

WAR AND THE OIL PRICE CYCLE

by Amy Myers Jaffe and Jareer Elass

Complex rivalries for influence among regional powers, most notably between Saudi Arabia and Iran but also including Turkey, Qatar and the United Arab Emirates, are transforming the Middle East. As local borders and ruling institutions have become contested in the aftermath of the Iraq War and the Arab Spring, so has control of the region's major oil and gas facilities. Warring militias, the Islamic State of Iraq and Syria (ISIS), Al Qaeda and traditional governments are increasingly focusing on maintaining or gaining control of oil production and refining installations. Additionally, regional conflicts, now complicated by the active military involvement of Russia, have spilled over to affect global oil markets as Saudi Arabia and its Gulf allies, seeking to influence regional military and geopolitical outcomes, have initiated a market share war that has brought about a collapse in oil prices.

This paper examines how conflicts in the Middle East, including the Syrian civil war and the rise of ISIS, are shifting the geopolitics of oil. These conflicts are raising serious new risks to regional oil facilities, making them both strategic assets and spoils of war. Current diplomacy to resolve the conflict in Syria faces serious challenges. In addition to humanitarian grounds, it is imperative to find a durable solution in order to prevent the continued destruction of major regional oil and gas production and export facilities. The ongoing destruction of such infrastructure may represent a major challenge to global energy security in the three to five year time frame.

Oil has shaped international conflict for decades. According to one estimate, twenty-five to fifty percent of interstate wars between 1973 and 2012 had oil-related linkages.¹ But the cyclical nature of oil's contribution to global conflict is not well understood. Not only are oil prices cyclical, but the geopolitics of oil are linked inexorably to the same boom and bust price cycle.

Military adventurism, proxy wars and regional pathologies in the Middle East expand and contract with the ebb and flow of massive petrodollar accumulations related to the oil price cycle.

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The massive inflow of petrodollar revenues when oil prices are high creates disposable incomes that can be easily dispensed on regional arms races, especially since oil consuming countries like the United States are incentivized to increase arms sales as a means of solving oil import related trade deficits. Besides transferring wealth from industrialized countries to oil producers in the Middle East and North African (MENA) region and Russia (and stimulating renewed drilling for oil and gas in North America), high global oil and natural gas prices also slow global economic growth and encourage energy conservation. This causes petroleum demand to slow globally, lowering oil prices. Social and political problems in the region reemerge as oil prices recede. Regional governments have fewer resources to spend on restive populations that have become accustomed to generous handouts enabled by high oil prices. Job creation and visible social programs slow, dissatisfaction rises, and the consequences of economic downturns incite support for militants. Ensuing instability forces governments to use newly purchased arms, which ironically begins the cycle yet again, as new conflicts disrupt oil supplies.

In this manner, the world experiences perpetuating patterns of military conflict, followed by oil supply crises, and accompanying global financial instability. In effect, the Middle East resource curse has become globalized. The challenges this is presenting on humanitarian, security and economic fronts have become increasingly dangerous. The arms race that has accompanied the rise of oil prices over the 2000s has been no exception and is now all the more complicated due to the violent participation of sub-national radicalized groups that are less susceptible to diplomatic pressures or initiatives. In this emerging geopolitical context, the rise of violent subnational groups like ISIS and Al-Qaeda are increasingly putting oil infrastructure at risk, laying the groundwork for a future oil crisis that may prove harder to solve than in the past.

As borders and ruling institutions have become contested, so has control of the region's major oil and gas facilities. Initially an outgrowth of disunity inside Iraq, the conflict over oil and gas facilities is now accelerating across ungoverned territories, with important long-term consequences for global energy markets. Mideast oil and gas production capacity, along with surface facilities, are increasingly being damaged in ways that will make them hard to repair. Export disruptions, which were once sporadic, are becoming a more permanent feature of the civil war landscape. The level of destroyed capacity is currently estimated at about 2 million b/d and rising.² The longer Mideast conflicts fester, the more that infrastructure could become at risk. There is an additional element to this oil and war story that links structurally with the oil boom and bust cycle.

As oil prices recede, along with a decreased demand for oil and accelerating

regional conflict, wealthy oil producers such as Saudi Arabia, the United Arab Emirates, and Kuwait, are often tempted to use large oil production capacity as a strategic asset. They flood the market with increased supplies in order to lower prices, thereby hurting geopolitical rivals. This price war strategy, which was notably present during the prolonged Soviet war in Afghanistan and the eight year Iran-Iraq War, temporarily ameliorates the short run effects of war on surface export facilities through excessive production rates. In addition, it lays the seeds for the future uptick in the oil market, by discouraging investment in future oil productive capacity outside the Middle East when prices are extremely low. In the case of the 2000s, the destruction caused by ISIS on the oil sector in many locations around the Middle East, combined with expected losses in investment in other parts of the world (like Canada's oil sands and the Arctic due to current low oil prices), may be creating the conditions for a future oil supply crunch. This has major implications on U.S. policy.

This article asserts that the United State would be, in light of these circumstances in the Middle East, unwise to dismantle its Strategic Petroleum Reserve (SPR) as has been suggested on Capitol Hill. It would be similarly unwise for the United States to lose focus on the importance of conservation efforts in the transportation sector which has both national security and climate benefits. The United States would benefit strategically from a reevaluation of its ban on oil exports. Finally, the United States should place a greater emphasis on conflict resolution in troubled states. By resolving internal conflicts over the distribution of oil revenues, the United States can better pave the way for long-term solutions whereby those same revenues can be integrated into national budgets in ways that brings economic prosperity to populations instead of rising military expenditure.

