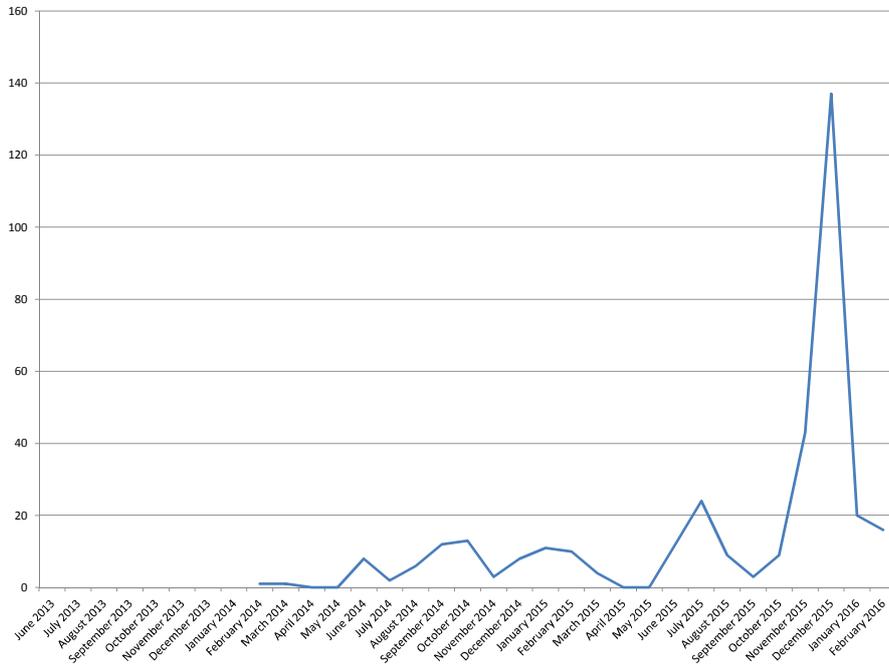
Source: Based on author’s computations from ProQuest Central (2016).

Table A.3: The Most Frequent Events in the Topic “Sectarian Violence”

June 2014
Mosul seized: clashes between Sunni and Shiite militants

Source: Based on author’s computations from ProQuest Central (2016).

Figure A.4: Frequency of the Topic “Mass Murders” in the Media



Source: Based on author’s computations from ProQuest Central (2016).

Table A.4: The Most Frequent Events in the Topic “Mass Murders”

November 2015	December 2015
Paris attacks	San Bernardino attack

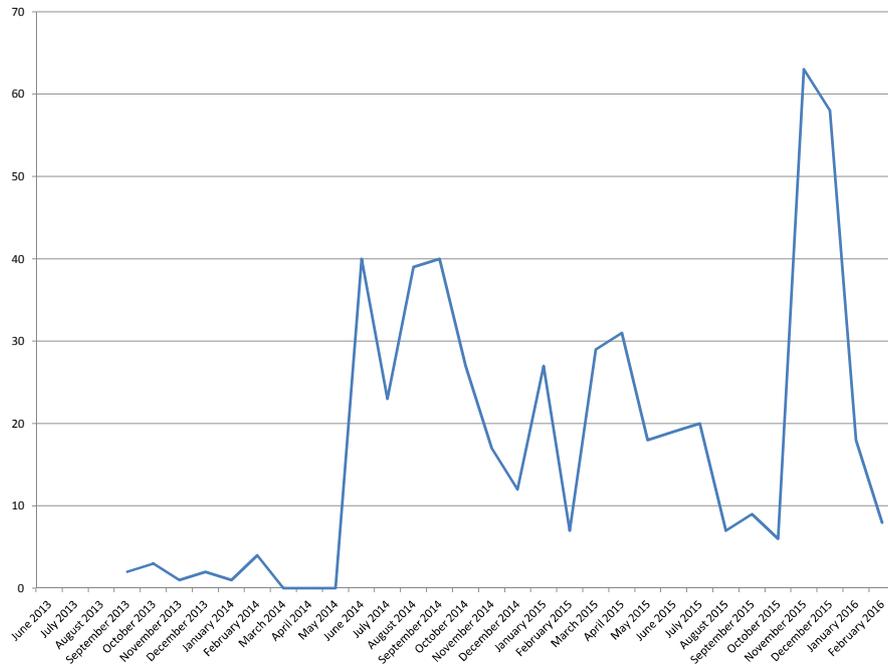
Source: Based on author’s computations from ProQuest Central (2016).

Table A.5: The Most Frequent Events in the Topic “Massacres”

June 2014	September 2014	January 2015	April 2015	November and December 2015
Massacres connected to Mosul	Sotloff and Heines executed	Charlie Hebdo	Execution of Ethiopian Christians	Massacres in Paris, San Bernardino attack

Source: Based on author’s computations from ProQuest Central (2016).

