Abstract:

In this paper I study the circumstances that led to the rise the Islamic State in Iraq and Syria (ISIS/Daesh) and its economic power. I use articles, testimonies before US House of Representatives and analyze economic data to generate facts and draw conclusions. All references rely on primary source documents that were not released in an official capacity by ISIS. These are documents that have been released online by pro or anti-ISIS activists or information that was gathered and analyzed by research centers and international organizations. It is worth noting that non-officially released documents were very helpful in shedding more critical light on the nature of ISIS administration and economy. The main limitation of the research (and in all studies about ISIS) is that the total number of documents uncovered so far is still a small portion of the total number of administrative documents issued by ISIS in its various departments. Therefore, better analysis will have to be reserved for future, particularly if ISIS is driven out of its key strongholds and when the international community seizes ISIS Statehood documents for research.

Introduction:

By the end of 2011 the United States withdrew from its long bloody war in Iraq that had lasted 8 years on the assumption that they left the country in a better place and condition. However, the victory of liberating Iraq, toppling Saddam Hussein regime and de-baathification of the state’s institutions quickly turned into a sectarian war. Shortly after that, the sociopolitical condition of the broader region changed. The Arab Spring and popular revolutions overthrew regimes in four Arab countries. This rapid change weakened many governmental institutions in the region. The absence of government authority and loss of legitimacy in the minds of the people of the Middle Eastern contributed to the emergence of armed ethnic and religious militias, the scariest of which was the Islamic State in Iraq and Syria (ISIS).

History and Background:

Doctrinal differences: Similar to the fundamentalist Islamic ideology that goes back to the 13th century, ISIS doctrine and its mother organization (al-Qaeda) were developed under the influence and claim of defending and reclaiming Muslims lands from conquerors and corrupt repressor rulers [1]. Example of that is the rise of Islamic State (IS) in 2006 which came from
convergence of interests between al-Qaeda in Iraq (AQI) and the oppressed Sunnis of the Anbar governorate. Yet, the ideological difference between AQI and ISIS remains significant and I will use it to compare the difference and strength of both organizations. By comparing the emergence of al-Qaeda central organization (AQC) to that of ISIS, it is possible to distinguish the ideological difference that was an advantage of ISIS. AQC emerged in the 1980s from a marriage between ultra-conservative Saudi Wahhabism (represented by Osama Bin Laden) and Egyptian extremists’ ideology known as Salafi Jihadism (represented by Ayman al-Zawahiri). Although Wahhabis are an ultraconservative group who fought many different groups in the Arabian Peninsula, but they did not migrate from the peninsula prior to the 1980s. Unlike the Salafi Jihadists’ ideology which started actively spreading beginning of the 1930s from Egypt to many Muslim countries until the 1980s when Zawahiri found in Bin Laden a great opportunity to finance their operations and madrasas\(^1\) in Afghanistan. On the other hand, ISIS was born from a marriage between AQI and identity frame of politics. Part of this identity is Salafi-Jihadism and the other part was hyper-Sunni identity driven by genocidal anti-Shiite\(^2\) ideology with many motives and incitements. Yet, the organization found that the best environment to grow was among Sunnis of Iraq who were stripped all their rights, properties and jobs in 2003-2004. Later in 2005 they were followed and killed in their homeland and towns by radical Shiite militias funded by Iran, and forced to flee from several areas (Baghdad, Center and South of Iraq) to the Western and Northern governorates (currently ISIS area of control) \([2]\).

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\(^1\) Madrasa translate to School in Arabic. It is used to refer to the Jihad schools that was created in Afghanistan in the 1980s.

\(^2\) ISIS differed from al-Qaeda ideologically on the treatment of the Shiite. Al-Qaeda did not fight or kill the Shiite because of their beliefs as ISIS did. For instance, al-Qaeda allowed for the Hazara (a minority Shiite group in Afghanistan) to live under their rule for over a decade and they even traded with them (which entails symbols of coexistence in Islamic culture). For sure there was maltreatment and they were treated as second class citizens, however, unlike ISIS they did not do genocidal acts as ISIS did in Mosel when they killed over a thousand civilian of Shiite in one week in the summer of 2014 when they took control of the city.
Also the emergence of ISIS differed from its similar predecessors –i.e. AQC and AlTawheed wa AlJihad Group-, ISIS doctrine was based on reviving the Islamic State by a return to the Caliphate system of rule. This means the expansion and holding of territories, in addition they should follow the same system of first State was established by the prophet Muhammed and the first Caliphs in the 7th century. All ISIS predecessors fought under general and broad headlines of enforcing the Sharia Law against modern states, western values and to contest all ideologies that are at odds with Wahhabism and Salafism (Baath, pan-Arabism, secularism, nationalism, democracy, modernity…) whether violently or by preaching and madrasas [3]. Even in Taliban Afghanistan or the shadow governments formed by Islamic groups in certain areas in Iraq, they did not attempt to declare the Caliphate. Also unlike ISIS, all other radical groups kept sort of communication with adversaries and regional forces or countries and accepted mediation of international organizations in exchange of prisoners, aid to civilians or press interviews [4].

**Societal factors:** The sectarian conflict in Iraq is a deep-rooted issue for centuries. However, the US-led invasion of Iraq in 2003 caused a rupture in an already fractured society. Also dismantling the Iraqi police and armed forces through the debaathification laws eliminated the entire Sunnis representation in the government and institutions and brought a government dominated by radical Shiite figures adopting the radical Iranian Islamic Shiite ideology. This situation unleashed a fierce power struggle and clashes among all the Iraqi society sects and ethnicities, however, the worst was a sectarian clash was between the two biggest groups, Sunni and Shiites, and that was a great environment for ISIS to grow [5].