WAR AND THE OIL CYCLE

Over the past four decades, oil prices have been governed by a combination of the real business cycle and the boom and bust investment cycles of oil exploration and production (E&P). As economies expand during upswings in the business cycle, oil demand rises in parallel, often fueling fears that shortages will occur.³ Oil prices then rise, generally in combination with irrational exuberance and market bubbles.⁴ High oil prices eventually stimulates more investment in oil exploration and drilling, encouraging technological innovation under the pressures of a renewed belief that high prices mean oil is permanently running out. But gravity eventually takes its course. Exceptionally high prices that follow the boom cycle then hinder continued economic acceleration. Commodity and asset market bubbles burst and recession ensues, limiting new demand for oil and

thereby bringing oil prices to a collapse. This lasts until cheap energy and government financial market interventions yet again restore economic equilibrium and growth. Producers, concerned about losses in their market shares, initiate price wars, which leave markets even more oversupplied, until low prices stimulate economic growth and oil demand once more.

The oil cycle has brought with it a similarly volatile economic cycle for the petrostates of the Middle East, whose governments have rapidly fluctuated between gigantic cash surpluses of so-called “petrodollars” and socially devastating budget deficits. Dubbed the resource curse, the massive influx of oil revenues during the commodities price up cycle discourages productive, non-commodities-linked investment, which is needed for long term-growth. The influx of petrodollars also fosters corruption and patronage, drives real estate and stock market bubbles, as well as provides irresistible incentives for wasteful government spending on white elephant projects and military expansion.

The geopolitical component of this oil megacycle can be particularly insidious. As oil capitals like Moscow, Riyadh, Abu Dhabi, Doha and Tehran reap massive profits with a sudden influx of petrodollars not easily recycled into domestic economies, significant financial reserves become available for arms purchases and military adventurism. Such initiatives are designed to protect the ruling class from both external threats (real and imagined) and internal challenges through robust internal security spending. Today, military employment in the Middle East is particularly high at three percent while military expenditures as a percentage of gross domestic product (GDP) is also strikingly high.⁵ For instance, it is above ten percent in Saudi Arabia.⁶ The regional arms race that accompanies high oil prices boosts not only arsenals of key countries in the Middle East but also their subnational proxies and even terrorist organizations that arise to challenge the status quo. Ironically, the flow of weapons driven by the oil price boom then increases the geopolitical risk to oil production, once again laying the groundwork for a future rise in oil prices as fears grow that military conflict will once again disrupt supplies.

In this way, as noted by historian Toby Craig Jones: “oil and war have become increasingly interconnected in the Middle East,” with the United States not only “mired in the middle” but “its approach to oil has abetted the outcome.”⁷ In fact, the United States and the West unwittingly participate in propelling the geopolitical nature of the oil cycle by recycling petrodollars via the sales of military equipment. In the mid-2000s, to reduce the pressure of the trade deficit on the U.S. dollar, the United States offered the Gulf Cooperation Council (GCC) countries a \$20 billion arms deal that now equips today’s conflicts.⁸

Recently, the level of geopolitical conflict underlying the Middle East's oil mega cycle is particularly dangerous, coupled with the Arab Spring uprisings and the dashed expectations of a new generation of youth. Not only have borders and identity politics in the region blurred in a manner that will be hard to reconstitute, but key institutions and infrastructure are being rapidly destroyed. For oil resource development, a business that requires huge capital inflows, long lead times and complex engineering, the rising instability and collapse of institutions in certain Middle East countries bodes ill for future regional economic progress. Regardless of the promise of new oil and gas supplies from shale formations in North America and beyond, a third of global oil production is still sourced from the Middle East and North Africa (MENA) region. While this might be able to be reduced over time, for the next few years, the fate of Middle East oil will still have huge impacts on the global economy.

REGIONAL BATTLES AND OIL FACILITIES

The oil price spikes of the 2000s are presenting complex energy and conflict challenges, problems that harken back to previous periods. Just as violence in the region devastated key oil facilities in the 1980s and early 1990s, today's battles continue to destabilize important energy producing centers. Current regional armed conflicts over oil fields raise a serious new risk that oil facilities are becoming strategic assets and spoils of war. The level of damage will be tied to the effectiveness of the United States and its allies to contain the spread of ISIS to new locations and the possibility of peaceful resolution of regional proxy wars.

Russia's buildup of troops in Syria adds another complication to the limited options facing the United States as it tries to build coalitions for a political transition in Syria. Despite the current energy surplus, Washington needs to avoid complacency about the global energy balance or it will find itself with few options in the continued destruction of energy infrastructure in the Middle East.

Unlike past regional wars, which were characterized by state-to-state armed conflict, today's friction points largely involve sub-national groups such as ISIS, Al Qaeda and other local militias. These sub-national groups are the ones this time around focused on gaining control of oil production and refining installations in contested areas. Their political impermanence has created unique problems, not the least of which is the inclination to use force to deny access to the facilities by regional rivals or the devolved state government. In the last year, 1.9 million b/d of oil productive capacity has been lost in the Middle East due largely to conflict.⁹ And, there is a lot more at stake, given that the MENA region produces 32.5 million b/d, about a third of total world production.¹⁰ Saudi Arabia's eastern province, which has been targeted by ISIS, is the home to over

90 percent of the kingdom's oil production and the vast majority of world's spare oil production capacity.¹¹

The current pace of arms buying in the region gives little reason for optimism. Even as Saudi Arabia's oil revenues were declining precipitously towards the end of 2014, Saudi Arabia was increasing its military spending to more than ten percent of its GDP.¹² The United Arab Emirates military spending was similarly high at three to four percent of its GDP, with Qatar at two to three percent.¹³ U.S. policy fed into this risky trend with President Obama promising new sales in arms to the GCC, in the aftermath of the historic P5+1 nuclear deal with Iran, including a \$5 billion deal with Saudi Arabia for 600 Patriot missiles.¹⁴ The United States is engaged in a diplomatic effort to reduce hostilities among key players and unify the effort to stop ISIS. Russia for its part seems to have rejected a diplomatic solution for the time being, committing more troops and material to the Assad regime in Syria.¹⁵