Figure A.5: Frequency of the Topic “Massacres” in the Media



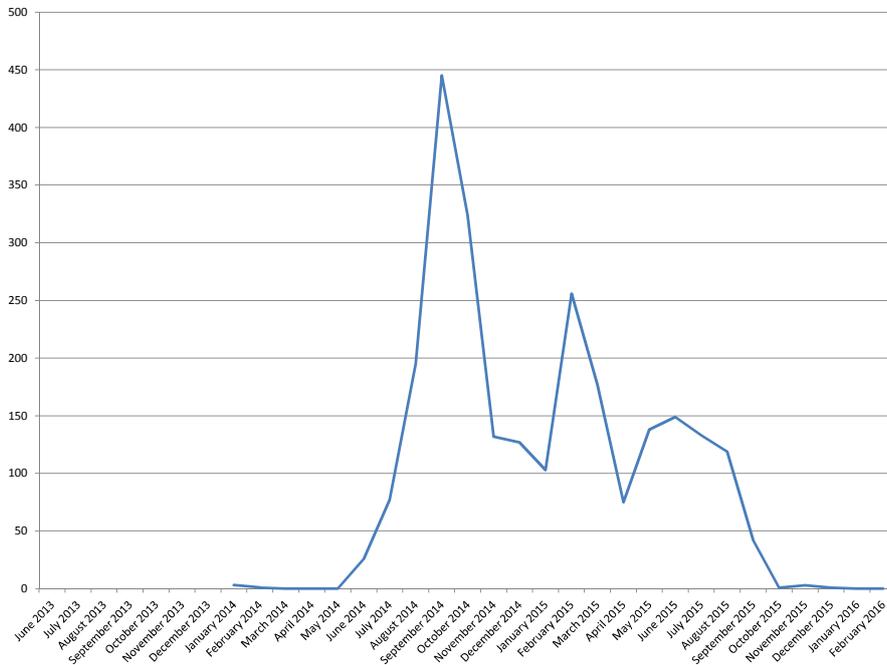
Source: Based on author’s computations from ProQuest Central (2016).

Table A.6: The Most Frequent Events in the Topic “Religious Fundamentalism”

September 2014	February 2015	June 2015
Sotloff execution	Jordanian pilot burnt to death	Massacre in Tunisian Sousse
Obama pledges to confront ISIL	Egyptian Christians beheaded	Killings in Kobani
ISIS advances on Kobani	Assyrian Christians kidnapped	
Hervé Gourdel killed		

Source: Based on author’s computations from ProQuest Central (2016).

Figure A.6: Frequency of the Topic “Religious Fundamentalism” in the Media



Source: Based on author’s computations from ProQuest Central (2016).

Table A.7: The Most Frequent Events in the Topic “Hostages”

August 2014	September 2014	February 2015
Foley executed	Heines, Sotloff, Gourdel executed	Jordanian pilot burnt to death Assyrian Christians kidnapped Egyptian Christians beheaded

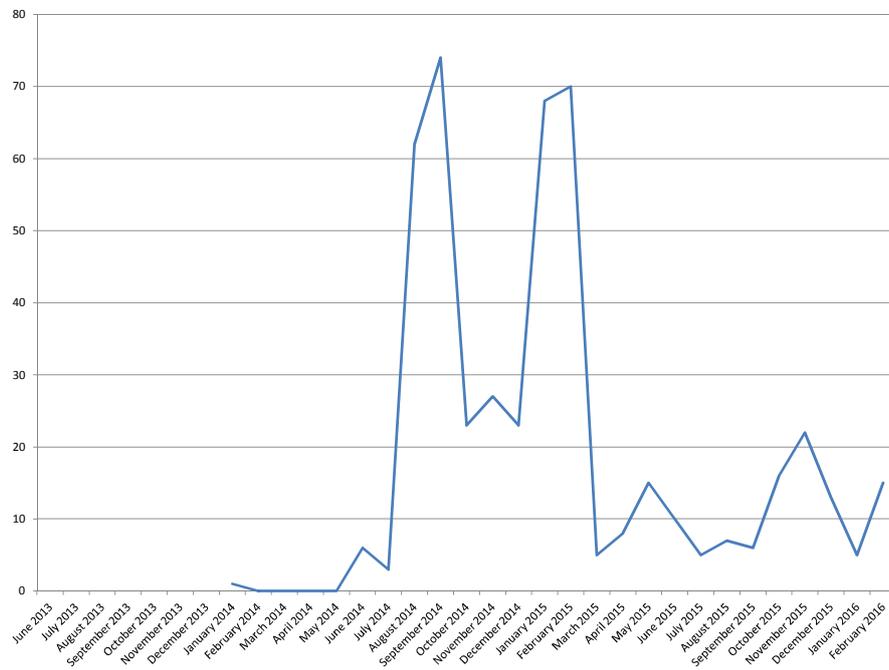
Source: Based on author’s computations from ProQuest Central (2016).