**First seeds of ISIS:** The rise of ISIS distinct ideology that differed from its predecessors goes back to the 1990s. There were always voices and figures that demanded stricter ideology and implementation, however, the doctrine of total obedience to the prince of the group stopped the
advancement of these ideas until Abu Mosab al-Zarqawi. He was a Jordanian Jihadi who fought the Soviets in Afghanistan and tried to win the attention of Bin Laden but he could not because he had theological differences with Zawahiri and was less knowledgeable than him [6]. In the 1990s after the liberation of Afghanistan Zarqawi returned to Jordan where he spent most of his time in jail. He always worked to expand AQC doctrine and he found in his jailed time an opportunity to spread his ideology among his peers and formed the first group he headed (Jamat AlTawheen wa AlJihad) ³ [7]. This new group of jihadists came from marginalized communities and a disadvantaged class that suffers from the corruption and dictatorship in Arab regimes. According to Zarqawi critics, his ideology represented the class of jihadists who lacked theoretical understanding of Sharia Law [8]. When King of Jordan Abdulla II came to power in 1999, Zarqawi was released in a national amnesty, so he returned to Afghanistan where he formed new group and refused to pledge alliance to Bin Laden and AQC, but he did not clash with the mother organization [9]. Then in 2003 he left for Iraq for Jihad against the US-led invasion and that was a great opportunity for him to lead like-minded militants in the battlefield and find supporters for his theological views. Zarqawi managed to attract fighters and coordinate with Saddam’s vice president (Ezzat al-Dori) and former Baathists ⁴ [10] to lead attacks in the battlefield against the American army. He started with 30 fighters and quickly managed to get over 5,000 full time fighters, yet all his attempts to revive the Caliphate system failed, mainly because he followed similar methods and teachings of AQC until he was killed by the American army on June 2006 [11]. However, Zarqawi’s new ideology -that was based on terminating all non-Sunni sects and

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³ The prisons in the Middle East (Jordan, Syria, Egypt…) was divided based on crime background, which was the best environment for leaders like Zawahiri in Egypt and Zarqawi in Jordan to recruit new jihadists and teach their doctrines. Prisons became the madrasas in the middle east.

⁴ The former Baathist received shelter and support from Assad regime between 2003 and 2010. Also this collaboration against
eliminate all ethnic and ideological doctrines other than Salafism doctrine—did not die with him. His group and followers continued with an organization called Majlis Shura AlMujahideen, which later developed into the Islamic State in Iraq (ISI) which was the first result of Zarqawi’s ideology [12].

Life cycle of the Islamic State: (Table 1) [13]

<table>
<thead>
<tr>
<th>Date of Formation</th>
<th>Name</th>
<th>Leader and Active Places</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>AQI - Tanzeem Qaeda al-Jihad fi Bilad al-Rafidayn</td>
<td>Leader: Abu Mosab al-Zarqawi. Main presence was in center and west of Iraq.</td>
</tr>
<tr>
<td>2006</td>
<td>Majlis Shura AlMujahideen</td>
<td>Leader: Abu Mosab al-Zarqawi. Main presence west of Iraq and it lasted for few months only and was the first divorce between AQC and Zarqawi.</td>
</tr>
<tr>
<td>2006</td>
<td>The Islamic State of Iraq</td>
<td>Leader: Abu Omar al-Baghdadi. This was the first group post Zarqawi and controlled parts of west Iraq. This was the first manifestation for Zarqawi’s ideology in reviving the Caliphate system.</td>
</tr>
<tr>
<td>2013</td>
<td>The Islamic State in Iraq and Syria/Levant (ISIS or ISIL)</td>
<td>Leader: Abu Bakr al-Baghdadi. The first expansion beyond the borders of Iraq to Syria.</td>
</tr>
<tr>
<td>2014</td>
<td>The Islamic State</td>
<td>Leader: Abu Bakr al-Baghdadi. They removed the geographic limitations in the name as they aimed to expand it to North Africa, Turkey, Caucasus and some parts of Europe.</td>
</tr>
</tbody>
</table>

After the death of Zarqawi, his followers attempted to choose a leader with no less strength than him. However, between 2006 and 2010 the group’s power has faded with the new deal between General Petraeus and Sunni tribes in Anbar [14]. The deal gave back the power of governance to the Sunni tribes in their areas and pulled away the Shiite government officials and militias. This deal pushed the Sunni tribes to change their position from jihadists once they had a full political control over their territories. They switched from fighting alongside AQI against the Americans and Shiite dominated government, to fighting AQI alongside the American troops [15]. However, by 2009 the Iraqi Prime Minister Nouri al-Maliki, backed by Iran, started pushing
toward more sectarian policies and Shiite dominant representation in majority-Sunni governorates [16]. This situation revived the old role of Jihadist. ISI was reborn in 2010 electing a new Caliph. Abu Baker al-Baghdadi came to be a head of the group in 2010. He was not in any leading position before that or even an influential figure among the Jihadist in the region, but his advocacy for more radical approach theologically and militarily legitimized his rule among his peers [17].