Our historical analysis of the impact of regional wars on long term oil market trends would suggest that the continuation of current conflicts could have major consequences for the upcoming global oil supply. In a study with coauthor Mahmoud El-Gamal, who utilizes Discrete Wavelet Transform (DWT) analysis to measure the effects of price and investment return variables on oil production at various frequencies, we found that wars in which oil production and export infrastructure were damaged, resulted in a significant discontinuity in oil market trends.¹⁶ In other words, data suggests that military conflicts over oil result in significant disruptions in oil capacity in the medium term and beyond, driving prices higher for some period of time until markets can adjust.

Analysis conducted by Peter Toft explores the link between intrastate conflict and oil supply disruptions using a different methodology. By recording oil production changes during the course of the 39 civil wars in oil producing countries between 1965 and 2007, Toft concludes that intrastate conflict intermittently leads to oil supply disruptions around fifty percent of the time.¹⁷ While Toft's assessment serves as a valuable indicator of the short-term impacts of civil war, it fails to take into account the long-term political and social changes that drive down oil production. There is an indication that a protracted process of consolidating power that follows the transformation of internal politics can be far more harmful to oil sector investment – and thus production capacity – than simply the infrastructural damage incurred during the initial course of the conflict. Our analysis shows that war damaged facilities often remain offline for prolonged periods following conflict, if not for an indefinite timeframe.¹⁸

Militias throughout the Middle East have learned they can undermine the authority of existing political leadership in the region by overtaking oil facili-

ties.¹⁹ A prime example of this strategy has been amply demonstrated in Libya where what might have been a successful transitioning government fell into disarray as rebel factions grabbed and turned off key oil installations, thereby denying access to eastern Libyan ports.²⁰ A more threatening trend is the focus of ISIS on a similar strategy, one that is systematically destroying oil and gas production capacity in contested areas in Iraq, Syria, Yemen, and Libya.

There is a dual threat to regional oil facilities from both the rise of ISIS and escalating proxy wars around the Middle East. Not only is major production and export infrastructure in Iraq, Syria and Libya at risk, but ISIS is also threatening neighboring countries should conflict spread to its principal sponsors. ISIS has already attacked civilian Shia communities inside Saudi Arabia including targets in Saudi Arabia's eastern province and in Kuwait. Saudi Arabia has fortified its northern borders with Iraq with more military hardware and troops, while Iranian forces have moved into positions near the southern Iraqi oil fields, raising the risks of border skirmishes.²¹ The militarization of border areas so heavily populated with oil fields and export infrastructure brings with it unique risks.

Jeff Colgan, in his case study approach to how oil can fuel military conflict, refers to several mechanisms at play in the region today: "externalization of civil wars" in petro-states and "financing for insurgencies" are contributing to violence across the region.²² And the oil revenue of Saudi Arabia, the United Arab Emirates, Qatar, Russia and Iran has to some degree insulated rulers from domestic opposition, potentially making them, as Jeff Colgan's and others' analyses would suggest, "more willing to engage in risky foreign policy adventurism."²³

ISIS AND OIL CONFLICT

The acceleration of targeting oil facilities by subnational groups is rooted in the history the repression of sectarian economic interests in countries such as Iraq, Libya and Syria. In many cases, sectarian communities living in oil producing regions did not receive an equitable share in wider national budgets during the reign of authoritarian regimes, and this has created larger problems in the post-Arab Spring environment. Disagreements over the division of state oil revenues have exacerbated ongoing sectarian conflict in not only Iraq, but also in Libya and Syria.

In the case of when Muammar Gaddafi ruled Libya, citizens in the east had long-standing historical grievances about the sharing of oil revenues which undermined the initial coalition government and put military competition for control of oil facilities at the center of the civil conflict. In the absence of an effective Libyan government, a proxy war erupted as rival nearby Arab states supported

competing leaders and militias (Qatar and Turkey backed the provisional government based in Tripoli while the United Arab Emirates and Egypt backed the opposition government situated in the eastern part of the country). The resulting chaos created opportunities for extremist groups like Al Qaeda and ISIS that have been able to scale up their operations in the country and are currently engaged in a military campaign to seize control over Libyan oil infrastructure or deny it to competing factions. One theory suggests that depriving any potential Libyan unity government of oil wealth aims to prevent a new government from effectively fighting and defeating ISIS.²⁴ Given the political instability and the fact that armed militias from both sides target the country's oil infrastructure, Libya's oil production has understandably fluctuated widely, with output currently at around 370,000 b/d, down from 1 million b/d produced in October 2014.²⁵

ISIS is also engaged in a turf battle in Yemen with the more established Al Qaeda in the Arabian Peninsula (AQAP), which first made its presence known in the country this March by taking credit for suicide bombings at two Sanaa Shiite mosques in which 137 people were killed and another 357 wounded.²⁶ The deteriorating situation caused by the multitude of warring factions in Yemen has raised the specter of extremist groups capturing oil infrastructure. In mid-April of 2015, the Yemeni army ceded control of a group of oil fields to a coalition of armed tribes in order to protect the area from being captured by AQAP.²⁷ The proxy war being fought between Saudi Arabia and Iran in Yemen has caused the country's oil production to fall off sharply, from capacity of 150,000 b/d in the first quarter of 2015 to around 16,000 b/d at present with production potentially totally stopping as storage becomes full and exports are embargoed.²⁸ The conflict has prompted Yemen LNG Co. to declare *force majeure*, halting output and exports from the country's single LNG facility.²⁹

