

May 28, 2015

Yemen Conflict Threatens to Add Entrenched Risk Premium and Price Volatility to Global Oil Market

Summary

- Since Saudi Arabia began airstrikes on Houthi rebel targets in Yemen in late March 2015, more than 1,800 people have been killed—at least 825 of them civilians—in a conflict intended to roll back the progress of the Shia-led rebellion. While the operation has created some operational space for the Houthis' opponents in Southern Yemen and disabled Houthi long-range missile capabilities that threatened Saudi Arabia, it has so far fallen short of its apparent goal of dislodging the Houthis from major cities.
- Yemen's oil production today only accounts for approximately 0.1 percent of global output, yet the country holds a strategically important location adjacent the Bab el-Mandeb strait, one of the world's most important oil transit chokepoints through which nearly 5 million barrels of oil per day traveled last year.
- Saudi Arabia has been joined by Sunni allies, against the Iran-backed Houthi rebels that they believe to be an Iranian proxy, resulting in the conflict being seen to some extent as yet another flashpoint in a regional battle for influence between Riyadh and Tehran.
- When airstrikes began, oil prices jumped approximately 5 percent as prompted in part by concern that the escalation could foment even wider conflict in the Middle East that would threaten crude oil supplies to the global marketplace.
- If conflict were to make shipping through the Bab el-Mandeb too dangerous, oil tankers would be forced to alter their routes and travel around the southern tip of Africa, adding at least \$3 to \$4 per barrel to the shipping cost of oil and ten days of additional transit time, while also elevating the risk premium on global oil prices, with analysts estimating potential price increases of \$10 per barrel if the strait were closed.
- Yemen holds proved oil reserves of approximately 3 billion barrels. If more enduring degrees of political stability and governance could be achieved, the country would likely see currently offline oil supplies return and an uptick in new energy investments.
- Developments in Yemen represent just the latest example of uncertainty and volatility in a global oil market with potential implications for U.S. naval activities, foreign policy, and, through possible oil price spikes, the economy.

Background

The Houthi uprising, named after its late founder, Hussein Badreddin al-Houthi, began over a decade ago, ostensibly aimed at attaining self-governance for the community of Zaydi Shia in the northern Saada province and surrounding areas near the border between Yemen and Saudi Arabia. As their grievances against the central government that they felt was marginalizing them remained unaddressed, the Houthis' rebellion continued on and off, picking up momentum after the 2011 revolution that deposed longtime President Ali Abdullah Saleh (who, despite opposing the Houthis during his presidency, has recently given them of the support of the military units that remain loyal to him).

In September 2014, after picking up significant popular support in two months of protests against the government of President Abd Rabbu Mansour Hadi (protests prompted largely by economic concerns such as the cancellation of the government's fuel subsidy program), the Houthis were able to take effective control of Yemen's capital, Sana'a. After several months of attempting to solve the crisis, President Hadi resigned under pressure in January 2015, with the Houthis announcing a transitional council in February. The president later escaped to his hometown, the major southern port city of Aden, where he rescinded his resignation, and from where he fled to Riyadh when the Saudi military intervention began.

The Saudi-led intervention, dubbed Operation Decisive Storm, came after the Houthis and their allies had expanded well beyond their stronghold in the far north of Yemen, consolidated control of Sana'a and other areas of central and western Yemen, and appeared poised to take control of Aden (see Figure 1). The bombing has resulted in over 825 civilian deaths¹ and contributed to humanitarian problems including the displacement of over 545,000 Yemenis from their homes,² but has resulted in little change to the strategic balance in the war. With little changed by the fighting, the conflict has repeatedly seen false signs of resolution, only to continue unabated, signaling the potential for a protracted regional war in Yemen. On April 21, reportedly after pressure from the United States and local Sunni governments over the high level of collateral damage, Saudi Arabia said it would be ceasing its aerial attacks and transitioning to efforts aimed at brokering a peaceful agreement between all parties,³ which include the Houthis, supporters of Saleh, supporters of the Hadi government, and Southern secessionists (who have opposed the Houthis in recent fighting but tend to maintain their desire for independence from Sana'a). Despite this announcement, airstrikes on Houthi positions in strategic locations continued.⁴ As the fighting pressed onward, a five-day humanitarian truce was called by Saudi Arabia to allow goods to reach ports previously shut by the Saudi-led naval blockade. This coincided with an ostensible peace conference in Riyadh which had little hope of attaining a political solution to the crisis, given that it was not attended by the Houthis, who were asked to withdraw from the cities they had captured before any talks could proceed. The truce itself was equally unable to raise hopes of a lasting peace, as some combat continued in cities including Taizz—Yemen's second largest—during the ceasefire, and Saudi Arabia resumed bombing campaigns in Sana'a and other cities immediately upon its conclusion.⁵ Certainly, the assumed objective of a decisive victory over the

⁵ Los Angeles Times, "In Yemen, hundreds flee as airstrikes pummel capital after truce's end," May 19, 2015



¹ Reuters, "Yemen Ceasefire Begins After Fighting Rages Until the Last Minute," May 12, 2015

² AP, "Saudi-led airstrikes in Yemen resume after truce expires," May 18, 2015

³ New York Times, "Saudis Announce Halt to Bombing Campaign," April 21, 2015

⁴ Reuters, "Saudi-led coalition bombs Yemen despite calling off air campaign," April 22, 2015

Houthis has not been achieved, with only the pushback of Houthis from positions in Ad Dali this week to show as a notable achievement over two months of bombing,⁶ and Saudi citizens remain generally supportive of the campaign, seen as a bold move against Iranian interference.⁷ U.N. Secretary-General Ban Ki-moon has attempted to convene peace talks, most notably this week in Geneva,⁸ but has been unable to bring all sides to the table to end a conflict that has shown no signs of resolution. Most recently, aides to the exiled Yemeni president Hadi insisted UN-sponsored peace talks will have to be postponed due to intensified clashes in Aden,Taizz, Ad Dali, and Shabwah, and again made the ambitious demand that the Houthis recognize Hadi's authority before talks can begin.⁹





Despite modest oil production relative to other countries in the Middle East, oil has the potential to be a major pillar of Yemen's economy. According to the International Monetary Fund, oil and gas production accounted for 63 percent of all government revenue between 2010 and 2012. However, political upheaval, maturing oil fields, and frequent physical attacks on its pipeline infrastructure have left Yemen's oil sector fragile. These factors have all contributed to declining production, which currently sits at only 120,000 barrels per day, from a peak of 440,000 in 2001 (see Figure 3). With over 56 oil infrastructure attacks between 2012 and 2014 and persisting violence in the short term, 12

¹² EIA, Country Analysis Brief: Yemen; and National Yemen, "Yemen's Unrest and Attacks on Energy Infrastructure Destabilize National Economy," January 20, 2015



⁶ Reuters, "Houthis suffer first serious setback in south Yemen fighting: residents," May 25, 2015

⁷ Financial Times, "Understanding the Saudi king's succession bombshell," April 29, 2015

⁸ Reuters, "U.N. announces Yemen talks, Iran to allow ship inspection," May 20, 2015

⁹ Daily News Egypt, "Yemen talks likely to be postponed," May 25, 2015

¹⁰ EIA, Country Analysis Brief: Yemen

¹¹ U.S. EIA, "Oil trade off Yemen coast grew by 20% to 4.7 million barrels per day in 2014," April 23, 2015

prospects for foreign investment and increased production or export remain dim. Nevertheless, control over oil fields and the resulting revenues will be highly sought after, as they are essential to maintaining the provision of basic government services and the legitimacy that follows. The country holds an estimated 3 billion barrels of proved oil reserves and 17 trillion cubic feet of natural gas.¹³

Geopolitical Implications and Prospects for Spillover and Escalation

After Saudi Arabia launched Operation Decisive Storm, many of its Sunni-ruled allies joined soon thereafter. Seen by Riyadh as an Iranian proxy, the Houthis' military success prompted fears of increased influence by Tehran, likely exacerbated by concerns that the emerging framework of a nuclear deal with the P5+1 allows Iran sufficient nuclear freedoms to be seen as an unchecked security threat. Seeing the potential for further conflict with Iran-backed groups, the Arab League announced plans in late March 2015 to form a 40,000-strong joint military force, with Iran's intervention "in many nations" cited as a motivating factor. The United States has provided logistical and intelligence support to Saudi Arabia, and has allowed for its offshore presence to be a deterrent for any Iranian efforts to replenish Houthi supplies.

Iran has sought to counter the expansion of the Saudi-led alliance. Despite Riyadh's calls for Pakistan to provide troops, Islamabad has been hesitant, likely mindful of the risks of worsening its relationship with neighboring Iran, who sent Foreign Minister Javad Zarif on a visit to Pakistan in early April. Pakistan has thus far only sent naval vessels to contribute to the international blockade designed to prevent arms shipments to the Houthis. Oman, a nation that has served as a channel for diplomacy with Iran, is the only member of the GCC to have refrained from joining the conflict.

Given the sectarian overtones of the conflict, the Yemen uprising has the potential to intensify ongoing fighting throughout the Middle East that shares a Sunni versus Shia element, such as the Syrian Civil War and the battle for control of Iraq. The destruction wrought by the Saudi operation has the potential to inflame Shia sentiments against Saudi allies in those conflicts as well as elsewhere. Bahrain, while relatively quiet in recent months after extensive unrest, has a marginalized Shia majority that remains deeply resentful of Saudi military actions to put down their protests in 2011, and extended conflict could spark sectarian violence in the Persian Gulf island. This resentment only stands to be exacerbated by Bahrain's participation in the Saudi-led military operations. Other countries have been more cautious of stoking domestic discontent or regional tension; fear of spillover is cited among the likely reasons why Saudi allies ruling Oman and Pakistan have refrained from entering the conflict.¹⁶

¹⁶ Bruce Riedel, "Pakistan resisting Yemen war, but will its relationship with Saudi Arabia survive?" *Markaz*, April 9, 2015



¹³ BP, plc., Statistical Review of World Energy 2014

¹⁴ See, e.q., USA Today, "Arab League agrees on military force to combat Iran", March 29, 2015

¹⁵ McClatchy DC, "Pakistan agrees to send ships to block arms shipments to Yemen Rebels," April 17, 2015

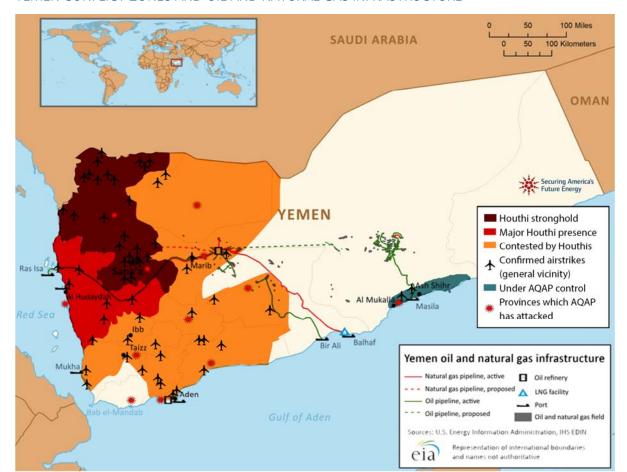


FIGURE 2
YEMEN CONFLICT ZONES AND OIL AND NATURAL GAS INFRASTRUCTURE

Saudi Arabia, which holds the world's highest levels of spare oil production capacity, is threatened by the repercussions of its actions in Yemen. So far, it has only been lightly touched at home, in the form of Houthi rocket and shelling attacks on the Saudi border town of Najran, killing at least five civilians, ¹⁷ but such attacks are likely to continue. Not only does Saudi Arabia face the potential of fighting spilling over the border from Yemen, but it faces the potential of the Yemen war sparking homegrown instability. Within Saudi Arabia, the downtrodden Shia minority—which is a majority in the Eastern Province, home to the Kingdom's largest oil fields and installations—could allow their anger over the campaign against their coreligionists in Yemen to build into sustained unrest. This has already begun on a small scale; for example, Shia militants in the Saudi town of Awamiyah engaged in a firefight with security forces who learned of their plans to launch demonstrations against the military action. ¹⁸

Further, the expanding conflict has the potential to increase the activity and impunity of terrorist groups, most notably the Islamic State of Iraq and Syria (ISIS) and al-Qaeda in the Arabian Peninsula (AQAP). The latter group has long been among the most active branches of al-Qaeda, but had been

¹⁸ Bruce Riedel, "Saudi blowback: War in Yemen spreading," *Markaz*, April 7, 2015



¹⁷ Reuters, "Houthi shells kill five in Saudi border town," May 6, 2015

under heavy pressure from the Yemeni government, exacerbated by U.S. drone strikes and the rise of the rival Houthis as a major force throughout Yemen. The chaotic situation wrought by the Saudi-led aerial bombardment has diverted the efforts of the Houthis—a strong enemy and rival of AQAP—and allowed the terrorist group to consolidate and reassert its control in various pockets of the country, especially its eastern region (see Figure 2). This development has been admitted by U.S. Secretary of Defense Ash Carter, who noted in early April that "we see them making direct gains on the ground." Meanwhile, despite not having had any significant presence in Yemen before the bombing campaign began, ISIS has begun operations in the country, claiming responsibility for a deadly blast in a Sana'a mosque in March and releasing a video purporting to show its military exercises there and claiming it will attack the Houthis, ²⁰ who, being Shia, are seen as mortal ideological enemies.