The New Caliph: Baghdadi comes from a conservative family and grew up in an environment dominated by tribal only-Sunni traditions. For his tribesmen who knew him, they agreed that the 2003 invasion was a turning point in his radicalization (like thousands of Sunnis). And after 2003 they were provoked by the marginalization of Sunnis and increased domination of Iranian backed Iraqi officials in the government. This particular detail could be the motive for ISIS differing from previous radical militias, who now consider the Shiites as enemies of Islam for their collaboration with the Americans during and after the invasion. In 2004 Baghdadi was captured by the US army and detained in Camp Bucca where he spent a few months, then was released as he was deemed to be low-level threat [18]. However, Camp Bucca turned out to be a gift for Baghdadi because it advanced his Jihadist career. In Bucca he turned from adhering to Muslim Brotherhood Doctrine to an extreme Salafi-Jihadi doctrine. This US run prison introduced Baghdadi to many jihadist commands and provided him with access to like-minded individuals. Most of his inmates became leaders and ministers in the Islamic State, including the second man in the organization (Abu Mohammed Al-Adnani, ISIS’s chief propagandist and its official spokesman) and were fueled with hate toward Americans and Iraqi leaders for the torture and mistreatment they experienced in Camp Bucca. Some former prisoners explained that Jihadist ideology thrived in the Camp Bucca similar to “AlQaeda Madrasas” in Afghanistan that produced Jihadists in the 1980s [19].
The new environment in Bucca introduced Baghdadi to most of the Jihadist groups’ leaders and transformed him from unknown low-level “foot soldier” into an ambitious fighter and a member of a large network of radical militants. Baghdadi honed his negotiation skills in the camp and he impressed his US jailers who saw him as a fixer who solved disputes between different ideological jihadists and kept the camp quiet. That showed his ambition to be a leader and dominate the jihad forces against Shiite and Americans. He worked on this since his release from Camp Bucca until he was appointed as leader of ISI in 2010 which was a surprise for most Jihadists groups. AQC members claimed that Bin-Laden and Zawahiri did not knew him prior to announcing his name as the prince of the group [20].

In order to show distinction from previous leaders (Abu Omar Baghdadi, Abu Mosaab Zarqawi), Baghdadi choose to show unprecedented brutality by planning to maximize the number of casualties in all operations targeting Iraqi civilians. Al-Issawi, a mentor for Baghdadi and Zarqawi explained that since 2010 his blanket takfeer⁵ ideology succeeded to spread fear and kill many more including Sunnis and Jihadists than any previous leader. Al-Issawi explained that ISI ideology is somehow awkward to Zarqawi’s teachings, the group had no limits and targeted anyone differed or did not pledge allegiance to them [21]. In May 2014, Baghdadi responded to criticism on ISIS brutality by saying “O Muslims, Islam was never for a day a religion of peace. Islam is the religion of war. Your Prophet… dispatched with sword” [22].

Baathists impact on ISIS: By 2010 the Syrian Iraqi boarders were closed in front of Jihadists coming through Syria to Iraq⁶ [23]. This has increased the role of Iraqi Jihadists and

⁵ Takfeer translates to (accusing/considering someone’s beliefs/actions infidelity, disbelief or blasphemy). It is a core principle in all fundamentalist Islamic groups. Moderate Islamic teachings denounce calling any individual an infidel and it differentiate moderate Muslims from radicals.
resulted the Iraqization of the group and increased role of Iraqi Jihadist ideology and skills in ISI. That of course included the former army officers from the dismantled and well trained Saddam army. The Iraqization of ISI went hand in hand with the restructuring of the group’s military power and statehood transformation. Almost all leadership and responsibility positions were handed to Iraqi jihadists who earned it based on their academic achievement [24]. The oil ministry was headed by an engineer “Abu Ahmad al-Janabi,” while the health ministry came under the leadership of a professor “Abu Abdullah al-Zaidi.” Both the public relations and oil ministers were Janabis (Iraqi Sunni tribe). The media minister was Mashhadani (from a Sunni area in north Baghdad), and the martyrs and prisoners ministers were Issawi (Sunni tribe from Anbar). The main exception in this regard was Abu Hamza al-Muhajir, the war minister, an Egyptian by origin who spent over two decades in warfare in Afghanistan and Iraq [25]. This new structure helped transform a mafia-like radical group into a skilled, trained and professional state and army. It is estimated that 30% of senior officers in ISIS military command are former army and security forces from Saddam’s army. Their military experience with the experience of al-Qaeda Afghanistan veterans in guerrilla warfare transformed the group into an effective fighting machine combining urban guerilla warfare and conventional combat. This enabled them to swiftly crush the Syrian and Iraqi armies and capture major urban centers and control rural areas and villages in both Iraq and Syria. This includes Mosul in Iraq and al-Raqqa in Syria and make the latter a de facto capital of the Islamic State [26].

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6 Syria was a main route for Jihadists to cross to Iraq and fight the American army. The Syrian regime had a policy in which a visa was not required to enter Syria for any Arab national plus more than 10 other non-Arab Islamic countries. That made an easy route for any radical or jihadi from nearly 40 countries to travel to Syria and easily cross to Iraq and join any of the radical groups that fought the American army. Damascus airport became a hub for transporting jihadists from the airport to the borders.
That growth of ISI and other Jihadi groups in Iraq and Syria shows a close correlation between the success or failure of radical ideology groups and the relationship between the Sunni society and the Shiite/Alewite governments in both countries [27]. The rapid power acquired by the group between 2006 and 2013 demonstrates that their ideology derives power from the clash between ultraconservative Sunni societies and repressive Shiite rulers. This rapid control of territory after 2012 in Iraq and Syria was mainly related to two elements: First; ISIS ability to portray the group as the defender of Sunnis who were stripped their rights and representation in government and are now facing the growing influence of Shiite militias like Hezbollah, General Sulaimani forces and Mehdi army [28]. Second, the strategy of ISIS planners is designed to exploit the identity crisis in the region. They claim that the modern Western system applied in Syria and Iraq is the reason for all troubles and tragedies of Sunnis for the last decades. Therefore, the group aims to implement an alternate fundamentalist socioeconomic framework that can rival modernity and restore Sunnis rights [29].

