THE ARAB SPRING AND NATIONAL OIL COMPANIES: HIDDEN EFFECTS AND STALLED REFORMS

BY

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MARCH 13, 2014
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Executive Summary

The violent uprisings that have convulsed the Arab world since late 2010 appeared to bypass most of the region’s major energy exporting states. With the exception of Libya, the countries with the most virulent uprisings play minor roles in world markets. But the lack of unrest does not mean that the region’s national oil companies (NOCs) escaped unscathed. Regime reactions to the Arab Spring contributed to increased revenue and patronage demands on these firms as a way of counteracting political opposition. Several authors find that these political objectives are behind inefficient operations in NOCs relative to shareholder-owned counterparts. I argue that not only political objectives but also specific political events contribute to inefficiencies. Emerging data suggest that NOCs responded to the Arab Spring by increasing activities that have made them less efficient. These include contributions to state social welfare schemes, hiring, and delayed reforms of domestic energy subsidies. However, while new patronage may have set back recent improvements in efficiency, these activities may have also contributed to the political stability that was, for the most part, maintained.

Introduction and Literature Review

National oil companies (NOCs) have been known to be less efficient producers of revenue relative to their inputs than their shareholder-owned counterparts. Several scholars have described how state ownership creates mandates that differ from the profit-maximization directives of shareholder-owned international oil companies (IOCs). In particular, NOCs are under political pressure to overemploy domestic labor and divert products into domestic markets at below-market prices.

Marcel (2006) and Losman (2010) find that these social mandates bias NOCs toward shoring up rentier regimes while shirking required capital investments, which, in the long run, serves to block political participation and resource development. Eller et al. (2011) provide statistical evidence that such noncommercial objectives reduce NOC capacity to generate revenue. The political objectives that lie behind the strategies driving these firms can be assumed to contribute
to lower levels of production and higher market prices than would occur under more efficient commercial development.

Marcel details how NOCs may be legally bound to respond to the needs of society and the interests of the state. Company mandates include serving the state’s foreign policy goals (by favoring certain markets), fulfilling local content obligations that serve the long-term interests of society (such as training nationals, developing private sector capacity, and financing public services and goods), and, of course, funding government budgets through royalties, taxes, and dividends paid to the state. These responsibilities have the ultimate purpose of fending off threats to political stability.

Thus NOCs’ loyalties are divided between meeting the needs of host states and the investment challenges of the industry. Marcel describes a “constant institutional struggle” between the state and the NOC in which the NOC seeks autonomy to pursue operational efficiency and the state sets rules that run counter to that efficiency. “This political process can lead governments to have incoherent goals—for instance, seeking greater revenue from the oil industry while asking the NOC to carry out social programs that hamper its operations and increase its costs.”

However, while NOCs are generally less efficient than their shareholder-owned counterparts, Hartley and Medlock (2013) find that their aggregate level of efficiency has increased over the last decade. The efficiency gap between the two groups narrowed between 2001 and 2009. Their study of 61 oil companies, ranging from wholly state-owned firms to hybrids to wholly private firms of varying size, used two quantitative techniques to conclude that state ownership was correlated with inefficiency—mainly due to retail subsidies and overemployment—but that efficiency was increasing at a faster rate among NOCs than IOCs.

Each of these studies focused on NOC efficiency prior to the Arab Spring. More recently, a few scholars sought to address the uprising’s effects on the Middle East energy sector. Fattouh and Darbouche (2011) found that disruptions in production influenced world market prices in a

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limited way, mainly due to weak post-recession demand. Jaffe and Miller (2012) argued that increasing political participation in exporting states would probably strengthen subsidies, which, all else equal, would eventually cause a decline in exports. Similarly, Bahgat (2012) argued that surviving autocracies—as well as their new, more democratic counterparts—have little choice but to continue or even increase social spending and subsidies, or face growing radicalization and opposition.

With this paper, I take a different tack. I compile emerging evidence that offers a picture of changes in the efficiency of Middle East NOCs since the outbreak of the pan-Arab uprisings in December 2010. My findings include evidence of increased hiring and social welfare obligations, as well as reduced capital investments that NOCs require to maintain future production. At the same time, I show that Arab host governments have cancelled or delayed a number of subsidy reforms that, had they gone forward, might have provided for increasing levels of NOC efficiency. Instead, stalled reforms have allowed continued increases in domestic energy demand in the Arab oil states, which, in turn, increases the share of production that is distributed at prices below global benchmarks. In aggregate, these developments suggest a decrease in the operational efficiency of Arab NOCs since the Arab Spring.

Public Reactions to the Arab Spring in Oil-producing Countries

The historic pan-Arab uprisings that began in Tunisia in December 2010 swept away long-serving autocrats in Tunisia, Egypt, Libya, and Yemen, and thrust Syria into civil war. Among these five, only Libya was a major oil exporter at the start of the unrest, while the others produced and exported small amounts of hydrocarbons.