When ISIS began its campaign in June 2014 to form an Islamic caliphate by seizing large swaths of land in northern Iraq and eastern Syria, of paramount interest to the group was gaining control of oil fields and capitalizing on existing oil smuggling operations. Initial high estimates of \$1 to \$3 million a day for ISIS' oil earnings were based on a one-time gain from "...draining down pipelines, storage tanks and pumping stations in northern Iraq."³⁰ But more recently, the extremist group is finding it cannot sustain oil production, both because it lacks the technical know-how and because its fighters cannot stave off attacks to recapture key installations.³¹ Few people with strong technical expertise have remained in ISIS-controlled territory and the group's efforts to coerce skilled staff into staying have proved ineffective.³²

Serious repair or more complex procedures, such as water injection at Syria's

mature producing fields, is proving a challenge for ISIS.³³ As of the summer of 2014, ISIS had control over half a dozen Syrian oilfields (*al-Furat*, *al-Omar*, and *Deir ez-Zor*) that prior to the war had a capacity of 114,000 b/d.³⁴ At present, ISIS production in Syria has shrunk to a trickle, with most fields productive capacity destroyed for all practical purposes. A similar fate has befallen several smaller oil fields captured by ISIS in northern Iraq,³⁵ where the extremist group set oil wells on fire as they retreated from battle.

OIL PRICES AS A TOOL OF PROXY WAR

The violence that is wreaking havoc on these regional oil facilities has a geopolitical element. As in the 1980s, regional proxy wars are prompting a price war from Saudi Arabia and its Gulf allies in an effort to weaken the other side, notably Russia and Iran.

Russia has been a major arms supplier and ally to Syria and has provided technical and diplomatic support for Iran's nuclear program and regional military expansion.³⁶ Russian President Vladimir Putin initially tried to play all sides by offering Saudi Arabia a range of nuclear and military assistance in 2007.³⁷ However, during a 2008 visit, then Saudi Foreign Minister, the late Prince Saud Al-Faisal, made it clear that any Saudi-Russian rapprochement had to include Moscow curtailing military cooperation with Iran and Syria, including dropping the sale of Russian S-300 surface-to-air missile systems to Tehran.³⁸ Russia spurned the Saudi conditions, scuttling the chances of greater cooperation on oil prices at that time.

Evidence suggests that Russia found that its geopolitical interest is enhanced by its friendly relationship with Iran. By backing Iran militarily, Russia gained leverage through a regional proxy who could directly influence the security of Saudi Arabia and Qatar, Russia's main competing energy suppliers. Russia's alliance with Iran, while somewhat tenuous, provides a counterweight to the threat that Saudi Arabia and Qatar would collude with the United States to weaken Moscow via an energy market share war. Russia is also motivated to support Iran to constrain the success of Sunni jihadist movements that might spread to its borders.³⁹

Indeed, by 2009, Saudi Arabia began hinting that an oil price war could be in the cards, should Moscow continue to threaten the kingdom's national security through its arms sales to Iran and support of the government of Bashar Al-Assad of Syria. The Saudi threat was material to Russia's economic outlook, given the history of similar Saudi strategic moves against the Soviet Union and Iran. Saudi Arabia has successfully provided support to regional political movements, militias, or counter-insurgents that contributed to the Soviet failure in

Afghanistan.⁴⁰ Saudi Arabia's ability to flood oil markets at will has also played a role in various efforts, including lowering oil prices to pressure Iran during its eight-year war with Iraq, to weaken the Soviet Union after its invasion of Afghanistan, and to ease the pressure on global markets ahead of the U.S. invasion of Iraq.⁴¹

In 2013, discouraged that the United States was not intervening in Syria and unhappy with Washington for pursuing a diplomatic agreement with Iran, Saudi Arabia approached Moscow to see whether a dialogue could convince the Kremlin to alter its support for the regimes in Damascus and Tehran. According to one media account, Saudi Arabia offered a guarantee not to use a post-Assad Syria as a transportation hub for competing natural gas shipments to Europe if Russia would withdraw its current military support for the Syrian regime.⁴² Other speculation assumed that Riyadh would offer accommodation on oil price levels if Russia would be willing to trade its political stance on Syria for some sort of cooperation with the Saudis in energy markets. The initiative was a non-starter.

By 2014, in line with policies seen back in the 1980s, Saudi Arabia was slashing prices to maintain market share in a manner that was geopolitically convenient. Saudi Arabia began to initiate price reductions for U.S. and Asian customers in moves widely interpreted at the time as a sign that the kingdom was starting to implement a price war directed, in large measure, at Russia and Iran.⁴³ By early 2015, oil prices had cratered to \$50 a barrel.

Geopolitically, the fall in prices to \$50 a barrel has been effective but not definitive. Cracks initially became apparent in the unity of the inner circle of President Vladimir Putin as lower oil prices and U.S. sanctions took their toll on the Russian economy and Russia's wealthiest oligarchs. But low oil prices did not deterred Russia from its support for Syria's regime. Moreover, during its discussions about its nuclear program with the P5+1 powers, Tehran was also still expanding its regional power through proxy wars, contributing increased support for an escalation in the Yemen war, which temporarily contributed to a rebound in oil prices to \$60 a barrel. Oil movements through the Suez Canal have to traverse the Bab El-Mandeb chokepoint, which borders Yemen and Djibouti.⁴⁴ Roughly three to four million b/d of oil travels that route.⁴⁵ While it is possible for shippers to bypass the Suez Canal, escalation of the conflict in Yemen unnerved oil markets for several reasons. Firstly, it showed that the conflict between Saudi Arabia and Iran continues to spread across the region, with negative consequences for regional production. Secondly and most importantly, it showed that Russia and Iran were willing to use military force to counter Saudi efforts to lower oil prices.