After its rapid expansion in Syria and Iraq, it was crucial to demonstrate that the Caliph was a strong capable force, for both the morale of ISIS fighters and intimidation of civilians in ISIS areas. The rise of a heroic, eloquent and charismatic Caliph is part of Islamic history since the first successor of the prophet until the last Ottoman Sultan. The appearance of the Caliph Abu-Baker al-Baghdadi was designed to show him as a strong invincible figure who was surrounded by mystery and more importantly have a strong speech skill in which he targets the Islamic Nation

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7 General Sulaimani is the head of Jerusalem Legion part of the Iranian Revolutionary Guards forces. General Sulaimani and his legion are responsible for special operations outside Iran. Prior to 2011 they were responsible for atrocities against the Sunnis in Baghdad. After 2011 they deployed 15,000 fighters from Jerusalem legion to Syria and in 2013 to Iraq.

8 First successor of the prophet was a very well-spoken and eloquent man, and it became a main character of every Caliph or Imam. Eloquence was a tool to gain support for the Caliph/Prince in the Islamic history. In the case of ISIS it was used to motivate jihadists to join them from all over the world.
adversaries. All these elements were manifested in his first and only public appearance in Mosul in the summer of 2014 when he delivered a speech in the Friday prayers. His appearance was a spark and maybe a shock, mainly to the public. It showed the danger and power of ISIS to societies and States in the region [30].

After controlling a sizeable territory, training a strong army and seizing massive amounts of heavy weapons from the defeated Syrian and Iraqi armies, ISIS immediately started acting like a State and declared the Caliphate. By beginning of 2015 its authorities extended to 35,000 square miles (90,800 sq km). The system applied by ISIS relied entirely on the state system that was in place in the Iraqi and Syrian States. They kept the bureaucracy and system as inherited from the Syrian and Iraqi States and amended it with ISIS titles and some Islamic laws. The result was modern institutions but covered with Islamized titles and logos. For instance, the ministries and departments name changed to Diwans. Also provinces and towns are called Wilaya, while mayors and governors are called Walis, however, systems and tasks remained exactly the same. ISIS followed highly centralized method of governance in which the Caliph appointed local administrations for each area (Wilaya). And each Wilaya had a council of members from various realms of daily life. The council then reported to higher central Diwans who have the authority of law making and issuing verdicts, and all that should be in accordance with Sharia Law and applied on the entirety of Islamic State territory [31]. The below table (Table 2) represents the various Diwans with a brief description of each Diwan’s functions. Yet, past the Diwans, there are other governance bodies, such as the General Supervisory Committee⁹ that enjoys the authority to issue

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⁹ General Supervisory Committee acted like the office of the Caliph which issues conclusive decisions to be followed by Diwans, and mostly related to security policies and Sharia laws.
general orders and verdicts to all Wilayas, such as a ban on GPS and Apple devices in December 2014.

**ISIS Governmental Body (Table 2):**

<table>
<thead>
<tr>
<th>Government Department</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diwan al-Ta’lim</td>
<td>Education</td>
</tr>
<tr>
<td>Diwan al-Khidamat</td>
<td>Public Services (e.g. electricity, water, street cleaning). Management of public facilities (e.g. parks)</td>
</tr>
<tr>
<td>Diwan al-Rikaz</td>
<td>Precious resources (two known divisions: fossil fuels and antiquities)</td>
</tr>
<tr>
<td>Diwan al-Da’wah wa al-Masajid (wa al-Awqaf)</td>
<td>Da’wah activity and control of the mosques</td>
</tr>
<tr>
<td>Diwan al-Sihha</td>
<td>Health</td>
</tr>
<tr>
<td>Diwan al-Asha’ir</td>
<td>Tribal outreach</td>
</tr>
<tr>
<td>Diwan al-Amn (al-Aam)</td>
<td>Public security</td>
</tr>
<tr>
<td>Diwan Bayt al-Mal</td>
<td>Finances and currency system</td>
</tr>
<tr>
<td>Diwan al-Hisbah</td>
<td>Enforcement of public morality: Islamic police</td>
</tr>
<tr>
<td>Diwan al-Qada wa al-Mazalim</td>
<td>Islamic court, judicial matters, marriages</td>
</tr>
<tr>
<td>Diwan al-Alaqat al-amma</td>
<td>Public relations</td>
</tr>
<tr>
<td>Diwan al-Zira’a</td>
<td>Agriculture, environment</td>
</tr>
<tr>
<td>Diwan al-Ifta’ wa al-Buhuth</td>
<td>Fatwas, textbooks for training camp recruits etc.</td>
</tr>
<tr>
<td>Diwan al-Jund</td>
<td>Military and defense</td>
</tr>
</tbody>
</table>
Financial Resources:

Unlike all its predecessors which financed themselves mainly through wealthy donors, the Islamic State used its control over a territory to generate money to fund their operation. A better understanding of the Islamic State’s revenues and economic plans will better enable the international community to predict its future and counter its strength and expansion [32]. In testimony for RAND corporation representative Patrick B. Johnston before the Committee of Financial Services in the US House of Representatives, the corporation representative stated that ISIS “raises the majority of its money now through smuggling oil and products originating in the Iraqi and Syrian oil sectors or through extorting entities in those sectors; through extortion and taxation of the local economy in the areas it controls; through looting war spoils, including the region’s rare and valuable antiquities; and through black-market sales of stolen and looted goods” [33]. RAND corporation representative explained that there are reports based on collected information from a senior ISIS leader in Mosul estimating that ISIS’s surplus is now about $2 billion. This indicates that unlike in the past, ISIS is no longer struggling to maintain a balanced budget each month, it instead enjoys a significant surplus. This abundance is related to two facts, first their economy is diversified, and second they easily find market for their products (oil and antiquities mainly) [34]. On top of that, they managed to secure huge amounts of hard currency from robbing banks when controlling main urban centers and selling antiquities looted from historic sites in Mosul and Palmyra through international networks. In addition to oil and antiquities, they managed to extort and tax people in their areas of control. All these sources have helped make the group arguably the world’s richest terrorist organization. Yet, as Western and

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10 The RAND Corporation is a nonprofit institution that helps improve policy and decision-making through research and analysis.
Middle Eastern officials have gained a better understanding of the Islamic State’s finances over the past two years, a broad consensus has emerged that its most secure unstoppable source of cash appears to be taxing and extorting people it rules and the businesses they control.