Table A.8: The Most Frequent Events in the Topic “Extremism”

November 2015	December 2015
Paris attacks	San Bernardino attack

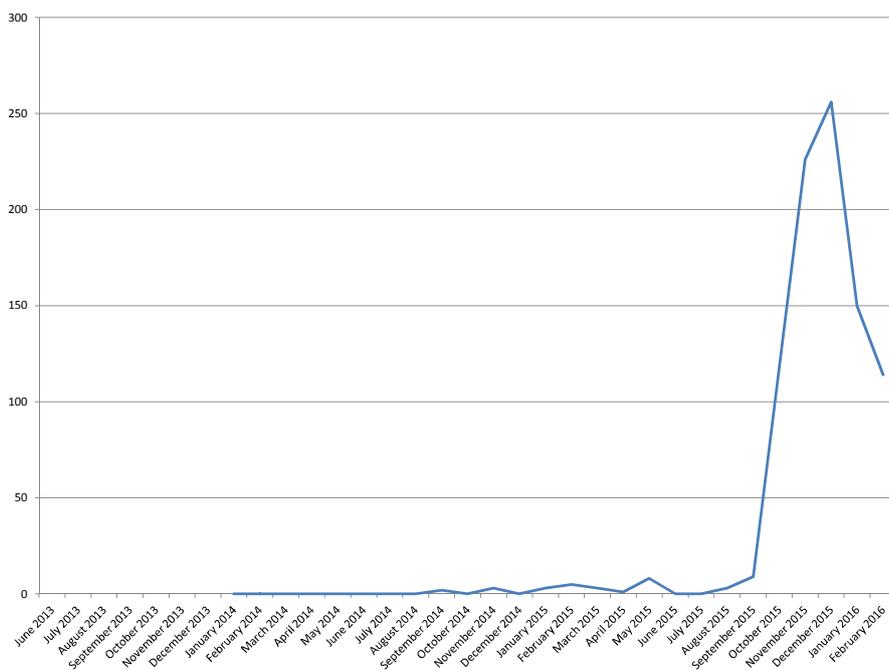
Source: Based on author’s computations from ProQuest Central (2016).

Figure A.7: Frequency of the Topic “Hostages” in the Media



Source: Based on author’s computations from ProQuest Central (2016).

Figure A.8: Frequency of the Topic “Extremism” in the Media



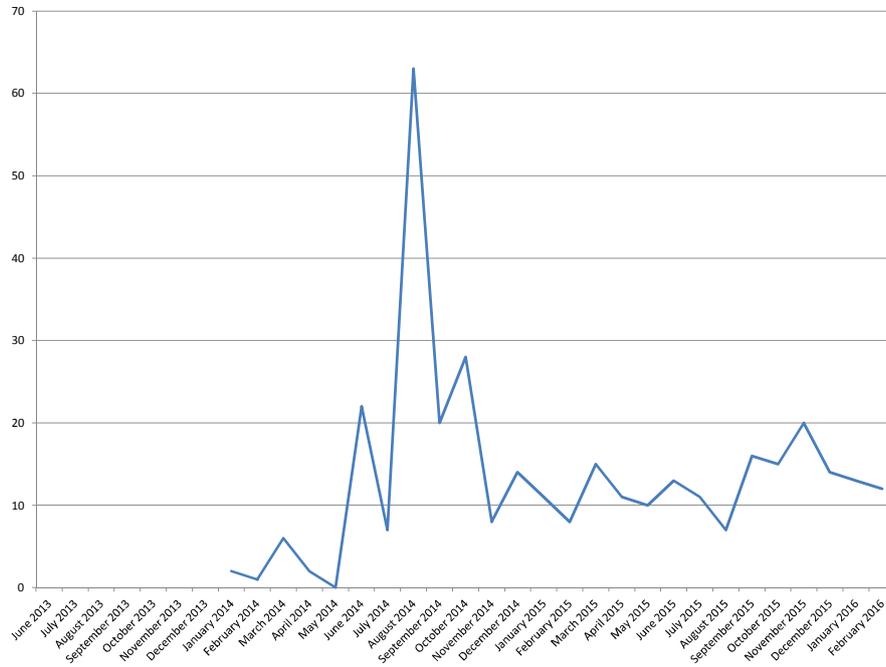
Source: Based on author’s computations from ProQuest Central (2016).

Table A.9: The Most Frequent Events in the Topic “Displaced People”

August 2014
Christians fleeing from Arbil and Sinjar

Source: Based on author’s computations from ProQuest Central (2016).

Figure A.9: Frequency of the Topic “Displaced People” in the Media



Source: Based on author’s computations from ProQuest Central (2016).