The successful conclusion of the P5+1 nuclear deal negotiations with Iran paved the way for renewed efforts by the United States to broker a peace initiative in Syria. The Obama Administration worked overtime to get Middle East diplomacy off the ground to prove that the politically controversial Iranian deal could pave the way for a better Middle East. A flurry of diplomatic activity included high-level meetings between Russian and Saudi diplomats, Iran's foreign minister Javad Zarif and Syrian President Bashar al-Assad and Iranian and Lebanese officials. The blogosphere was buzzing with rumors, including one that Riyadh and Tehran might be able to agree on a formula that would restrict Hezbollah back to Lebanon, cordon Bashar al-Assad off to a limited titular role and begin serious negotiations for an inclusive political transition in Syria. One report on the deal purports an Iranian proposal that encompasses a cease-fire and full-scale, free elections in Syria.⁴⁶ Russia added to the perceived momentum at the time when Fyodor Lukyanov, chairman of a council that advises the Kremlin on foreign policy, uttered a sign of flexibility on Assad's role in an interview with the *New York Times*, proclaiming: "Saudi still believes that Assad should go, but now they are a little less sure that the alternative will be better... Russia still believes he should stay, but cannot ignore that the general situation is changing, that the strategic position of Syria is much worse now than before."⁴⁷ The possibility that all parties might consider a change in Syria led to speculation that Saudi Arabia and Iran may be able to work more cooperatively inside the Organization of Petroleum Exporting Countries (OPEC), with rumors that Saudi Arabia may be inclined to consider an OPEC floor price of \$60 to \$65 a barrel in exchange for a serious Iranian commitment to a peace process in Syria.

While low oil prices have forced Moscow to take draconian economic steps, so far it has not fundamentally produced the desired diplomatic capitulation. As predicted by Robert Blackwill and Meghan O'Sullivan, "... a weaker Russia will not necessarily mean a less challenging Russia...Russia could seek to secure its regional influence in more direct ways—even through the projection of military power."⁴⁸ Indeed, U.S. summer diplomatic efforts fizzled quickly by autumn, with Russia changing the facts on the ground through direct Russian military intervention. Russia's motivations are multifold and certainly include protecting its substantial interests in Syria including its preferred outcome that maintains Syria as an Iranian bulwark against Sunni jihadists.⁴⁹ Some analysts are suggesting that Moscow is overly optimistic about defeating Syrian opposition groups. Instead, it is suggested that Russia's previous difficulties during its invasion of Afghanistan may prove instructive, with all Syrian opposition forces still focusing in earnest on the Assad camp, and saving energies against each other for a later day.⁵⁰ However, it is still not clear as this article went to press whether

Russia intends to satisfy the Saudis by participating in peace negotiations, or whether the Russian engagement on behalf of Assad is meant to hold Iran and Moscow in a position to use Syria to assert themselves against the kingdom and restore oil prices. While the outcome in Syria is uncertain, the Russian move clearly complicates the landscape in the region, and leaves open the possibility of escalating violence. Pavel Baev and Jeremy Shapiro of Brookings suggest Russia's increased intervention may simply be designed to "establish a position of strength from which to bring Moscow back into the center of diplomacy over Syria,"⁵¹ but they are skeptical that Russia will be able to manage its participation in the conflict to reach a desired goal. Russia may also have broader goals, including intimidating U.S. allies both in the region and in Europe, to influence oil policy over the longer term, as well as to weaken strategic alliances that could be used against Russia, its national interests or the interests of individuals in the current regime. In recent years, Russia has acted to reassert itself on the world stage both through military means and by tapping energy as a weapon for leverage to enhance its geopolitical status.⁵²

IMPLICATIONS FOR U.S. STRATEGY

As conflicts continue to simmer in the Middle East, militias and extremist groups will continue to try to capture oil fields and infrastructure. This turn of events is a serious challenge to stability across the Middle East and to the global economy. Years of conflict have taken their toll on the state of the oil industries across the Middle East. For example, take the case of Iran: Iran's oil production averaged around six million b/d in the late 1970s.⁵³ Following the Iranian Revolutions from 1978 to 1979, Iranian output fell to 1.5 million b/d; three decades later, the country's oil output capacity stands at less than sixty percent of its pre-revolutionary levels.⁵⁴ In Nigeria, regime change prompted a similar outcome: the Biafran civil war in 1967 sank oil production by around forty percent.⁵⁵ During the transition from military rule in 1979, oil production dropped thirty percent, continuing its decline until 1983.⁵⁶ In Libya, the historical links between regime change and oil output offer a prelude for today's revolutionary state: Muammar Gaddafi's ascension to power in 1969 led to a rapid evaporation of foreign investment and operations in the oil sector. By 1975, the previous regime's output average of 3.2 million b/d had sunk over fifty percent, and by 1985, oil production had dropped to a mere 430,000 b/d.⁵⁷

The parties to the conflict in Syria may be so numerous and the dynamics fueling conflict so complex, that it is hard to see how the United States would be able to influence the outcomes it might consider desirable. It has been argued that "complementary international missions to degrade ISIS from the air, and

train and equip the group's local adversaries," are the key to the needed ingredients of containment.⁵⁸ But the United States can prepare itself for the energy consequences that might come from continued violence and destruction in the Middle East. The United States has hampered its potentially enhanced international stature by keeping its own oil surplus sheathed. U.S. tight oil could be a greater benefit to U.S. allies and free markets, if Congress were to lift the 40 year old export ban.