**How is ISIS using the money?**

The fact that ISIS managed to accumulate a financial surplus creates a new concern for counterterrorism since in previous experiences, radical groups never enjoyed affluent budgets. Therefore, the new situation is how would ISIS use the surplus? There are a few scenarios: First, ISIS could use the surplus for the planned territorial expansion and fund undercover ISIS groups in Iraq and other areas in the Levant or to fund operations in Libya and Sinai where they already have a presence. Second, the organization could use it to expand its influence in other strategic parts of the Muslim world, including Pakistan and Afghanistan, as it attempts to seize dominance in the jihadist world from Al Qaeda central organization[^11]. Third, it could use this money to encourage and fund attacks in Western States (North America, Western Europe) or elsewhere in the world, mainly countries involved in fighting ISIS (Russia, Turkey, Australia...). Fourth, it will need to spend some of its money to fund its members and to provide services and maintain its sharia-based order in the territory it currently controls [35].

**Oil Revenues:**

*Extraction and Selling:* By end of 2015 ISIS controlled 22 oil fields with a reserve of 20 billion barrel which makes up to 1.4% of world’s oil reserve [36]. Oil could be ISIS main and richest revenue and so far they have been successful in extraction and smuggling it. When

[^11]: That has been the group’s goal ever since Zarqawi. Therefore since 2013 pledging alliance for ISIS by many Al Qaeda fighters was rewarded with money and positions among the group.
international oil price raises, demands on ISIS oil increases and oil trade becomes ISIS main economic source for hard currency. As of March 2015 ISIS control included most of the natural gas and oil fields in Syria (AlOmar, Jafra and Jeribe) plus one of the biggest oil fields in Iraq (Ajil) in addition to several other small fields in both countries. The potential oil productivity of the group reached 80,000 barrel per day, which theoretically brings revenue of $3 to $8 million per day [37]. However, the group never acquired the expertise, equipment and maintenance to produce the potential capacity of controlled wells.

(Figure 1) shows the difficulty that ISIS is facing in terms of maintaining and managing its oil resources. Efficient oil production typically requires flaring methane gas that comes up with the oil and thus active oil wells leave a clear signature in night-time imagery. Using data from NOAA\textsuperscript{12} on daily flaring activity in Syria and Iraq combined with estimates of ISIS control, the calculations included a range of indicators of oil production. Each column of the figure shows a different measure of production: the first column shows number of sites flaring on any given day, which shows whether ISIS is capable to extract oil or not. The second column shows average intensity of flaring activity over all sites, which captures total production. And the third column shows average intensity of flaring at active sites, which captures the intensity of production among working sites. The study used two sets of data, the top row of the figure shows the raw figures and the bottom row normalizes by activity before the war escalated, March-June 2012, to highlight changes over time more evident. As expected, ISIS’ productive base was small to start with and dropped rapidly (column 1), its total productivity has generally fallen since January 2014 (column 2), and the productivity per well is quite poor compared to that in non-Daesh areas of Iraq and Syria [38].

\textsuperscript{12} National Oceanic and Atmospheric Administration
Although it is difficult to determine a definitive oil production figure from ISIS oil fields, according to local oil traders who live in ISIS controlled areas, the group’s oil production was somewhere between 34,000 to 40,000 barrels per day by end of 2015. The price of a barrel of oil varies depending on the quality of extracted oil. Some fields earn about $25 a barrel, while others, like al-Omar field, one of Syria’s largest, earn $45 a barrel and in many occasions that was higher than the international oil price. Yet, ISIS managed to market and sell its oil due to the captive local market in Syria's war-torn northern and eastern regions. The group was capable to control routes and find local markets until summer 2015 when the international coalition against ISIS started targeting their financial resources and fighters. Between spring 2014 and summer 2015 ISIS was estimated to earn at least $1.5m a day but now the number might have decreased but the drop has not exactly yet verified. The active oil production is related to the group’s creativity in oil production.
extraction and arranging means of trade and transport. For example after the increased bombardment on fields under their control they managed to find new routes and markets, their last attempt was by creating contracts with local traders [39]. (Table 3 below provides numbers from the main oil fields under the group’s control, while (figure1) shows the routes used in 2016 to smuggle oil, locations of oil fields under the group’s control and places of mobile refineries used by ISIS or other dealers/groups buying oil from them).

(Table 3)

<table>
<thead>
<tr>
<th>Oil Field</th>
<th>Estimated Production bpd</th>
<th>Price of Barrel</th>
</tr>
</thead>
<tbody>
<tr>
<td>al-Tanak</td>
<td>11,000-12,000</td>
<td>$40</td>
</tr>
<tr>
<td>al-Omar</td>
<td>6,000-9,000</td>
<td>$45</td>
</tr>
<tr>
<td>al-Tabqa</td>
<td>1,500-1,800</td>
<td>$20</td>
</tr>
<tr>
<td>al-Kharata</td>
<td>1,000</td>
<td>$30</td>
</tr>
<tr>
<td>al-Shoula</td>
<td>650-800</td>
<td>$30</td>
</tr>
<tr>
<td>Deiro</td>
<td>600-1,000</td>
<td>$30</td>
</tr>
<tr>
<td>al-Taim</td>
<td>400-600</td>
<td>$40</td>
</tr>
<tr>
<td>al-Rashid</td>
<td>200-300</td>
<td>$25</td>
</tr>
</tbody>
</table>