This increased risk of terrorism is not confined to Yemeni soil. Increased operability of groups like AQAP and ISIS aids their capacity to strike at targets throughout the Middle East, and a newly powerful AQAP could see a return to the days when it launched high-profile attacks in the region and beyond. The failed AQAP operations of 2009 that sought to assassinate Saudi Prince Mohammed bin Nayef (recently announced by King Salman as the new crown prince) and bring down a Detroit-bound Northwest Airlines flight serve as a stark reminder of the group's determination to pose risks both to regional rulers and the American people. In addition, a longer-term threat to the stability of the region could develop from the unfolding humanitarian crisis. Poverty, especially among internally displaced persons (IDPs) and refugees, has been frequently correlated with militant recruitment, ²¹ and more than 545,000 have been estimated to be displaced, ²² adding to the nearly 300,000 IDPs and refugees already in the nation (both Yemenis and refugees from the Horn of Africa). The UNHCR is preparing for the flow of up to 130,000 new refugees fleeing the country. ²³ So far, they have most immediately fled across the Gulf of Aden to Somaliland, Puntland, and Djibouti, but their ultimate destination will be influenced by the course of the war.

Oil Market Implications

Most immediately, the expanding conflict has crippled Yemen's already deteriorated capacity to produce and export oil, removing modest amounts of oil from the global market but also setting back the return of Yemen's potential contribution to global supply. The closure of major seaports after the start of the strikes has crippled the flow of exports. Of the approximately 100,000 barrels per day (bd) exported by Yemen (of a total of 140,000 bd) in recent months, approximately 75,000 bd went to China, and Chinese tankers have left Yemeni ports as recently as March 29.²⁴ While China can likely source its lost Yemeni crude from other exporters like those in West Africa, a lack of investment has hampered Yemen's ability to support world supply. As recently as 2011, before the uprising that deposed President Saleh, Yemen's production capacity was approximately 280,000 bd; at that time, oil revenues and related infrastructure represented more than 70 percent of Yemen's GDP.²⁵ With

²⁵ Yemen Times, "Yemen announces new oil block," March 28, 2011



¹⁹ Globe and Mail, "Al-Qaeda making gains in Yemen turmoil, Pentagon chief says," April 8, 2015

²⁰ Reuters, "More fighting, air strikes in Yemen, civilian death toll exceeds 550," April 24, 2015

²¹ See, e.g., Achvarina and Reich, "No Place to Hide: Refugees, Displaced Persons, and the Recruitment of Child Soldiers," *International Security* 31(1), Summer 2006, pp. 127–164

²² New York Times, "Al Qaeda is Capitalizing on Yemen's Disorder, U.S. Warns," April 8, 2015

²³ UNHCR, "UNHCR reports some 900 refugee arrivals in Horn of Africa from Yemen, operations inside Yemen continue," April 10, 2015

²⁴ Irish Independent, "China evacuates citizens and tanker from Yemen," April 1, 2015

economic grievance a major supporting factor in the ongoing conflict, further losses of oil revenue will likely only serve to intensify the ongoing rivalries, potentially exacerbating the conflict and further crippling an already underperforming oil sector.



Source: SAFE analysis based on data from EIA

However, the greatest impacts on the global oil market are not the direct result of the loss of Yemeni production, given its relatively small capacity. Despite Yemen's minor contribution to global oil supply today, the global nature of the oil market means that the insecurity there poses a risk to prices everywhere. Yemen's geographic position along the Bab el-Mandeb remains the primary source of concern for the oil market in light of the ongoing conflict there. The strait's importance lies not only in the volume of oil which travels through it—5 million barrels a day in 2014—but also its status as a major two-way conduit. Just over half of its traffic is northbound, primarily oil from the Persian Gulf heading towards the Suez Canal or SUMED pipeline and markets in the West, but it is also a significant southbound route at well, with 2.1 mbd of crude oil and petroleum products moving into the Gulf of Aden in 2014.26

If the Bab el-Mandeb Strait were closed, tankers from the Persian Gulf would no longer be able to reach the Suez Canal or SUMED pipeline, which would divert them around the southern tip of Africa. This would add substantial transit time and cost. For example, the shipping distance for a hypothetical shipment from Iraq to Southern France would more than double from approximately 9,000 kilometers (km) to 22,000 km and require almost three additional weeks of transit.²⁷ Any southbound flows from Europe and North Africa (to Asia for example) would also be affected by a closure of the strait. Such developments would have substantial implications for the global oil market and economy. The estimated shipping costs alone are at least \$3 to \$4 per barrel. ²⁸

One prime danger the Yemen conflict and any potential spillover or escalation poses comes in the form of increased oil price volatility. Over the past several months, volatility has returned to levels not seen since 2008–2009 when prices fell from the historic highs of July 2008 (See Figure 4).²⁹ The U.S. rig count, Chinese oil demand growth, and other indicators all have the potential to jolt prices. Continued instability in and around major oil–producing countries endures as a concern. Meaningful levels of oil price volatility are likely to remain in the short to medium term, negatively affecting the planning and budgeting of consumers and businesses alike. The situation in Yemen is just the most recent instance of

²⁹ SAFE analysis based on data from: EIA



²⁶ U.S. EIA, "Oil trade off Yemen coast grew by 20% to 4.7 million barrels per day in 2014," April 23, 2015

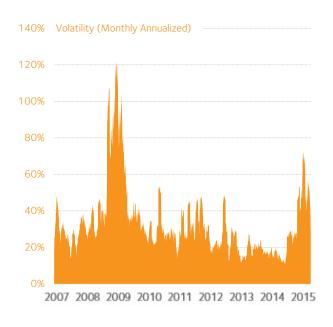
²⁷ SAFE analysis

²⁸ Bloomberg Business, "Yemen Crisis Having an Impact on Oil Prices," March 27, 2015

prices being affected in the short term despite no impact on oil supplies (oil prices also increased last June when ISIS militants overran northern Iraq, although events did not meaningfully affect Iraq's oil output).³⁰

In addition to the prospect of continued and potentially greater price volatility, a Middle East in the throes of protracted regional conflict, with Saudi Arabia pitted against Iran in a proxy war, would likely result in a larger, more enduring risk premium being attached to the prevailing global price of crude oil due to fears of deepening political instability, terrorism, and war. These effects would be far greater than other recent examples of elevation in the risk premium, such as those of 2012 when Iran threatened multiple times to close the Strait of Hormuz unless sanctions against it were lifted, causing several shortterm oil price spikes.³¹ With relations between countries in the region likely to deteriorate further, prices may remain permanently elevated in the event of similar threats or provocations. While it is difficult to isolate the relative magnitude of direct causes of oil price fluctuations (and decreasing rig counts in the U.S. have been cited as a contributing factor),

FIGURE 4
ESTIMATED OIL PRICE VOLATILITY



Source: SAFE analysis based on data from EIA

the uncertainty surrounding the future of the Yemen conflict—exacerbated by Saudi Arabia's decision to continue bombing after it declared an end to airstrikes—is being cited as a prime reason for futures markets being more bullish on the price of Brent than at any time in at least four years.³²

If such developments were to actually result in further³³ and substantial disruption to oil supplies (See Figure 5)—particularly from Saudi Arabia, which today produces approximately 10 mbd (more than 10 percent of global production) and holds the vast majority of global spare oil production capacity³⁴—the impact on prices would be still more meaningful and potentially long lasting. A worst-case scenario would involve a spillover into overt military action between Iran and Saudi Arabia or its allies. With each side possessing missiles capable of reaching across the Persian Gulf, strategic military and economic targets on both sides could be at risk. This would include coastal oil installations such as Saudi Arabia's Abqaiq facility, the world's largest oil processing plant with 7 mbd of capacity.³⁵ A 2006 attack there, attributed to al-Qaeda (which, despite its failure, contributed to a 6 percent oil price increase in a single

³⁵ U.S. EIA, Country Analysis Brief: Saudi Arabia



³⁰ See also, SAFE, "Further Social and Political Fragmentation and Descent into Civil War in Iraq Could Send Global Oil Prices Skyrocketing," June 17, 2014

³¹ See, e.g., CNN, "Oil prices spike 4% on Iran supply threats", January 3, 2012; and Reuters, "Iran renews Hormuz closure threats", July 15, 2012

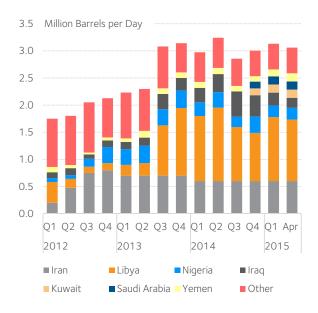
³² Bloomberg, "Oil Bears Routed by Spring Thaw in Prices as Drill Rigs Sit Idle," April 26, 2015

³³ Several OPEC countries are experiencing unplanned supply outages today; see Figure 5.

³⁴ IEA, Oil Market Report, March 13, 2015

day)³⁶, shows precedent that newly emboldened terrorist groups could consider attacks that would cripple Saudi oil infrastructure given the opportunity. Some analysts have suggested that attacks on Saudi oil installations caused by the conflict's spillover would raise oil prices by \$2 to \$10 per barrel. Prior work by SAFE's Commission on Energy and Geopolitics found that physical disruptions to oil supply could generate even higher peak oil price increases in both dollar and percentage terms.³⁷

FIGURE 5
UNPLANNED GLOBAL OIL SUPPLY OUTAGES



Source: SAFE analysis based on data from EIA

The costs to the U.S. economy from potential oil price spikes and volatility arising from tensions tied to the ongoing conflict are compounded by the costs it bears in its efforts to secure the region. As Yemen's stability has deteriorated, American naval patrols in and around the Gulf of Aden have increased. The deployment of the USS Theodore Roosevelt aircraft carrier, with aircraft conducting manned reconnaissance missions over maritime traffic in the area, and the USS Normandy quided missile cruiser in late April as well, brought the number of American naval vessels off the coast of Yemen to nine;38 although a total of 14 U.S. warships in total are thought to be in the general vicinity.³⁹ This has raised speculation, downplayed by State Department officials, that the United States is moving to intercept Iranian shipping traffic suspected of seeking to resupply Houthi militants (and thus raising expectations of a more active American role in the conflict), but the stated mission

remains a dual one of maintaining open shipping traffic in the waters surrounding Yemen while dissuading Iran from sending arms.⁴⁰ The subsequent shift of course by an Iranian convoy away from the Yemeni coast in late April was described as a "promising sign" by U.S. officials and a vindication of the "very direct messages" being sent to Iran to refrain from actively aiding the Houthis,⁴¹ and Iran's decision to allow for U.N. inspections of an aid ship currently en route to the Yemeni port of Al Hudaydah with an Iranian naval escort will also be seen as a success by those in favor of a strong American naval presence off the Yemeni coast.⁴²

⁴² Reuters, "U.N. announces Yemen talks, Iran to allow ship inspection," May 20, 2015



³⁶ SAFE analysis based on data from: U.S. EIA

³⁷ See, e.g., Commission on Energy and Geopolitics (a project of SAFE), "Oil Security 2025: National Security Policy in an Era of Domestic Oil Abundance", January 15, 2014

³⁸ CNN, "U.S.: Warships near Yemen create 'options' for dealing with Iranian vessels," April 22, 2015

³⁹ Wall Street Journal, "New Tensions Build Between U.S. and Iran in Waters Off Yemen," May 19, 2015

⁴⁰ CNN, "U.S.: Warships near Yemen create 'options' for dealing with Iranian vessels," April 22, 2015

⁴¹ CNN, "US aircraft carrier enters Persian Gulf as Iranian convoy moves away from Yemen," April 25, 2015

Conclusion

With the United States remaining a strong ally of Saudi Arabia in part due to the crucial role the Kingdom plays as the world's pivotal oil supplier, its foreign policy options have remained deeply constrained. The U.S. military has given logistical support to Riyadh for its operations in Yemen—all the while aware that the extensive nature of the campaign poses risks of unleashing further regional chaos and emboldening terrorist groups with deeply anti-American sentiments—and has pressured the Saudi government to cease the bombing campaign.⁴³

Not only has the desire of the United States to maintain its relationship with the world's swing oil producer meant supporting it in a questionable and costly military mission, but it has required further U.S. naval patrols in the region, stretching the American military and adding costs to U.S. taxpayers. But perhaps the biggest detrimental effects to the United States are yet to come. If the Yemen conflict spills over into a long-term regional war, oil prices will experience higher volatility and higher risk premiums. And due to the continued American dependence on oil in its transportation sector, U.S. consumers and companies will pay the price. Until steps are taken to diversify the fuel use of the U.S., America will remain constrained in its foreign policy and its military options and consumers will remain hostage to conflicts and tensions in the Middle East and throughout the world.

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⁴³ See, e.g., *Washington Times,* "U.S. pressures Saudi Arabia to stop bombing Iran-backed rebels in Yemen," April 30, 2015



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