The United States can do much more to use its advantageous energy position to enhance its global leadership. As Blackwill and O'Sullivan note, the U.S. shale boom provides the United States with the tools to "sharpen the instruments of U.S. statecraft."⁵⁹ Current policies of limiting natural gas exports and banning crude oil exports must be considered in the context of U.S. international leadership and not just in the confines of U.S. domestic political priorities. In the global context, hoarding energy supplies inside our borders sends the message to other countries that they too should be hoarding their energy. Such attitudes were precisely what worsened the global economy during the 1979 oil crisis.⁶⁰ The United States is bound by membership in the International Energy Agency (IEA) emergency stockpile system to share energy in times of emergency or major disruption, so it seems all the more ludicrous that our hoarding of supplies will be limited to periods where energy supply is sufficient.


Still, the U.S. oil bounty is not a solution unto itself, as it too is vulnerable to the globalized oil cycle and associated geopolitical fallout. The United States must also sustain the current tendency to lower its oil demand, thereby ameliorating the global resource curse by attenuating the cyclical rise in fuel requirements and decoupling economic growth from customary demand pressures. By lowering the amount of oil that might be needed in three to five years through efficiency and substitution, the United States could thereby cushion itself and the global economy from the next supply gap likely to come if conflicts in the Middle East continue to escalate.

As U.S. Energy Information Administration (EIA) analysts Shirley Neff and Margaret Coleman show in the lead article in the Special Issue of Energy Strategy Reviews on "U.S. Energy Independence: Present and Emerging Issues," U.S. demand-side management policies are finally paying off, with U.S. oil consumption falling almost 10 percent between 2005 and 2013 and expected to find deeper reductions in the coming decades. U.S. oil demand is expected to decline by more than twenty to thirty percent in the next twenty years, Neff and Coleman *argue, demonstrating the importance of well-designed transportation policies.*⁶¹ There is no question that technological innovation and new investment strategies by U.S. independent oil companies have brought about a renaissance in U.S.

domestic oil and gas production, creating a prolific U.S. energy supply outlook. But without government intervention to curb our appetite for oil, this rising production might have done little more than meet increases in incremental demand.

The consequence of the U.S. oil export ban has generally been the accumulation of high, surplus crude oil inventories that tend to depress U.S. crude oil prices relative to global markets. The extra revenue that might come from export access would not only benefit the domestic U.S. economy but also reduce some oil that might have gotten shut-in because of negative break-even economics. If and when the destruction of oil production capacity in the Middle East contributes to a tightening market, allies such as Mexico and Europe will be eager to have access to U.S. condensates and tight oil. Such energy trade strengthens our ties to important allies and trading partners, thereby enhancing American power and influence.

The reduction in the level of U.S. oil imports in light of the shale boom is prompting members of Congress to suggest an opportunity might exist to sell off all or part of the SPR.⁶² The creation of the SPR was a specific response to the problem of petro-power and the 1973 Arab oil embargo.⁶³ Any sales from the reserve must consider a number of factors, including the possibility that a Middle East oil supply disruption could reemerge as a problem for the already tenuous global economic system. The SPR continues to play a vital role in U.S. national security. The United States is still a major importing country and an important member of the IEA emergency stockpiling program with our Western allies. The existence of the SPR, combined with surge production potential for U.S. crude oil exports, can position the United States diplomatically and strategically to play an enhanced leadership role during an oil supply crisis.

Finally, as the United States continues its pursuit of peace in the Middle East, it needs to be more cognizant of the need for active diplomacy regarding the distribution of oil revenues inside war torn societies. To date, the United States has not done a good job in its diplomatic efforts to assist local leaders in managing oil revenue sharing conflicts, and this failure has crippled U.S. efforts to stabilize failing states such as Iraq and Libya. The U.S. Department of State Bureau of Energy Affairs has woefully ignored the benefits of bringing warring parties together to fashion a more lasting system to divide future oil receipts as part of conflict resolution diplomacy. As this paper and other studies on the links between oil and war shows, conflict resolution that focuses specifically on oil aspects could prove fruitful to larger elements of conflict. 