(Figure 1)
In another attempt to create a new system and increase their crude oil sales, the group started selling most of its crude oil directly to independent traders at the oil fields. They outsourced the marketing part and developed a well-organized system where Syrian and Iraqi buyers go directly to the oil fields with their trucks to buy crude. However due to the increased airstrikes of the international coalition against lines of oil tank trucks, ISIS changed the oil supply system to limit drones and airstrikes damage. Since the spring 2016, the truckers register outside the field and pick up their number in line. Truck drivers explained the new system in which they are told exactly what time they can return to fill up their trucks. The aim is to avoid a pile-up of vehicles which makes the sites more vulnerable and obvious target for airstrikes. The new system was efficient and enabled the group to maintain its production and oil sales. However, ISIS is struggling to maintain its profit margins. While the new system managed to minimize the damage on tank-trucks, it did not succeed to keep the profit margin. It slowed the distribution and did not stop strikes on oil collection points. After extraction and transportation, the refining comes before sending it to the market. Most of the oil is sold crude but refining is important to keep local market dependent on oil products comes from ISIS fields. Refining is mostly done by local residents who constructed their undeveloped refineries after ISIS mobile refineries plus refineries seized from Syrian and Iraqi States were destroyed by coalition airstrikes. Traders dealing with the group revealed that ISIS had obtained five mobile refineries since mid-2015 [39]. Yet, the group seems to be trying to minimize its losses, therefore since summer 2015 ISIS started outsourcing the refining business to private owners. The refinery owners make purchase agreements with the militants or traders for crude oil. Once the oil is refined, dealers distribute it in smaller trucks to markets across Syria and Iraq.
At this point in the marketing stage, ISIS is not engaged for obvious mobility reasons since most of the oil is sold in areas out of their control. However, before the intensification of airstrikes, about half the oil went to markets in Iraq or smuggled to Jordan through Iraq, while the other half was consumed in Syria or smuggled to Turkey through Syria. Smuggling to Turkey happened through both ISIS territories and rebel-held areas in the north (Idleb and Aleppo). During 2016, local traders said more fuel has been shipped to Iraq, because Russian air strikes often target fuel trucks en route to rebel areas (that was with the increase of Russian strikes on Aleppo).

**Smuggling**: transporting oil to the neighboring countries is another source of hard currency for ISIS since all oil sold in the local market is sold in Iraqi Dinar or Syrian pound. Therefore, securing routes and creating safe means of smuggling to neighboring countries (Turkey
and Jordan in this case) is essential work for the IS ministry of oil. However, this mostly happens by traders rather than by ISIS militants for their ability to move between boarders, plus it can be good for business and profit for Syrian and Iraqi locals\textsuperscript{13}. During the first half of 2016 smugglers from Syria to Turkey said that demand on ISIS oil has been declining, not because of tighter border controls but because the sharp fall in international oil prices make it unprofitable. But some determined smugglers continue their trade even for less profit margin. Most of the smuggling from the Syrian side has gone through opposition areas in the northwest. During 2016 to be able to transport with minimum damages from airstrikes, local traders and smugglers would buy fuel at the market, pour it into jerry-cans (see figure 3) and carry it over the border in small vehicles, or use donkeys and horseback in mountainous areas. In Iraq, locals say the route now goes south through Anbar province towards Jordan\textsuperscript{14} [39].

(Figure 3, smuggling routes from Syria to Turkey and jerry-cans used for smuggling oil)

\textsuperscript{13} Absence of work opportunity and state generated jobs in ISIS controlled areas led to locals’ dependency on trade of legal and illegal means of all life necessities.

\textsuperscript{14} The geographical location and logistic matters, mainly control of routes divided the smuggling routes. Iraqi oil poured to Jordan while Syrian oil poured to Turkey through rebels’ areas.
Yet, selling oil did not stop at the local market and smuggling to the neighbor countries’ markets. ISIS found its largest market in the Syrian regime. Although the Islamic State is a regular target of Assad's statements about terrorism, and while the Assad regime is under harsh regional and international sanctions and boycott, Assad finds his ways to cover the market needs of fuel and diesel from ISIS after losing the majority of Syria’s oil fields to the Islamic State. In a US Special Forces raid on the ISIS Minister of Oil residence (Abu Sayyaf), some of the collected documents uncovered information that the group gets about 72% of its oil revenues from negotiated deals with the Assad regime [40]. The group also made agreements with the Assad regime to allow ISIS trucks and pipelines to move from the regime to ISIS controlled areas and vice versa. In one of the documents found in Abu Sayyaf residence, dated February 11, 2015, the agreement between Assad and ISIS allows trucks and pipeline transit from regime-controlled oil fields in the north eastern through ISIS-controlled territory. This helped the jihadists bring in more than $500 million which amounts to roughly $40 million a month in oil sales from agreements with Assad government alone\(^\text{15}\) [41]. Also the US sanctions on the Syrian regime revealed that at least two Syrian government officials, including a Syrian-Russian businessman named George Haswani, served as middlemen between Assad and ISIS for oil deals. In addition to oil deals, ISIS has a steady source of cash from the Assad regime who is reliant on power plants in ISIS controlled areas (mainly in Palmyra) to supply power to Damascus and other cities under Assad control [42].

**Extortion, Taxation and Sales of Antiques:**

On October 2014, the US Department of Treasury Undersecretary for Terrorism and Financial Intelligence acknowledged that ISIS has accumulated unprecedented amount of wealth.