The initial uprisings involved grassroots alliances of young, mainly middle-class citizens, who leveraged new technologies to organize and publicize their grievances while gaining widespread sympathy outside their borders. Their success weakened the status quo forces in the region, which were unable to hold onto power amid the collapse of external support. The uprisings came as a particular surprise to the community of Middle Eastern political scholars, whose long-standing theoretical constructs tended to emphasize the durability and stability of the region’s
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Authoritarian regimes, portraying them as buttressed by the distribution of economic rents from commodity exports and foreign aid.

Observers soon noted a lack of uniformity in the uprisings’ spread. Arab republics appeared more prone to infection, while monarchies seemed less susceptible. However, while no ruling Arab monarch was deposed, most of the monarchies—including the major oil exporters—were subject to turmoil. Nearly all endured increasing independent political activity, which created new patterns of domestic opposition. Regime responses bundled more traditional increases in patronage spending with focused repression and, in the case of Oman, token political reforms.

Most affected was Bahrain, which experienced huge demonstrations, including one that brought the equivalent of a fifth of the citizenry into the streets. The uprising in Bahrain might have overthrown the minority Sunni-dominated regime of King Hamad had it not been for the strategic significance of the island kingdom, which hosts the US Navy’s Fifth Fleet, and American acquiescence to intervention of ground forces from Saudi Arabia and the UAE, which quickly quashed the unrest.

After Bahrain, Oman was the Gulf monarchy that produced the most virulent uprising. Demonstrations occurred in Muscat, Salalah, and Ibri, while protests turned violent in the northern city of Sohar, where rioters demanding increased wages and benefits burned and looted buildings. Kuwait also saw formidable demonstrations that brought tens of thousands to the streets on multiple occasions, blocking roads and clashing with police. In November 2011, demonstrators stormed and briefly occupied the national parliament. Saudi Arabia also underwent serious protests and a violent response by security forces in which several protesters, especially in Shia-dominated areas of the Eastern Province, were shot and killed (Matthiesen 2012). The UAE saw no physical demonstrations, but a pro-democracy petition and high-profile

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2 Yom argues that Bahrain’s violent response was less repressive than those in Arab republics and milder than commonly portrayed. See Sean L. Yom, “A Community of Sorts: Royalism, Diffusion, and Sovereignty among Arab Monarchies” (paper presented at the annual meeting for the Middle East Studies Association, New Orleans, Louisiana, October 12, 2013).

blogging led to a crackdown that saw dozens imprisoned (Peterson 2012). Algeria also endured numerous protests and marches, but these had been ongoing prior to the uprisings and were not considered a regime threat.

Outside of Libya, major oil-exporting regimes responded to the uprising with an outpouring of patronage spending, estimated at more than $200 billion combined, with more than half of that amount coming from within Saudi Arabia. (See Table 1.) Corresponding increases in government spending range from 10% in the UAE to 30% in Oman.  

<table>
<thead>
<tr>
<th>Table 1. Patronage Responses in Arab Oil States, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public sector pay increase for nationals</strong></td>
</tr>
<tr>
<td><strong>Qatar</strong></td>
</tr>
<tr>
<td><strong>UAE</strong></td>
</tr>
</tbody>
</table>
| **Algeria** | 46% | - Increased food subsidies  
- State pay increases  
- Loans and grants to farmers, unemployed youth  
- New housing and infrastructure projects |
| **Bahrain** | Up to 37.5% | - 20,000 state jobs created  
- US$2,500 grant to each family  
- Minimum wage increased to $1,100/mo. |
| **Kuwait** | 25% | US$3,500 grant to each family |
| **Saudi Arabia** | 15% | - 120,000 jobs created  
- US$130 billion subsidy program  
- US$500/mo. unemployment benefit  
- Minimum wage increased to US$800/mo.  
- Social housing |
| **Oman** | US$130–260/mo | - 50,000 new public sector jobs  
- Minimum wage increase  
- US$400/mo. unemployment benefit |


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The Relevance of Per Capita Rents

Is patronage spending an effective tool of political stability? Ali and Elbadawi (2012) make a strong case for the value of social spending, showing that countries with large rent surpluses can afford more patronage hiring than those with smaller endowments, relative to population. Unsurprisingly, big spenders also tended to experience lower levels of repression and Arab Spring unrest. This analysis does not hold true across the board. Bahrain, despite its relatively large capacity for patronage, went through serious unrest. Libya, which was not analyzed but saw its regime overthrown in 2011, is also typically grouped in the high-rent, high-patronage category. Conversely, Algeria and Sudan saw smaller amounts of Arab Spring-linked unrest, despite much smaller per capita wage bills. Table 2 ranks countries by the level of per capita rents.

### Table 2. Public Employment, Political Repression, and Unrest (Annual Average: 2000–2007)

<table>
<thead>
<tr>
<th>Country</th>
<th>Rent per capita</th>
<th>Public Wage Bill per capita</th>
<th>Index of Political Repression</th>
<th>Unrest (2010-12)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$ thousands</td>
<td>US$ thousands (PPP)</td>
<td>0=most repressive; 8=least</td>
<td></td>
</tr>
<tr>
<td>GCC Countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qatar</td>
<td>40,446</td>
<td>11.9</td>
<td>6.8</td>
<td>4</td>
</tr>
<tr>
<td>Kuwait</td>
<td>25,007</td>
<td>8.1</td>
<td>5.9</td>
<td>3</td>
</tr>
<tr>
<td>UAE</td>
<td>15,556</td>
<td>9.2</td>
<td>6.4</td>
<td>4</td>
</tr>
<tr>
<td>Bahrain</td>
<td>8,584</td>
<td>3.5</td>
<td>5.9</td>
<td>2</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>8,239</td>
<td>3.9</td>
<td>4.5</td>
<td>3</td>
</tr>
<tr>
<td>Oman</td>
<td>6,975</td>
<td>2.1</td>
<td>7.3</td>
<td>3</td>
</tr>
<tr>
<td>GCC Mean</td>
<td>11,898</td>
<td>6</td>
<td>6.1</td>
<td>3.16</td>
</tr>
<tr>
<td>Populous Arab Oil exporters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iraq</td>
<td>1,775</td>
<td>0.5</td>
<td>0.3</td>
<td>n/a</td>
</tr>
<tr>
<td>Algeria</td>
<td>1,563</td>
<td>0.4</td>
<td>3.3</td>
<td>3</td>
</tr>
<tr>
<td>Syria</td>
<td>532</td>
<td>0.1</td>
<td>2.9</td>
<td>2</td>
</tr>
<tr>
<td>Egypt</td>
<td>313</td>
<td>1.9</td>
<td>2.8</td>
<td>1</td>
</tr>
<tr>
<td>Sudan</td>
<td>288</td>
<td>0.1</td>
<td>0.6</td>
<td>3</td>
</tr>
<tr>
<td>Yemen</td>
<td>--</td>
<td>0.1</td>
<td>2.9</td>
<td>1</td>
</tr>
<tr>
<td>Non-GCC Median</td>
<td>532</td>
<td>0.2</td>
<td>2.8</td>
<td>2*</td>
</tr>
</tbody>
</table>

Notes: Units: Rent per capita is in thousands of current US dollars. Public wage bill per capita is in thousands of real PPP dollars. Unrest measures created by the author. 
Source: Ali and Elbadawi, 2012, except unrest index estimates made by author; * = mean
The success of most oil-rich states in wielding patronage to fend off the entry of pan-Arab uprisings into their societies underlines the enduring effectiveness of rentier structures. These are built around state-society social pacts in which welfare benefits and other forms of state largesse are exchanged for regime support. Rent distribution has allowed regimes in the richest oil states—the Gulf monarchies—to maintain long-term stability through periods of enormous social change, while concentrating political power in the hands of long-serving ruling families.

**Qualitative Evidence of Backsliding NOC Efficiency**

Ultimately, revenues earned by the region’s oil companies—whose exports comprise a large share of GDP and government budgets—underwrite these political structures. (See Table 3.) At times when regime survival concerns come to the fore, national oil companies assume a counterrevolutionary function. During these episodes, efficiency of operation is sacrificed to social welfare duties that bolster regime legitimacy.

<table>
<thead>
<tr>
<th>Table 3. MENA Oil Rents, as a % of:</th>
<th>Gov’t revenue</th>
<th>Year</th>
<th>GDP</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>60</td>
<td>2008</td>
<td>19</td>
<td>2011</td>
</tr>
<tr>
<td>Bahrain</td>
<td>85</td>
<td>2008</td>
<td>19</td>
<td>2010</td>
</tr>
<tr>
<td>Egypt</td>
<td>n/a</td>
<td></td>
<td>8</td>
<td>2011</td>
</tr>
<tr>
<td>Iran</td>
<td>70</td>
<td>2008</td>
<td>23</td>
<td>2009</td>
</tr>
<tr>
<td>Iraq</td>
<td>n/a</td>
<td></td>
<td>78</td>
<td>2011</td>
</tr>
<tr>
<td>Kuwait</td>
<td>77</td>
<td>2008</td>
<td>50</td>
<td>2011</td>
</tr>
<tr>
<td>Libya</td>
<td>95</td>
<td>2013</td>
<td>25</td>
<td>2013</td>
</tr>
<tr>
<td>Oman</td>
<td>87</td>
<td>2008</td>
<td>40</td>
<td>2011</td>
</tr>
<tr>
<td>Qatar</td>
<td>57</td>
<td>2008</td>
<td>14</td>
<td>2011</td>
</tr>
<tr>
<td>KSA</td>
<td>89</td>
<td>2008</td>
<td>56</td>
<td>2011</td>
</tr>
<tr>
<td>UAE</td>
<td>80</td>
<td>2008</td>
<td>22</td>
<td>2011</td>
</tr>
<tr>
<td>Yemen</td>
<td>n/a</td>
<td></td>
<td>19</td>
<td>2011</td>
</tr>
<tr>
<td>Sudan</td>
<td>n/a</td>
<td></td>
<td>14</td>
<td>2011</td>
</tr>
<tr>
<td>Syria</td>
<td>n/a</td>
<td></td>
<td>16</td>
<td>2010</td>
</tr>
</tbody>
</table>

Hidden Effects of Increased Government Spending

Spending responses to the uprisings have exacerbated the growing fiscal and energy distribution burdens amassed by these states, while impeding plans to reform them. A survey of company documents and media reports finds that NOCs have been tasked with increasing contributions to government budgets and social welfare programs at the same time that they have stepped up the delivery of discounted energy for domestic distribution. Some NOCs, notably those of Oman and the UAE, have also reported increased hiring. These obligations, in turn, are likely to reduce funds available for reinvestment in production. Underinvestment presents the potential for future reduction in market supply. This combination of factors is likely to counteract the recent efficiency gains of Mideast NOCs relative to their counterparts outside the region, as documented by Hartley and Medlock.

These outlays have also increased the oil prices necessary to maintain heightened levels of social welfare spending. The so-called “budget breakeven” oil price has multiplied over the past decade. Where Saudi Arabia required $39 oil to cover its national budget in 2005, it needed $98 in 2013. According to estimates from APICCORP (Figure 1), breakeven prices for several countries approach or surpass current oil prices and may imply revenues diverted from reinvestment.

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5 For calculation of these budget-breakeven oil price estimates, see APICORP, “Economic Commentary—Modeling OPEC Fiscal Break-even Oil Prices: New Findings and Policy Insights,” Research Note 8 no. 8–9 (August–September 2013). Note that breakeven prices differ widely among the organizations that calculate them.
Figure 1. Oil Prices Required to Fund Government Budgets in 2012 v. 2013

Source: APICORP, 2013

**Patronage Employment**

As described above, government jobs provide a key platform for patronage distribution. The Arab Spring triggered among regimes a reflex movement toward increased hiring and wages. The logic behind these moves appears sound. As shown in Table 2 above, high per capita wage outlays correlate with political quiescence. Perhaps unsurprisingly, the Arab uprisings also energized national employment schemes in the region, and NOCs appeared to have been one of the chief recipients of newly hired workers. A 2012 survey by the recruitment firm GulfTalent found employers reporting increasing pressure to hire nationals as well as expanded workforces across the six Gulf monarchies. Among the 10 sectors surveyed, oil and gas firms (including those in the private sector) reported the highest rate of increasing headcount and the highest expectations for further hiring. The survey attributed the increased citizen hiring impetus directly to government responses to the region’s popular uprisings. 6 As demonstrated by Hartley and

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Medlock, an increasing headcount relative to revenue decreases the revenue per employee, a chief measure of the firm’s overall efficiency.

Further, patronage job distribution and wage increases in the Middle East—and especially in the Gulf—typically accrue to citizens, while noncitizens are generally excluded from these government legitimacy-building measures. These labor practices exacerbate expensive and exclusionary entitlement structures, while giving nationals a rational interest in policy that undermines the state’s long-term goals in economic diversification (Hertog 2011).

**Oman**

In reaction to the Arab Spring-inspired unrest, Omani ruler Sultan Qaboos called in the army, but quickly called for the creation of jobs while also increasing employment benefits and firing several members of his cabinet. These directives appear to have driven widespread patronage hiring and training programs at the Omani NOC Petroleum Development Oman (60% government held; 34% by Royal Dutch Shell; 4% by Total; 2% by Partex). PDO’s 2011 annual report describes its employment drive on its very first page. The company declares that it hired 787 new workers, a level comprising “a record number of Omani nationalists.” Headcount reached an “all-time record of 4,722 Omanis,” which brought the proportion of Omani employees above 80% of the total workforce. In 2012, the company declared its obligation to enforce “Your Majesty’s National Objectives Program” and continued to develop “sustainable employment and development opportunities for Omanis” while procuring goods and services in-country. “This required a mindset change across the business from both staff and contractors and an acceptance of possible additional supply chain costs.” As part of this drive, PDO hired another 1,167 Omanis to reach a new record level of 5,240 Omani employees. (See Figure 2.)

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Figure 2. PDO Reported a 13% Boost in Omani Nationals Employed in 2011 and a 9% Increase in 2012

![PDO Omani staff](image)

Source: PDO, 2011 and 2012

The Omani NOC launched an initiative to hire Omani-owned subcontractors and vendors, announcing the creation of a total of 4,300 new jobs through increased in-country spending. The company also established a social investment program that offered job training, as well as grants for charities, camel racing, schools, and several other initiatives. As can be seen in Figure 3, the company’s operating costs rose sharply in 2011, while capital investment spending declined.

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Figure 3. Operating Costs Crowd Out Capital Investment

![Figure 3: PDO operating costs vs capital investment](image)

Source: PDO, 2012

Even more startling, PDO said it was reacting directly to demands for higher wages by supporting the establishment of an oil-sector trade union—an exceedingly rare move in the Gulf context. PDO also created an internal affairs department to handle grievances and provided “citizenship training” for 120 of its workers rehired after being fired for joining anti-government demonstrations.⁹ Summing up its social initiatives, the company said: “Against a backdrop of rising community expectations, PDO continued to take its civic responsibilities very seriously. In 2012, a variety of stakeholders, including government ministries, charities, businesses, families, and individuals, benefited from our targeted, structured Social Investment Program. The company funded a series of community-based vocational training initiatives and vital infrastructure through the flagship program, and there was a wide range of substantial new commitments in the key areas of health, education, heritage, employment support, and roads.” Taken together, PDO’s increased commitment to hiring, in-country purchases, and social welfare spending will be likely to decrease its operational efficiency relative to competitors outside the region.

Increased patronage in Oman’s state sector appears to have bled into the private sector. Among firms in the six Gulf oil monarchies surveyed by GulfTalent, those in Oman exhibited the highest average increase in pay, the highest level of government hiring pressure, and the second-highest

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level of job creation. GulfTalent attributed Oman’s policies to “widespread strikes” by Omanis, including private sector workers clamoring for pay increases equal to those in government. More than half of private firms in Saudi Arabia and Bahrain reported similar pressure. Nearly 60% of Saudi firms polled hired additional citizens in 2011. (See Table 4.)

<table>
<thead>
<tr>
<th></th>
<th>Pressure on employers</th>
<th>Rate of citizen hiring</th>
<th>Payroll increases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oman</td>
<td>82%</td>
<td>14%</td>
<td>36%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>78%</td>
<td>10%</td>
<td>59%</td>
</tr>
<tr>
<td>Bahrain</td>
<td>54%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Kuwait</td>
<td>38%</td>
<td>5%</td>
<td>27%</td>
</tr>
<tr>
<td>UAE</td>
<td>28%</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Qatar</td>
<td>17%</td>
<td>1%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: GulfTalent survey of HR managers, 2012; GCC labor ministries via GulfTalent

Saudi Arabia

Saudi Arabia’s NOC, Saudi Aramco, is the world’s largest oil company by reserves and production. It has traditionally been exempt from political manipulation and some of the kingdom’s cultural restrictions, and is left to operate as a profit-making entity. As such, Hartley and Medlock found Aramco one of the most efficient wholly government-owned NOCs. Despite higher levels of autonomy than typical NOCs, Aramco remains the key source of government revenue and, simultaneously, the dominant source of underpriced fuels for the kingdom’s needs in transportation, industry, and power generation. Its annual reports from 2011 and 2012 detail increasing local procurement, preferential home loans and free building lots for employees, and training of young Saudis for new downstream jobs. It reported “a significant increase in the number of new employees hired” and a “generational shift” in the workforce, with 40% under

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10 Marcel, *Oil Titans*, 62–63. Marcel writes that Saudi Aramco operates under its own rules within the country’s tightly controlled environment. This includes conducting business in physical as well as cultural isolation from the rest of Saudi Arabia on its own compound, where women retain more rights inside its perimeter than outside.
the age of 30 within five years.\textsuperscript{11} However, the overall size of Saudi Aramco’s workforce has remained constant at near 50,000 over the past decade.

**Figure 4. Saudi Aramco Workforce Since 2001**

![Saudi Aramco workforce 2001-2012](source-image)

Source: Saudi Aramco, 2012; Petroleum Intelligence Weekly, 2014

**Bahrain**

Arab Spring effects on the Bahrain Petroleum Co. (BAPCO) were more direct. BAPCO fired nearly 300 workers who took part in Arab Spring demonstrations\textsuperscript{12} that forced it to cut some operations, but also rewarded employees who remained loyal “in the most trying of circumstances” with a one-off bonus “as a token of our appreciation.” BAPCO also “accelerated its obligations” in other social causes, reporting an increase in training and scholarships, as well as donations to community programs, charities, and sporting and business events.\textsuperscript{13}

**Others**

In the UAE, the Abu Dhabi National Oil Company (ADNOC) also launched a hiring drive that aimed to increase its workforce by 30%, from 25,000 to around 32,500 by 2014. The new manpower was to staff an expansion across the company, with a particular emphasis downstream. However, ADNOC’s plans to increase hiring were announced just weeks before the


start of the Arab Spring and therefore appear unrelated.\textsuperscript{14} Kuwait’s main NOC, the Kuwait Petroleum Co. (KPC), claimed a slight increase in the number of Kuwaiti employees, after a decrease from 2006–2007. Algeria’s Sonatrach also touted increased hiring, but overall its headcount appeared to rise most sharply in 2009, ahead of the Arab Spring. Still, the Algerian government responded to the unrest with an outpouring of patronage spending, notably offering salary increases and “business incubation” loans to unemployed youths on very favorable terms.\textsuperscript{15} (See Figures 5 and 6.)

Figure 5. Kuwait Petroleum Company Workforce

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{./Images/figure5.png}
\caption{KPC workforce}
\end{figure}

Note that 2011 figure does not include temporary or contract workers included in previous years. Source: Sonatrach and PIW, 2014

Source: KPC and Petroleum Intelligence Weekly, 2014

Figure 6. Sonatrach Workforce Numbers.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{./Images/figure6.png}
\caption{Sonatrach employees 2001-11}
\end{figure}

Domestic Consumption of Export Commodities

A more fundamental challenge to the efficiency of Middle Eastern NOCs lies in the typical obligation to deliver a portion of their production to domestic markets where it is sold at prices far lower than those available globally. For NOCs, these sales imply an opportunity cost and, for retail subsidies on refined fuels, an actual cost, which reduces their revenue efficiency relative to that of their shareholder-owned counterparts. Hartley and Medlock found efficiency substantially

\textsuperscript{14} Tamsin Carlisle, “ADNOC to add 7,500 new jobs,” \textit{The National}, November 23, 2010, \url{http://www.thenational.ae/business/energy/adnoc-to-add-7-500-new-jobs}.


17
impaired in firms operating in countries with subsidized retail fuel prices. It thus follows that, if subsidies are increased—or if the portion of production delivered to subsidized markets increases relative to the portion exported—the firm experiences a decrease in efficiency.

The delivery of subsidized energy to society in the Middle East has long been understood as a means for citizens to share in the rents accrued from exports of a national resource. This explanation does not reflect the true importance of subsidies in the autocratic context. In some quarters, access to cheap energy is considered a right of citizenship and thereby linked to legitimacy of unelected regimes. These factors make reforms of subsidies that contribute to demand especially difficult. Increasing demand, in turn, has contributed to the evolution of Middle Eastern oil states beyond their early roles as simple suppliers of energy to the rest of the world. The Middle East and North Africa represents a growing market for energy, with some of the world’s highest per capita consumption. OPEC reported that oil demand in the Middle East grew 3.9% in 2013, faster than any other region, including China. Over the past four decades, the Middle East’s share of global oil demand has risen sharply. (See Figure 7.)

16 Mean retail prices in subsidizing countries were 40% below the average US retail price, and firms headquartered in these countries exhibited revenue efficiency 15% below that of shareholder-owned firms operating in unsubsidized environments. See Peter R. Hartley and Kenneth B. Medlock III, “Changes in the Operational Efficiency of National Oil Companies,” *Energy Journal* 34 no. 2 (2013).
Figure 7. Oil Consumption in the Middle East (Including Egypt and Algeria) as a Share of Global Oil Consumption, 1965–2012

Source: BP, 2013

Expectations for the Middle East to remain a reliable future supplier of crucial commodities to world markets are becoming less certain (Gately et al. 2013), and regime responses to the Arab Spring have reinforced doubts about the ability of these states to reform patronage structures that threaten their long-term viability as exporters.

Delayed subsidy reforms
Prior to the uprisings, officials within several Arab governments made public statements about plans to address energy demand by reforming subsidies responsible for keeping prices low. In most cases, once the uprisings started these proposals were dropped and demand continued to rise. Electricity price reforms announced in Bahrain, Saudi Arabia, Oman, and Abu Dhabi had not come to fruition at the time of writing. In Egypt, ongoing reforms of energy subsidies were halted by the global financial crisis in 2009 and had not been restarted following the ouster of the Mubarak government. In Syria, ongoing reforms of subsidized energy prices were halted after the Tunisia uprising, with the government reversing course to increase allotments of subsidized
heating oil. Neighboring Jordan cut diesel and kerosene prices. However, a major subsidy reform did take place in Iran, and smaller energy price increases were imposed in Dubai. Notably, these were enacted in the politically fraught environment following the December 17, 2010, start of unrest in Tunisia.

Details of delayed or cancelled reforms include the following:

- **Bahrain:** In 2010, Minister of Oil and Gas Abdulhussain Mirza announced that fuel subsidies could not be continued indefinitely and should be redirected to the needy, while “companies, affluent people, and expats” should pay higher prices. The dual-tariff proposal, similar to pricing schemes in the UAE, was dropped after the uprising. In 2013, the government revisited subsidy reform on a more modest basis, announcing that diesel prices would rise by 80% over the three years to 2017, from $1.02/gallon (27 US cents/liter) to $1.82 gallon (48 US cents/liter).

- **Saudi Arabia:** Abdullah al-Shehri, head of the kingdom’s Electricity and Co-Generation Regulatory Authority (ECRA) declared publicly in 2010 that electricity consumers could only be forced into energy efficiency measures by higher tariffs. ECRA had been forced to reverse its attempted increase of residential rates in 1999, but did achieve a small hike for commercial and industrial users in 2010. Al-Shehri said in 2010 that he would again seek approval for higher residential prices for Saudis who could afford them. But in an interview in 2012, al-Shehri said political developments led him to delay his request. As of the time of writing, there was no sign of higher tariffs in the residential sector, the kingdom’s largest consumer of electricity. More recently, Saudi Electric Company chief executive Ali al-Barrak suggested that subsidies should only be delivered to low-income customers.

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21 Abdullah as-Shehri, interview by author, Abu Dhabi, March 6, 2012.
Oman: In 2009, Oman’s electricity regulator proposed raising subsidized tariffs to cost-reflective levels on commercial and industrial customers. But, at the time of writing, this increase remained on hold. Policymaking officials said it had been delayed by the 2011 unrest, even though the increase would not have affected the politically sensitive residential sector. Growth in power consumption has averaged at least 7% per year for the past decade, while feedstock costs are increasing in tandem, and natural gas production shifts from depleting conventional reserves to unconventional gas. In the meantime, rising gas demand has forced Oman to divert exportable gas into the domestic economy, leaving its LNG export facilities operating at 80% of their nameplate capacity of 14 bcm/year (Darbouche 2012). Gas exports are expected to continue to decline. (See Figure 8.) However, Oman announced in 2013 that it would double gas prices for some industrial customers from $1.50/MMBtu to $3/MMBtu by 2015 and that further increases should be expected.23

Figure 8. Oman Natural Gas Production, with Projections for Domestic Consumption and Exports to 2022


- United Arab Emirates: Prior to the Arab Spring, the UAE’s two NOCs—which had already imposed the Gulf’s highest transportation fuel prices—were in the process of phasing out subsidies on gasoline and diesel fuel, much of which was imported at international prices and then resold locally at heavy discounts. Plans to hike prices were halted in Abu Dhabi after the Arab Spring, when a flurry of demands emerged for prices to be aligned with much lower levels in neighboring states. But Dubai managed in 2013 to raise diesel prices to $3.83/gallon ($1.01/liter), nearly reaching the average 2012 US price of $3.98. Gasoline prices remain set by federal decree at $1.78/gal (47 cents/liter), of which the government pays 70%.24

Dubai in 2011 also imposed a 15% hike on electricity and water prices, including on the politically powerful citizen-residential sector. The increase triggered a citizen backlash, and the regime compromised on aspects of the increase, but overall the new prices held. In 2010, Abu Dhabi was also preparing to increase heavily subsidized electricity and

water prices in 2011 or 2012, alongside a new residential billing format that revealed the true cost of electricity and water consumption and detailed the government subsidy. The new bills were released in 2012, but the tariff increase did not take place. With yearly demand expected to continue to grow by more than 11% per year, the UAE’s energy minister revisited the topic in 2014 and declared that prices could be increased. The minister, Suhail Mohamed al-Mazrouei, suggested that higher electricity and water rates would be reserved for less politically influential foreign residents, who form the majority of the population rather than citizens, whose individual levels of consumption are much higher, on average. However, at the time of writing, Abu Dhabi electricity and water prices remained at levels set in 1989.

- Algeria: After reporting an 11% rise in investment in 2010, Algerian NOC Sonatrach reported a significant drop in capital spending in 2011. The country finds itself in a similar bind as its counterparts to the east, with domestic consumption (fueled by very low domestic prices, smuggling, and high population growth) rising at a faster rate than production, which—all else constant—will begin displacing export capacity and revenues. (See Figure 9.)

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25 Nick Carter, interview by author, Abu Dhabi, November 9, 2010; and David Scott, interview by author, telephone interview, November 11, 2010.
Kuwait: With its populist parliament seeking ever-increasing citizen benefits, subsidy reductions have always been a difficult concept in Kuwait. As a case in point, the electricity price has been fixed at 0.7 US cents per kilowatt-hour since 1966, without even being adjusted for inflation. As a result, Kuwait’s government budget is dominated by wages and subsidies, while capital investment tends to run below 20%, one of the lowest levels in the region and among Arab states generally. At current rates of increases, Kuwait’s welfare expenditures will bring about budget deficits within a few years. Proposals to address the spending imbalance have triggered angry outbursts in parliament. But after fierce IMF criticism in 2013, Kuwait’s cabinet announced

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28 World Bank, *World Development Indicators 2014*, (Washington, DC: World Bank, 2014). Gross fixed capital formation as % of GDP. Note that Kuwait’s GFCF was 18% in 2009, 20% in 2010, and 16% in 2011. By contrast, in 2010 Algeria and Oman were above 30%, with Saudi Arabia and UAE around 25%, in line with the Arab world average.

formation of a committee to review subsidies, which account for 22% of the budget, with the largest share ($11.8 billion) supporting electricity, fuel, and desalinated water.\textsuperscript{30}

- Iran: Outside the Arab world, Iran in December 2010 became the first major energy-exporting country to drastically cut indirect subsidies (IMF 2013; Guillaume et al. 2011) as well as the first country in the world to replace energy handouts with a universal cash transfer program for households (Tabatabai 2011). IMF and press reports credited the reform with reducing domestic energy demand while halving the world’s largest energy subsidy burden, valued at around $100 billion or a quarter of 2010 GDP. The largest increase in price affected smuggling-prone diesel fuel, which rose from 1.6 US cents to 37 US cents per liter, followed by electricity for large residential consumers, where prices for consumption in excess of 600 kilowatt-hours per month jumped from 1.6 US cents to 19 US cents per kWh. This rate was nearly double the average US price in 2012. (See Figure 10.) Demand reduction was sufficient to permit a temporary increase in oil exports, before Iran’s oil trade was blocked by international sanctions.\textsuperscript{31}


Although initial plans called for prices to be increased to 90% of international levels over five years, Iran’s subsidy reform was halted in 2012 by rising inflation and a lack of parliamentary support.\textsuperscript{32} The overall outcome of the reform remains inconclusive. The IMF reported in 2013 that energy consumption growth was “initially stabilized” and described the reform as “partially successful” (IMF 2013).

**Discussion and Conclusion**

In their 2013 paper, Hartley and Medlock conclude that inefficiencies in NOCs relate to political overseers’ demands that firms redistribute resource rents to employees and domestic consumers. As the NOC share of resource development increases, these political objectives will translate into lower production and higher prices than would occur under commercial development.

I take a step beyond these findings to argue that it is not only political objectives but also specific political events that contribute to inefficiencies. I present emerging evidence that government

reactions to the pan-Arab uprisings that started in December 2010 have pushed these firms to comply with increased state demands for cash and in-kind resources. Political overseers have then deployed these resources to purchase political support among citizenry in an effort to reduce the appeal of pan-Arab revolutionary rhetoric.

In his pathbreaking work on the causes of political violence, Gurr (1970, p. 24-5, 319) argues that individuals’ perceptions of deprivation and their level of discontent are driven by their expectations, which often defy an objective observer’s assessment of poverty or want. A key predictor of political violence is a progressive and palpable decline in living standards and economic conditions. Thus, Gurr argues that the best strategy for incumbent regimes to minimize the potential for collective violence is to maintain the status quo in distribution of social, economic, and political goods.

In their responses to the Arab Spring, surviving regimes governing wealthy oil states appear to have adapted Gurr’s advice by going even further. Rather than maintaining the distributional status quo, which, in Libya, and also in Bahrain and Oman (and arguably Kuwait and eastern Saudi Arabia), was insufficient to prevent political violence, these regimes have increased their social welfare spending while keeping intact subsidies that had been targeted for reform. The funds and resource products behind this distributive munificence are supplied by their national oil companies. These companies have increased contributions to state budgets, increased supply of feedstocks and fuels to meet subsidized domestic demand, and increased hiring on their own workforces. There are signs that they may have also reduced capital investments in future production.

With this paper, I offer an initial qualitative look at the factors potentially impinging production and efficiency in the Middle East oil sector that relate to the Arab Spring. This research would ideally be followed by a more exacting quantitative examination of NOC revenue efficiency in the Arab world in the years since the Arab Spring. Here, the data suggest that gains in efficiency seen in the energy sectors and NOCs of the Middle East toward the end of the last decade may have been reversed. The case of Oman’s PDO is particularly strong. Hartley and Medlock noted that the company had initially displayed increasing efficiency, which then dropped back toward
the end of the last decade. Given its energized commitments to social welfare, one expects that PDO’s relative efficiency will have slipped further.

One intriguing thought remains. High levels of efficiency may be good for NOCs and their wherewithal to invest in future production and may be beneficial for international energy markets, but it may not be so good for political stability within NOC home countries. If last decade’s increases in NOC efficiency were brought about by retrenchment policies such as streamlined workforces and social welfare programs, increasing efficiency may have actually contributed to the socioeconomic grievances that caused the pan-Arab uprisings. While this paper presents no evidence to this effect, it seems useful to raise the possibility as a context for the subsequent increase in NOC social welfare and employment contributions, and as a potential topic for future research.

**Acknowledgements**

The author thanks Walker Hall of Rice University for his research assistance with this paper.
References