NOTES

- 1 Jeff D. Colgan, "Fueling the Fire: Pathways from Oil to War," *International Security*, Vo. 38, No. 2 (Fall 2013) 147-180.
- 2 Estimates compiled by authors from a variety of media and analysts reports including Citibank, IHS CERA, Iraq Oil Report, Iraq Energy Institute, Harvard University Geopolitics of Energy project (case study author Luay Al-Khatteeb), Reuters, Energy Intelligence Group, Energy Compass, Middle East Economic Survey, AP, and Platt's Oilgram News. Also off the record interviews with regional and U.S. government officials and oil industry executives
- 3 Blake C. Clayton, *Market Madness*, (Oxford University Press, 2015), 170.
- 4 Ibid and El-Gamal, Mahmoud and Amy Myers Jaffe, *Oil, Dollars, Debt and Crises: The Global Curse of Black Gold*, (Cambridge University Press, 2010), 23.
- 5 SIPRI Fact Sheet April, 2015, http://books.sipri.org/product_info?c_id=496, accessed September 7, 2015; Mahmoud El-Gamal, (lecture, University of California, July 20, 2015).
- 6 Ibid. SIPRI Fact Sheet.
- 7 7 Toby Craig Jones, "America, Oil and War in the Middle East," *The Journal of American History*, 99 (1) (June 2012), 208-218.
- 8 Mahmoud A. El Gamal and Amy Myers Jaffe, *Oil, Dollars, Debt and Crises: The Global Curse of Black Gold* (Cambridge University Press, 2010), 162.
- 9 Estimates compiled by authors from a variety of media and analysts reports including Citibank, IHS CERA, Iraq Oil Report, Iraq Energy Institute, Harvard University Geopolitics of Energy project (case study author Luay Al-Khatteeb), Reuters, Energy Intelligence Group, Energy Compass, Middle East Economic Survey, AP, and Platt's Oilgram News. Also off the record interviews with regional and US government officials and industry executives, 2015.
- 10 Authors estimates based on oil production figures accessed from Oil Market Intelligence of Energy Intelligence Group and BP.com statistics.
- 11 Mohamad Bazzi, "ISIS, Saudi Arabia, and a New Wave Terrorist Violence" *The New Yorker*, June 29, 2015, www.newyorker.com/news/new-desk/a-new-wave-of-terrorist-violence, (accessed on October 23, 2015).
- 12 Sven Nordenstam "Saudi military spending rose 17 percent in 2014: study," Reuters (April 12, 2015), <http://www.reuters.com/article/2015/04/12/us-yemen-security-saudi-spending-idUSKBN0N30WV20150412> , (accessed September 7, 2015); also see SIPRI Fact Sheet April, 2015 http://books.sipri.org/product_info?c_product_id=496, accessed September 7, 2015.
- 13 Anthony. H. Cordesman "Military Spending and Arms Sales in the Gulf," Center for Strategic and International Studies (April 28, 2015), <http://csis.org/publication/military-spending-and-arms-sales-gulf>, (accessed September 7, 2015).
- 14 "US to speed up arms sales to Gulf after Iran deal: Kerry," *Agence-France Presse* (August 3, 2015), <http://www.gulf-times.com/Qatar/178/details/449807/US-to-speed-up-arms-sales-to-Gulf-after-Iran-deal%3A-Kerry-> , (accessed September 7, 2015).
- 15 Michael R. Gordon "U.S. Warns Russia Over Military Support for Assad," *New York Times* (September 5, 2015), http://www.nytimes.com/2015/09/06/us/politics/john-kerry-russia-syria.html?_r=0, (accessed September 7, 2015).
- 16 El-Gamal, Mahmoud and Amy Myers Jaffe, "Oil Demand, Supply and Medium Term Prospects: A Wavelet-based Analysis," Institute of Transportation Studies, University of California Davis (June 2013), http://www.its.ucdavis.edu/research/publications/publication-detail/?pub_id=1934 (accessed October 23, 2015).
- 17 Toft, P., "Intrastate Conflict in Oil Producing States: A Threat to Global Oil Supply?" *Energy Policy* 39 (11) , (November 2011), 7265-7274.
- 18 El-Gamal, Mahmoud and Amy Myers Jaffe, "Oil Demand, Supply and Medium Term Prospects: A Wavelet-based Analysis," (June 2013).
- 19 Jeff D. Colgan, *Petro Aggression: When Oil Causes War*, (Cambridge University Press, 2013), 21.
- 20 Hared Malsin, "ISIS Allies Try To Cut Off Libya's Oil Revenue," *Time*, March 16, 2015 <http://time.com/3745911/isis-oil-libya/> , accessed September 7, 2015.
- 21 Authors interviews with regional oil industry officials and U.S. military sources.

- 22 Ibid
- 23 Ibid and Michael Ross, *The Oil Curse*, (Princeton University Press, 2012), 12.
- 24 Hared Malsin, "ISIS Allies Try To Cut Off Libya's Oil Revenue," *Time*, March 16, 2015 <http://time.com/3745911/isis-oil-libya/>, accessed September 7, 2015.
- 25 "Libya battles threats internal and external" *Petroleum Intelligence Weekly*, Energy Intelligence Group, August 3, 2015, (accessed October 23, 2015).
- 26 Mohammed Ghobari and Mohammed Mukhashaf, "Suicide bombers kill 137 in Yemen mosque attacks," *Reuters*, March 20, 2015 <http://www.reuters.com/article/2015/03/20/us-yemen-attack-bomb-idUSKBN0MG11J20150320>, (accessed September 7, 2015).
- 27 Saeed al-Batati and David D. Kirkpatrick, "Yemeni Army Tries to Safeguard Oil Fields as Qaeda Fighters Advance," *International New York Times*, April 17, 2015 http://www.nytimes.com/2015/04/18/world/middleeast/aid-agencies-increasingly-alarmed-by-yemen-crisis.html?_r=0, accessed September 7, 2015.
- 28 Iain Packham, "Yemen Oil Output Could Come to a Halt by August," *International Oil Daily*, Energy Intelligence Group, June 23, 2015.
- 29 "Yemen's LNG Plant Halts Supply as Fighting Worsens Security," Aaron Clark and Chou Hui Hong, *Bloomberg*, April 13, 2015 <http://www.bloomberg.com/news/articles/2015-04-14/yemen-ling-halts-production-as-fighting-worsens-security-at-plant>, (accessed September 7, 2015).
- 30 International Energy Agency, *Oil Market Report: 14 October 2014* <https://www.iea.org/oilmarketreport/reports/2014/1014/>
- 31 "ISIS grabs oil and gas fields in Syria and Iraq, but challenges remain," *The Daily Star*, July 26, 2014 <http://www.dailystar.com.lb/News/Middle-East/2014/Jul-26/265188-isis-grabs-oil-and-gas-fields-in-syria-and-iraq-but-challenges-remain.ashx>
- 32 Ibid.
- 33 Ibid.
- 34 "Air Strikes Weaken Islamic State Oil Operations," *Petroleum Intelligence Weekly*, Energy Intelligence Group, October 6, 2014.
- 35 Through the course of the summer of 2014, ISIS had captured six oil fields in northern Iraq—the Ajeel, Himrin, Ain Zalah, Safiyah, Batmah, and Qayara fields, which collectively had pre-war nameplate production capacity of 58,000 b/d. But by early September of 2014, ISIS had relinquished three of those fields to Iraqi forces, leaving the Ajeel, Himrin and Qayara fields under the group's control, with production from these fields averaging less than 15,000 b/d.
- 36 Salam al-Saadi, "Russia's Long Term Aims in Syria" *Carnegie Endowment for International Peace*, October 6 2015, carnegieendowment.org/sada/?fa=61521, (accessed on October 23, 2015).
- Also Songying Fang, Amy Myers Jaffe and Tec Loch-Temzelides. "New Alignments? The Geopolitics of Gas and Oil Cartels and the Changing Middle East." Working Paper, Institute of Transportation Studies, http://www.its.ucdavis.edu/research/publications/publication-detail/?pub_id=1687, (accessed October 23, 2015).
- 37 Elass, Jareer and Amy Myers Jaffe, *The History and Politics of Russia's Relations with OPEC*, working paper, James A. Baker III Institute for Public Policy, 2009, available at <http://bakerinstitute.org/research/the-history-and-politics-of-russias-relations-with-opecc/>, (accessed September 7, 2015).
- 38 Ibid.
- 39 "New Alignments? The Geopolitics of Gas and Oil Cartels and the Changing Middle East." Songying Fang, Amy Myers Jaffe and Tec Loch-Temzelides. *Journal of Economics of Energy and Environmental Policy*. Volume 3. Number 1, January 24, 2014, <http://www.iaee.org/en/publications/eeeparticle.aspx?id=61>.
- 40 Rachel Bronson, *Thicker Than Oil* (Oxford University Press, 2008).
- 41 Ibid
- 42 "Saudi Arabia offers Russia Deal for Backing off Assad Support," *Reuters*, August 7, 2013 http://www.huffingtonpost.com/2013/08/07/saudi-arabia-russia-assad_n_3719215.html?utm_hp_ref=tw. Also, see Ambrose Evans-Pritchard, "Saudis offer Russia secret oil deal if it drops Syria" *The Telegraph*, August 27, 2013 <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/10266957/Saudis-offer-Russia-secret-oil-deal-if-it-drops-Syria.html> (accessed September 7,

2015).

43 Mark Mazzetti, Eric Schmitt and David D. Kirkpatrick, "Saudi Oil Is Seen as Lever to Pry Russian Support From Syria's Assad," *The New York Times* (February 3 2015), http://www.nytimes.com/2015/02/04/world/middleeast/saudi-arabia-is-said-to-use-oil-to-lure-russia-away-from-syrias-assad.html?smid=tw-share&_r=2 (accessed September 7, 2015).

44 Energy Information Administration, "Maritime Chokepoints Critical to Petroleum Markets," (March 2, 2011), www.eia.gov/todayinenergy/detail.cfm?id=330.

45 Ibid

46 Jean Aziz, "What's behind Zarif's visit to Beirut?" *Al monitor*, <http://www.al-monitor.com/pulse/originals/2015/08/lebanon-iran-zarif-visit-messages-implications-repercussions.html#>

47 Anne Barnard, "New Diplomacy Seen On U.S.-Russian Efforts to End Syria Civil War" *The New York Times*, (August 11, 2015), www.nytimes.com/2015/08/12/world/middleeast/new-diplomacy-seen-on-US-Russian-effort-to-end-Syria-civil-war.html (accessed on October 23, 2015).

48 Robert D. Blackwill and Meghan O'Sullivan, "America's Energy Edge," *Foreign Affairs*, March/April 2014, 63

49 Middle East Briefing, <http://mebriefing.com/?p=1914>, (accessed September 7, 2015).

50 Ibid.

51 Pavel K. Baev and Jeremy Shapiro, "How Russia and America make the same mistakes in Syria," <http://www.brookings.edu/blogs/order-from-chaos/posts/2015/09/11-russia-america-same-mistakes-syria-baev-shapiro> ,(accessed September 7, 2015).

52 Edwards L. Morse and James Richards, "The Battle For Energy Dominance," *Foreign Affairs*, March-April 2002, 83; Also, Amy Myers Jaffe and Robert Manning, "Russia, Energy and the West," *Survival* 43, no. 2 (Summer 2001); and Amy Myers Jaffe and Ronald Soligo, "Energy Security: The Russian Connection," *Energy Security and Global Politics: The Militarization of Resource Management*, eds. Daniel Moran and James A. Russell (Abington: Routledge, 2008).

53 Daniel Yergin, *The Prize*, (Simon and Schuster, 1994).

54 Ibid and "Oil Market Intelligence," *Energy Intelligence Group*, (accessed October 23, 2015).

55 Ibid.

56 "Nigeria: Overview/Data," U.S. Energy Information Administration. July 14, 2010, < <http://www.eia.gov/countries/country-data.cfm?fips=NI#pet>>

57 Yergin, op cit.

58 Fromson, James and Steven Simon, "ISIS: The Dubious Paradise of Apocalypse Now," *Survival*, Vol. 57 June-July 2015, 7-56.

59 Blackwill Op cit.

60 Martin Hillenbrand, Daniel Yergin, *Global Insecurity: A Strategy for Energy and Economic Renewal*, (Penguin Books, 1983).

61 Shirley Neff and Margaret Coleman, "EIA Outlook: Reversal in US Oil Import Dependency," *Energy Strategy Reviews*, Volume 5, December 2014, 6-13.

62 *The Wall Street Journal*, "What to Consider Before Tapping the Strategic Petroleum Reserve," (Sept 18, 2015), <http://blogs.wsj.com/experts/2015/09/18/what-to-consider-before-tapping-the-strategic-petroleum-reserve/>

63 Ibid.

PERSPECTIVES