\(^{15}\) Numbers and agreements are according to the documents collected during the raid on Abu Sayyaf residence.
He continued saying that ISIS does not depend principally on moving money across international borders and obtains the vast majority of its revenues from local criminal and terrorist activities. In the areas controlled by ISIS the financial sources that is funding the militia’s operation took the shape of organized crime. These actions are mainly coercive ways to gain money such as forced bribery or confiscation of properties. When ISIS first took control of Raqqa, Mosel and other main urban centers, they seized approximately $1 billion from the banks ($675 million from Mosul only), in addition to tens of millions since 2014 from commercial businesses and protection fees. After their expansion in Raqqa-Syria and Mosul-Iraq in 2013-2014, the Islamic State attempted to act as a State and build a functioning bureaucratic institutions. However, ISIS leaders set up a system that became greedy and violent bureaucracy that now squeezes every last American dollar, Iraqi dinar and Syrian pound from every Syrian and/or Iraqis live or pass through ISIS territory. Individuals who managed to flee ISIS areas explained the means of taxation and extortion developed by ISIS officials. Some of these taxes are similar to those of a normal state, while others are more like extortion. It varies from forcing unprecedented tolls and traffic tickets, rent of government properties and buildings to commons, high utility bills for water and electricity\textsuperscript{16}, a new system of income taxes\textsuperscript{17} plus high taxes on crops and cattle; plus fines on anything seen by them as anti-Sharia law like smoking or wearing the wrong clothes. Estimates are that the group is making annually $1 billion from fees, taxes, and extortion collected through these institutions [43]. The extortion will remain possible as long as ISIS has a stretched control over territories. Eventually it might remain the last secure income for the Islamic State and probably they will manage to cover the military and statehood costs only from extortion in case oil revenue stopped.

\textsuperscript{16} Although most of utilities were not provided by them, the management was still in the hands of the rebels or government, mainly in Syrian territories under the control of ISIS.

\textsuperscript{17} Income tax is part of the Sharia Law and it varies between people, and they take higher taxes from the few Christian families in their area of control.
Yet, ISIS keeps proving their ability to create and secure new economic resources. They made trade agreements with individuals and businesses with their adversaries (i.e. Turkey, Assad and the Kurds). Yet, since it is very difficult to understand and trace the ISIS economy to eliminate its sources, US officials suggested that the group must be circulating its money back out into the regional and even global financial system. That conclusion came since there have not been signs of the kind of widespread inflation that could result from a large influx of currency into a relatively small economy closed off from the surrounding markets. Therefore, the group might be laundering money in South Turkey or North Iraq through money exchange and transfer businesses [43][44].

Additionally, since the Islamic State territories are frontiers rather than closed areas - mainly the Syrian Iraqi Turkish triangle- this eases the facilitation of all trades and deals with regional and European criminal organization. In addition to oil, antiquities trade and human trafficking deals have skyrocketed since ISIS controlled the Syrian-Iraqi-Turkish borders. This made the path for criminal organizations to secure routes for their commodities of antiquities, human organs and sex slaves from Asia to Europe through Turkey. On top of that, the loss of order and ongoing refugees’ influx enabled the organization to control more routes and secure their movements and find victims for their networks. The U.S. Department of State reports that Syria’s location as connection between Asia and Europe made the country a path for trafficking flows. Other countries in the region such as Kuwait, the U.A.E. and Lebanon had already seen rising rates of trafficking originating from Syria long before ISIS began dominating east Syria and western Iraq, and with ISIS control over the borders, the numbers are increasing as it secures another revenue for the IS [45].

Antiquities Selling: More than third of Syria and Iraq archeological heritage are in the hands of ISIS. One of the first things ISIS did immediately after controlling any historic site was
excavate antiquities dating from 9,000 B.C. to 1,000 A.D. and selling it through intermediaries to collectors and dealers. All unmovable or big items were bombed. This business is considered a major source of income for the Islamic State. Some estimates suggest that it is the second biggest revenue and save ISIS mainly when the oil market revenues dropped. Aymen Jawad, executive director of Iraq Heritage, a London-based organization dedicated to preserve Iraq’s ruins said “One of ISIS biggest antique treasures came from looting the ninth century B.C. city and grand palace of the Assyrian king Ashurnasirpal II at Kalhu, Mosul, which is now called Nimrud City…. Tablets, manuscripts and cuneiforms are the most common artifacts being traded, and, unfortunately, this is being seen in Europe and America. Hundreds of millions of dollars’ worth of irreplaceable pieces are being sold to fund terrorists.” al-Hamadani who works for Iraqi Department of Antiquities explained that The main black market for Mesopotamian antiquities is in Turkey, it functions as the main channel and hub for ancient Middle East artifacts aimed for Europe. The second largest antiques’ black market is located in Jordan and is sold to tourists. A single Mesopotamian artifact can make hundreds of thousands of dollars, as evidenced by the sale in April 2014 of a cuneiform baked clay cylinder of Babylonian king Nebuchadnezzar II dating from 604 B.C. to 562 B.C. This was sold for $605,000 to an anonymous buyer, according to Doyle New York auctioneers [46].

**How is ISIS managing financial transactions?**

The group has been using the underdeveloped banking system in the Middle East and its weaknesses to handle regional and international transfers through several ways.

First method: many banks in north Iraq and around Mosul are reportedly under the group’s total control because of the transactions and profits generated from dealing with massive amount
of funds coming from ISIS. It is obvious that these banks have no incentive to comply with any U.S or international regulations in countering terrorism. Yet, this network has expanded to reach some on south Turkey, therefore all efforts to isolate them from international financial institutions have failed and ISIS is being more capable to utilize financial control over the local formal economy.

Second method: the weakening of Iraqi and Syrian states was immediately replaced with the authority of tribes, rebels or the Islamic State. In the case of banking system ISIS used the expertise among its fighters to handle the banking issues, mainly the international banking transfers plus the use of intimidation and fear to force their rules and operations on bankers. The success in finding channels for their revenues gave them a motivation to identify and use banks that are unlikely to comply with policies designed to target their financial operations. This situation creates hardship in targeting their transfer operations, because as long as ISIS violence remains a threat to those who refuse to cooperate with the group, the international community will struggle to stop their financial operations.

Third method, ISIS is using less secure transfer systems in all the region’s bank. They identify the weakness points in these systems and use it to dodge international sanctions. For instance; even if the banks they deal with were isolated from all regional and international transfer system, they would not be cut off from informal banking systems, such as networks of (hawalas)\(^\text{18}\). These methods can move ISIS money in Iraq, Syria, and abroad and have been difficult for Western intelligence authorities to penetrate or stop [47].

\(^\text{18}\) which is informal value-transfer institutions throughout the Middle East, South Asia, and parts of Africa)
Conclusions:

How come ISIS has not been defeated yet?

First: total defeat of ISIS is directly linked to the ability to dry up ISIS financial resources. Yet, as long as ISIS is controlling territories, they will generate money through deals with States and actors based on mutual interest. Second: ISIS showed great resilience and high adaptation to offensives on their economic capacities and resources. Third: in a region saturated with ethnic and religious tension and conflict, ISIS showed high adaptation and ability to divert geopolitical development to a victory. Fourth: It derived skills from its cadre which works as a mafia-like mind group, which institutionalized illegal work. Fifth: ISIS speedy recovery and subsequent revival were enabled by its ideological cohesiveness, certainty in their righteousness and ultimate victory and its success in achieving rapid and sizable victories against national armies. The group’s ideology also redirected any defeat and loss of lives or territories to be perceived by its fighters as God’s will and test of the Mujahedeen’s faith and endurance. This idea was clearly heard in al-Baghdadi’s last speech released on February 2017. This strategy was different from Salafi Jihadism and all previous terrorist groups who planned victory for decades, and trained their fighters on patience and acceptance of loss and encouraged critical thinking after every defeat.

What are the economic strengths of ISIS?

Two economic facts about ISIS could predict its future. First: revenues from economic activities in areas of control are shrinking. Second: ISIS public institutions are hostile to any economic growth since its economic module is unsustainable. These two facts explain ISIS behavior in accumulating wealth and dry up all financial resources of their areas of control. They are doing so by looting and extorting as fast and as much as possible to fuel their expansion agenda.
and fortify their defenses in current territories. As a result of this economic imbalance, their chance of survival is poor and will result in inflation and failure of services [48] because 1. None of the resources are sustainable or non-extractive 2. Cash is being quickly dried up by fighters’ salaries and war disbursements 3. ISIS is determined to act as a State since reviving the Caliphate is the core of its ideology.

Alternatively, an analysis of ISIS institutions’ tactics and ability to resort to alternative plans shows potential for their survival. ISIS sources of revenue clearly go far beyond the conventional descriptions of a criminal outfit that primarily making money through smuggling of oil and antiquities. The provided evidences showed that the Islamic State has successfully incorporated such illegal acts in its developed bureaucratic institutional system. Therefore, disruption of oil infrastructure through airstrikes may have reduced ISIS revenues, but it did not seem to have gravely destabilized its finances. Through administrative procedures ISIS was able to impose greater taxation and use extortion to compensate their losses. At the same time, it is difficult to predict how this bureaucracy and policy can develop further in Iraq and Syria given the increasing pressures and constraints on ISIS resources. Therefore, to completely cut-off all of ISIS economic resources, the counterplan would require one of two options: either a wide-scale bombing campaign on ISIS’ infrastructure, or the complete isolation of ISIS from the outside world, which must include Assad’s agreements with ISIS and international cash transfer channels through local banks. However, both currently seem unfeasible, the first for political reasons, while the second for technical ones as Assad is using ISIS as his regime is facing international sanctions.

Consequences on the internal situation inside the Islamic State:

First, ISIS’ harsh laws and rigid security apparatus present it as a stabilizing force mainly in Syrian towns that experienced war and competing factions for the past four years, or fear from
the control of Assad forces if ISIS was removed. This has severely weakened the prospects of internal opposition for ISIS rule. Additionally, local rivals, such as the revolt of Shaitat tribe in Deir-Ezzor province are put down ruthlessly by ISIS. Also, ISIS tribal outreach embodied in its Diwan al-Asha’ir\textsuperscript{19} played members of the same tribe against each other. On the other side, in Iraq local opposition is not forthcoming due to fear driven by their experience with Maliki failed policies as we as the increasing Iranian influence in Sunni-majority areas. Instead they chose to reconcile with the new situation through a mixture of coercion and adaptation. As found before, the result of unjust rule by a minority group on a majority, have led to the rise of sectarian sentiment and replacement of Iraqi State role with radical fanatics. The story will never end and ISIS will always have an environment to thrive as long as there is a major role played by Iran in the region, especially in Sunni-majority societies.

To sum up, ISIS appears to have set up an administration that is very sophisticated as far as rebel or terrorist groups go. The Islamic State will be capable to endure for years unless subjected to direct ground military attack led by capable neighboring Muslim countries (Saudi Arabia, Jordan, Turkey and Egypt). Ground forces should be Sunni personnel to ensure collaboration of Sunni tribes/communities and to eradicate any future calls to fight Shiites or Western forces. This military operation must go hand in hand with a political reform in both Iraq and Syria, in which Iran’s role is minimized and Sunnis restore their rights and fair political representation in governance.

\textsuperscript{19} Department of Tribes
References:


