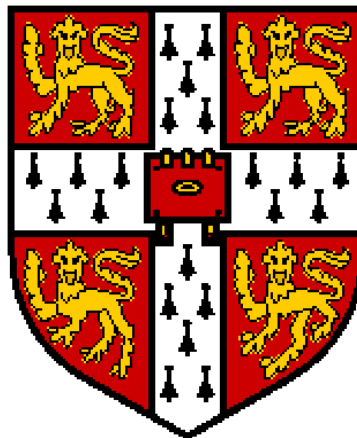


Stability versus Sustainability: Energy Policy in the Gulf Monarchies

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This dissertation is submitted for the degree of Doctor of Philosophy

For Connie

This dissertation is the result of my own work and includes nothing done in collaboration except where indicated. This dissertation has not been submitted for a degree or diploma or other qualification at any other university. It includes fewer than 100,000 words.

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Dissertation Summary

Stability versus Sustainability: Energy Policy in the Gulf Monarchies, by Jim Krane

Rising consumption of oil and natural gas inside the six Gulf Arab monarchies threatens to displace hydrocarbon exports that have long provided a large source of GDP. This trend is, in large part, a result of subsidized energy pricing and distribution, practices which form an integral part of rentier structures of political control. However, these practices are insufficiently analyzed in the rentier literature.

This dissertation addresses this shortfall by incorporating the theoretical significance of energy as a physical commodity – rather than as a source of rent – into the rentier literature. Energy subsidization has fostered within these states a structural dependence that has driven choices in industrialization, city design, technology preference and use, and personal habits. These subsidies have also helped build and maintain public support for unelected regimes, alongside the well-known role of energy rents. Energy thus has a conflicting dual role in the rentier state that contributes to the difficulty of subsidy reform. Externally, energy exports are the main source of state revenue; but domestically, energy is an important source of political support.

The literature's portrayal of subsidies as unreformable citizen entitlements conflicts with the increasing economic imperative of reforming these distribution practices. Since rentier consumption patterns threaten the flow of rents, the self-defeating nature of domestic resource distribution is emerging as a long-term weakness within rentier theory. I present evidence that reforms have already taken place, despite theoretical predictions to the contrary, and demonstrate the economic imperatives that make further reforms likely in at least two of the six states: Saudi Arabia and the United Arab Emirates. I also show that citizen understanding of energy subsidies is more nuanced than the entitlement portrayals found in the literature. This dissertation suggests revising the theory to accept a more flexible interpretation of subsidies as customary privileges, which allows for reform of these practices.

Reforms in rentier monarchies' energy policies are important not just because they challenge the most important theories of governance of these states, but because examining these reforms allows for understanding the difficult tradeoffs between politics and economics that underlie the survival of these peculiar regimes.

Foreword and Acknowledgements

I spent four happy years living in the Gulf, between 2005 and 2009, and have had the good fortune to return many times since. I found in these six countries a disarming warmth and hospitality and a profound natural beauty. I was unprepared for the huge amount of personal interest that I would develop in the region. After nine years of studying and writing about little else, I remain mesmerized.

The Gulf is also beset by some urgent problems, just one of which is covered here. The importance of energy to daily life was driven home to me during a 2005 blackout in Dubai. There was no escaping the 40-degree (110 degrees Fahrenheit) heat, which was magnified by the design of buildings that quickly trapped heat and offered no means to vent it. The experience drove home in a tangible way that energy policy and social contracts need to be re-calibrated for the longer term, rather than for a short era of conspicuous consumption.

I made many friends in the region, some of whom contributed in various ways to this dissertation, whether offering places to sleep, shared meals, anecdotes over a beer, even copies of their electricity billing statements. I also met my wonderful wife Chloe in nearby Baghdad, and the explorations of the Gulf that I describe in this thesis and my previous book were done as much through Chloe's eyes as mine. Saying I couldn't have done it without her is an understatement. Our adventures ranged from hikes among the mountain villages and canyons of Ras al-Khaimah, to our secret campsites in Fujairah, the Musandam, Jebel Misht and, most memorably, Jebel Rawdah; our breakfasts on the beach, and cocktails among the dunes and atop the Burj al-Arab. Best of all was the birth and first year of life of our son Jay.

After leaving the Gulf, we spent our next four years together in Cambridge, where – on the first day of my studies – Chloe gave birth to our daughter, Connie, to whom this work is dedicated. While Cambridge was more work than fun, I came to enjoy its eccentric ways, its medieval pubs, and cycling under vast East Anglian skies churning with clouds.

At Cambridge I was lucky to work under the impressive faculties of my academic supervisor, David Reiner, whose knowledge of literature in political science, economics and energy policy is matched by his affability and dedication. I am grateful for his diligence in reading so many drafts and offering so many comments, edits and suggestions. I will prize the memories of discussing this thesis with David in various pubs, as well as in two fabulous Cambridge Beer Festivals.

I am also indebted to Pierre Noël for taking an early interest in my topic, providing penetrating commentary, and introducing me to GDF Suez, the French energy firm that funded my PhD. At GDF, I am most grateful to Jean Rappe, who took a chance on funding my research, as well as Alain

Sanglerat, Alex Katon, Florence Verzelen, Brigitte Diercx, Suresh Bhaskar, Shankar Krishnamoorthy, Alda Engoian, Valerie-Ann Duval and others. My trips to the Gulf were punctuated by meetings, dinners and presentations at GDF Suez, and the company made me feel welcome there and in Paris and Brussels.

My gratitude extends to the Qatar National Research Fund and my talented and gracious research colleague, Steve Wright at Qatar University. Steve was kind enough to arrange my room and board in Doha, while Nancy Jarrah at the QU Research Office was instrumental in helping Steve and I navigate the intricacies of the grant. I also owe major thanks to head tutors Philip Pattenden and the Rev. Stephen Hampton at my college at Cambridge, Peterhouse, for their generosity in providing me with several creatively sourced grants.

Big thanks are also due to Cambridge's Energy Policy Research Group and especially Bill Nuttall, who offered so many prescient out-of-the-box comments, including one that turned out to be statistically significant. The generosity of the King Abdullah Petroleum Studies and Research Center in Riyadh, and especially Bashir Dabbousi and Mark Tuttle, made possible my research visit to the kingdom. I also need to thank YouGov Cambridge and Joel Faulkner Rogers and Sean Kirwan for running a survey on my behalf at no cost.

I gave several guest lectures in which my expenses were covered, allowing me to conduct interviews and fieldwork. For these, I am especially grateful to the following: The UAE Prime Minister's Office in Dubai and especially Maryam Kalban, Abdulla bin Touq and Azzan Lootah; Georgetown University Doha and Gerd Nonneman; American University of Kuwait and Ramzi el-Houry and Farah al-Nakib; the Dubai School of Government and Heba Shaaban (as well as formers Tarik Yousef and Steve Brannon), Case Western Reserve University and Pete Moore and Cyrus Taylor; the Union Club in Cleveland and Meredith Seikel; National Defense University in Washington and Denise Natali; Durham University and Chris Davidson; and Rice University's Baker Institute and Ken Medlock. Also helpful along the way was Kristian Coates Ulrichsen, who so often read and critiqued early work; as well as Giacomo Luciani, Justin Alexander of Qatar National Bank, John Tottie at HSBC Riyadh, Bruce Smith at the Abu Dhabi Water and Electricity Authority, and Mike Wood at the Ministry of Electricity and Water in Kuwait.

I owe big thank-yous to the very smart folks who read drafts of the work that comprises this thesis, especially to Mary Ann Tétreault who helped enormously with early drafts, and Jocelyn Sage Mitchell, who provided numerous excellent last-minute comments, as did Matthew Gray. My colleague Marwa Shalaby at Rice University helped enormously with some of my statistical work in Chapter 6, as did Richard Stoll. Pedro Rodriguez of the IMF helped me convert his demand equation for use in with my demand calculations in Chapter 4, as did Mark Agerton and Sean Leong at Rice.

I'm also grateful to several others who provided comments, especially Pete Moore, Sean Foley, Laura El-Katiri, Olaf Corry, Aoife Brophy-Haney, Bianca Sarbu, Steffen Hertog, Leila Benali, and Trevor Johnston. Thanks are due to the participants in my Expert Elicitation survey who provided the data that drives these chapters, and the dozens of patient interview subjects.

Finally, my family: I would have spent far more late nights in the PhD room if it weren't for Jay and Connie, whose infectious personalities lured me home by dinnertime most nights. My wife Chloe deserves a Q-Max tanker-load of my love and gratitude for – first of all – allowing me the indulgence of going back to school, and secondly, putting up with the resulting economic privations. Chloe did all this while keeping the home fires burning, raising our kids, supporting and commenting on my work, and being an outrageously loveable wife in general, all in good humor.

* * *

Chapter 1: Introduction

In 1932, a drill operated from a rig on a Bahraini hilltop ground through a layer of blue shale 1,250 feet below ground. The crew drilling the aptly named Oil Well Number 1, under the banner of Standard Oil of California, got the first whiff of a substance that would transform the desolate lands surrounding them. The black oil that geysered from Jebel Dukhan would be found again and again under the barren east Arabian landscape, in reservoirs of unprecedented size. Drillers struck crude in Saudi Arabia and Kuwait in 1938, Qatar in 1939, Abu Dhabi in 1958 and Oman in 1964.

The six Arabian Peninsula monarchies that emerged as independent states by the early 1970s used the proceeds from these resources to improve the lives of a people that had, until then, lived in nearly primeval deprivation, with little access to electricity, clean water, medicine or school. The tribal sheikhs who controlled access to the oilfields exploited the flow of rents to strengthen the continuity of their regimes. They embarked on nationalizations of their oil resources and seized control of production, greatly increasing their share of profits. And they distributed welfare benefits, jobs, cash and business licenses to marginalize rivals and secure the support and political quiescence of their people. By 1981, when these states banded together in the federation known as the Gulf Cooperation Council, or GCC, the current set of societal expectations and state obligations known as social contracts were in place. The very same ruling families that governed these lands in the times of pre-oil privation were those that still exercise near-absolute control over their vast state bureaucracies today.

This collection of isolated tribal sheikhdoms found itself transformed into an essential force within the global economy. Together the six monarchies hold 40 percent of the world's proven reserves of crude oil and 23 percent of its natural gas,¹ the largest known concentration of hydrocarbons on Earth. The Gulf monarchies have become synonymous with oil and gas, with borders and maritime boundaries shaped by field locations, and the symbols of the industry emblazoned on bank emblems and postage stamps. Their steady resource stewardship has kept markets supplied with energy sufficient to fuel the world through periods of unprecedented economic and population growth, and they have demonstrated that their manipulation of supply can plunge the world into crisis. Energy is not just the main business of the Gulf Cooperation Council countries. It is the basis of their independence and of their continued economic and political viability. Within these states, the distribution of energy proceeds is the most important means by which ruling families maintain themselves in power.

But the six Persian Gulf monarchies are not just providers of energy to the rest of the world. In recent years they have begun to represent a growing market for energy, with some of the world's highest per-capita consumption. Growth in energy demand in these countries has averaged 9% per year over

¹ BP 2012

the 40 years since 1972, far outpacing the world average of 2%.² Several factors have encouraged this growth in consumption, including fast-growing populations and personal wealth,³ and energy-intensive industrialization. Price is also a major factor behind the momentum of consumption growth. In the Gulf, energy is considered one of the benefits enshrined within the social contract, and prices are extremely low relative to incomes and to prices outside the region. Governments have steadfastly maintained historical prices with origins in the socio-political objectives of the early days of the oil economy. Subsidized energy has contributed mightily to development and the post-independence phase of state formation, and probably also to political stability, but subsidies have also contributed to an exorbitant level of demand for commodities that still comprise the region's chief export and biggest contributor to GDP.

Therefore the expectation for the GCC to retain its role as reliable supplier of crucial commodities to world markets is coming under challenge. Maintaining this status depends on Gulf citizens, and the flexibility in citizens' sense of entitlement to cheap energy and willingness to submit to reform. It also depends on measures the state is willing to take to ensure the continuity of exports. Like all exporters of finite resources, the Gulf monarchies will eventually face depletion-related reductions in production and export. But long-running growth in domestic demand is beginning to interfere with the ability of these stalwart suppliers to maintain their export roles, regardless of the size of their remaining reserves. An era of energy uncertainty has arisen in some of the Gulf monarchies, with shortages of natural gas and increasing domestic use of crude oil and other valuable liquid fuels. As a result, the GCC's share of global oil demand has risen sharply. (Fig. 1.1)

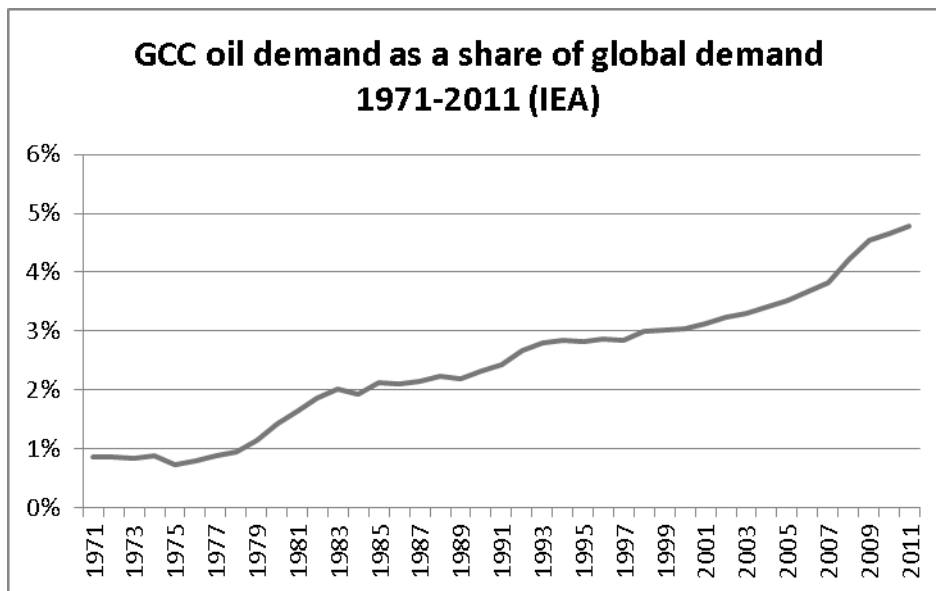


Figure 1.1: GCC's share of global oil consumption since 1971. (Source: IEA 2013)

² International Energy Agency 2013a

³ See Appendix for tables outlining growth in population, income and oil production and consumption

This demand story has surprised many observers. The Gulf's reserves were previously considered so large in relation to population that domestic consumption was an afterthought.⁴ A 2008 report from the International Energy Agency (IEA) revealed institutional surprise in discovering the extent to which the world's main supply region was becoming a center of demand, with uncertain prospects for future exports.⁵

The IEA views regional consumption growth from the perspective of importing countries in the OECD, which form its membership. Viewed from the perspective of the Gulf ruling families, the situation is more alarming. Sixty years after the discovery of oil at Jebel Dukhan, revenues from hydrocarbon exports remain one of the most important factors in keeping these six monarchies in power. Any threat to those exports also represents a threat to the political systems overseeing them. The scatterplot in Fig. 1.2 illustrates the delicate position of the ruling sheikhs. The high levels of oil rents in GDP (more than 20%) combined with small populations relative to the resource base, provide these regimes with *nearly unique* levels of co-optive power. This power is expressed in the high GDP per capita, above \$20,000 per year in each monarchy. Only two other countries, one of them also a monarchy, occupy the same upper-right quadrant. An increase in population or decrease in oil rents implies reduced proportional distribution, and a shift toward the vertical axis cluster of "resource curse" states, none of which remains a monarchy.

⁴ In 1971, for instance, the 6m Saudi residents consumed 307,000 barrels of oil per day, or 19 barrels per person, per year. By 2011, the kingdom's population had nearly quintupled to 28m, but oil consumption had risen nearly nine-fold, to 2.7m b/d. That represents 27% of production and more than 35 barrels per person per year.

⁵ The IEA states that "Rising energy consumption in the MENA [Middle East and North Africa] region is one of the few energy stories to have skirted thorough analysis in the past five years, dwarfed by the focus on China and Indian consumption and a natural tendency to view the region from the supply side. However, MENA's increasing demand call has already been sufficient to impact on the export availability of particular oil products – most notably, fuel oil and natural gas – with no apparent incentives to rein in growth while hydrocarbon receipts remain at current levels. ... The IEA needs to understand better this emerging regional consumption dynamic in order to gauge the impact on export potential from the largest producing region." See: International Energy Agency 2008

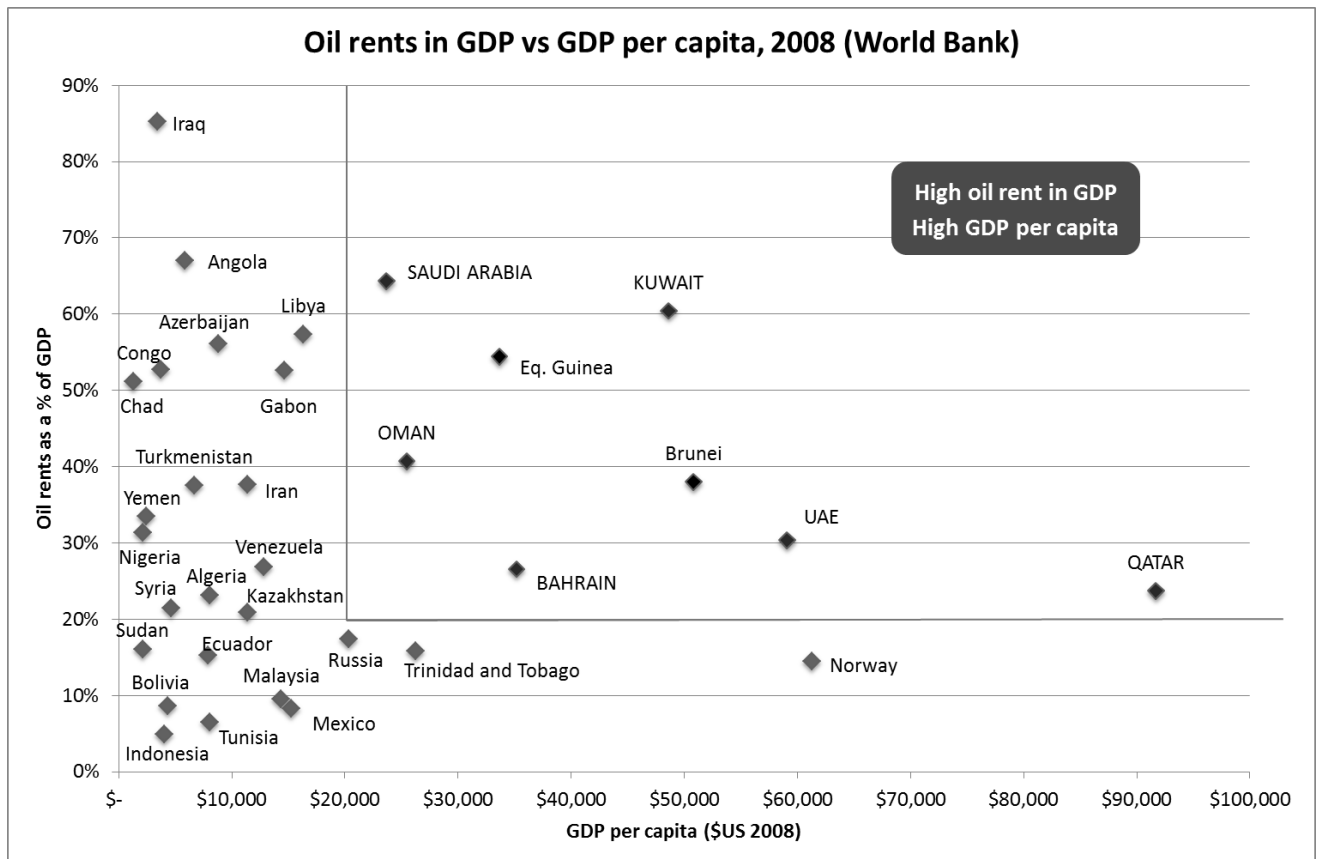


Figure 1.2: Oil exporting countries plotted on the basis of oil rents in GDP and GDP per capita. (World Bank 2012)

The recent events of the Arab Spring demonstrated the counterrevolutionary value of social spending, as countries with large rent surpluses could afford more patronage spending and generally tended to experience lower levels of unrest and repression.⁶ To academics, the trend of Arab Spring events demonstrates the continued relevance of theories that attribute regime longevity to rents and allocative governance. Rising domestic demand for natural resources thus stands as a potent threat to rent-based systems, and a threat that moreover exhibits a certain level of political protection, given that the resources distributed form a chief patronage component within the distribution systems of these regimes. Reforming energy subsidies in the political context of the Gulf thus entails short-run risk for longer-run stability.

⁶ Arab states with relatively low rent-to-population ratios such as Yemen, Syria and Egypt responded differently to the mobilization of their citizens, mainly by deploying the state's repressive apparatus. By contrast, Saudi Arabia, Kuwait, the UAE, Qatar and Oman relied principally – or solely in the case of Qatar – on increases in rent allocation. These latter responses were possible because of the revenues, mainly from resource exports, afforded regimes the wherewithal to increase already much higher levels of patronage seen in their per capita public wages. This analysis does not hold true across the board. Bahrain, despite its relatively large capacity for patronage, went through serious unrest. Libya, which 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. See Appendix for a table detailing public employment, repression and unrest. See also: Springborg 2013; O. Ali and Elbadawi 2012

The question posed by the Gulf's consumption conundrum – and that which sets the research parameters for this dissertation – is this: Can the Gulf monarchies reform consumption in a way that maintains exports without undermining public support for regimes?

1.1 Central Argument

The scholarship most often called upon to explain the patronage structures driving this consumption conundrum is the established political economy theory of the rentier state, a deeply influential paradigm which has been used since the 1980s in comparative politics research on natural resource exporters, especially those in the Middle East. However, rather than following the expected behavior that rentier state theory would describe, this dissertation argues that rentier regimes will confront their consumption problem in ways that challenge the theory's assumptions. In particular, the literature's characterization of subsidies as rights of citizenship is being undermined. This dissertation shows that, since continued rises in domestic consumption threaten the long-term maintenance of exports, regimes can be expected to protect exports by targeting domestic consumption, and the subsidies encouraging demand.

Rentier theory declares that economic allocation – through state employment and government subsidies as well as land grants and preferential commercial opportunities – is the means by which regimes generate political acquiescence that perpetuates their control of the state. As will be shown in the next chapter, the subsidies that are driving the consumption debacle are considered a bedrock element of the rentier social contract, a component which the preponderance of the rentier literature describes as sacrosanct. The central misunderstanding of rentier theory is therefore exemplified by the conflict between the continuation of domestic energy subsidies and the preservation of oil exports. Theory's inflexible stance toward these subsidies, portraying them as rights, implies that they cannot be reformed without upsetting the stability of the entire system. This dissertation argues that this tenet is being weakened by rising alarm expressed in regards to domestic demand, and will ultimately fail, as governments move to target subsidies in the interest of preserving exports. By amending rentier theory to allow for these reforms, this dissertation anticipates the potential for regimes to address the self-consuming properties of the rentier state in the interest of preserving power.

I conclude by proposing that, while the core rentier thesis on the importance of externally generated rents remains robust, explanatory power can be increased by altering the portrayal of subsidies from "rights" to "customary privileges," and by allowing for retraction or replacement of social contract benefits which are traded for regime support. These amendments provide theoretical allowance for the reforms that have already begun in one corner of the Gulf rentier heartland and that other regimes appear likely to initiate.

My task is to test the strength of theory’s pronouncements that these subsidies are rights which cannot be reformed without corresponding loss of public support for the regime. I do this in the following manner:

First, by a thorough examination of the literature that details political relations between state and society in the Gulf monarchies (and to a lesser extent, other energy exporters) with careful attention to documenting its treatment of subsidies. The literature review in the next chapter includes a detailed analysis of the role of welfare benefits, and where possible, subsidized energy, in that relationship. The preponderance of views across the rentier literature converges upon the notion that actions which probably constitute the most effective demand-management tool – raising prices – are either prohibited or illegitimate. I bring in complementary works which offer similar conclusions. Depending on the literature, subsidy reform is either difficult (as portrayed in economics), replete with steep barriers to change (social contract theory), tantamount to an invitation to political violence (works on “relative deprivation”), difficult for centralized states which lack political cover for unpopular decisions (welfare state theory), or a violation of citizens’ rights (rentier theory).

Second, after a short methodology chapter which details the techniques used to analyze these issues, I present three chapters which detail the consequences of subsidies and the likelihood of government policy responses which run counter to the prohibitions detailed in the literature review. The first of these (Chapter 4) uses descriptive statistics on energy demand and pricing to reveal the political-stability-versus-economic-sustainability quandary facing these monarchies (stylized in Table 1.1). I argue that energy demand in the Gulf monarchies has grown to the extent that economies are shifting to a new and costly paradigm for electricity production and distribution. Where once electricity was produced cheaply, a product of surplus domestic resources, increasingly these states are moving toward a more expensive model. The pattern of simultaneous increases in demand and cost, and the potential curtailment of exports, are stress-testing energy-based welfare benefits.

Table 1.1: The Stability versus Sustainability Dilemma	
Do regimes reform subsidies, in hopes of sustaining their political economies for the longer term?	This risks instability. Governing legitimacy depends on distribution, including of in-kind energy commodities.
Do regimes maintain subsidies to support short-term political stability?	This encourages domestic demand, which could endanger longer term sustainability of exports, and political-economic systems based on export rents.

Chapter 5 focuses on in-kind distribution of energy commodities. I argue that theory unwisely associates this practice with political stability, when in the longer run, policy that incentivizes energy consumption is more likely to undermine stability. The literature review will provide numerous

examples where authors argue against the legitimacy of retracting social contract entitlements such as energy subsidies, a position which is difficult to reconcile with the energy sector reform pressures described in this thesis. Thus, these pressures create the motivation for regimes to adjust relations with their citizens, while also undercutting the academic models that frame that relationship. Since my intent is to revise political theory that predicts behavior in resource-exporting states, my research follows two tracks. One documents policy action and probabilities of on-the-ground reform of social benefits, mainly in the electricity sector. The other focuses on the significance of reform to long-held assumptions regarding the practice of rentier politics. Bolstering the argument is evidence that reforms running contrary to theory have already taken place, and that further such reforms are likely. I provide aggregated expert opinion data which forecasts which regimes have the wherewithal to reform their social contracts, and which do not.

In Chapter 6, the focus shifts to the less familiar citizen perspective on subsidy reform. Here, I present public survey results which show that the rentier literature presents too monochromatic a view of citizen attitudes toward energy subsidies. Many citizens do indeed claim “entitlement” to the state’s natural resources, and these citizens are more likely to oppose pricing reform, as predicted by theory. However, this “entitled” view does not represent a majority view. A substantial portion of the public is willing to accept subsidy reform, especially when given a national-interest explanation or offered an alternate benefit.

The three substantive chapters form islands in a chain of continuity, starting from an analysis of the problem, moving to predictions of reform, and finishing with an exposition of the receptivity of the recipients to those reforms. Taken together, these findings suggest that regimes which find themselves under pressure may have more scope for energy subsidy reform than generally understood, and certainly greater than the scant opportunity portrayed in the rentier literature. The conclusion synthesizes these findings into an argument incorporating more theoretical significance for energy as a physical commodity, rather than solely as a source of rent, within the rentier literature.

1.2 Scope and Limits of the Thesis

This thesis, then, examines the political and economic role of energy subsidies in the Gulf monarchies through the lens of rentier state theory, the literature to which it intends to contribute. This approach defines the design of the thesis and also delineates the areas it does not cover. Since one goal is to show that theoretical prohibition on reducing citizen benefits is probably unworkable, my research looks most closely at electricity pricing and subsidies, since electricity can be sold at prices that vary depending on the category of customer. A state-mandated price increase on expatriate or commercial customers does not present the same direct challenge to rentier theory posed by an increase in prices levied on the citizen-residential category. Citizen-residential electricity prices also provide a more

important explanatory variable than prices on domestic transportation fuel, because retail prices of gasoline and diesel fuel are not differentiated by customer category. Despite this, it bears mentioning that subsidized gasoline and diesel prices have at various times been increased in the UAE, Oman and even Qatar. These increases also be perceived as violations of the state-society ruling bargain, to the extent that citizen customers (a minority of the total in the UAE and Qatar) have lost a portion of their state benefits. I also spend less time on subsidies on food, land, housing, and state employment, while acknowledging their importance within the social contract, since these have no direct bearing on commodity exports.

Related to this point, this dissertation necessarily provides only a limited, albeit robust, analysis of energy demand that uses estimates of price elasticity to calculate the effects of subsidy on energy demand. These calculations offer plausible estimates of the portion of energy consumption that arises from low prices. A secondary calculation comparing Abu Dhabi and Arizona provides controls for effects of wealth and climate. I acknowledge that energy demand is a complex formulation driven by numerous factors. However, a detailed decomposition of demand that estimates effects of all drivers is far beyond the scope and aims of this dissertation. My interests lie not in disentangling contributors to demand, but going beyond these to show their effects on political economies.

Elsewhere, the thesis does not engage deeply with development of alternate sources of rent through economic and industrial diversification, sovereign wealth funds or by increased refining and petrochemical production. Each of the Gulf states has produced economic diversification plans, the theoretical implications of which have been covered elsewhere.⁷ This dissertation assumes these processes will continue in the manner typical of exporters of depleting resources and that these sectors will in future be expected to replace contributions from declining commodity sectors.

The dominant focus on the subsidy portion of the state-society relationship may appear at times to oversimplify those relations. I acknowledge the complexity of regime-citizen ties and concede that further variables contribute to citizen acquiescence to regimes beyond those stemming from subsidized energy. This suggests that regimes may have more avenues for appeasing populations that extend beyond the issuance of rents and subsidies. I briefly discuss alternate sources of legitimacy and my results suggest that regimes have more room for maneuver than that implied by the rentier literature, but I do not spend much time investigating legitimacy because it is tangential to the central task of the thesis.

This dissertation also underplays the heterogeneity among countries often analyzed as a regional unit. It is thus worth emphasizing the dominance of Saudi Arabia within the GCC, as well as in the Organization of Petroleum Exporting Countries (OPEC), and arguably, in the Arab world. The Saudi

⁷ In particular see Hvidt 2013 and Hvidt 2012

landmass claims more oil reserves, five times the land, and nearly double the population of the other five Gulf monarchies combined. Saudi Arabia's prominence in the Arab and Muslim world is amplified by its custody over the two holiest shrines in Islam. This importance is demonstrated five times a day, at exactly the same hour, when a large portion of the world's 1.6 billion Muslims turn to pray in the direction of the western Saudi city of Mecca. Saudi Arabia's uniqueness in the region (some say the world) is underpinned by the fact that it has never been fully or directly colonized by an outside power.⁸ The Saudi role in energy markets is also unique. Saudi Arabia's known oil reserves are indeed the world's largest, but it is the kingdom's spare capacity, the gap between actual oil production and its declared production capacity of 12.5 million barrels a day, which allows it to maintain the powerful role as "swing supplier" to global markets. This unmatched flexibility in production and export capacity allows it to influence market prices, offset disruptions in output elsewhere, and command the strategic interest and protection of the West. Spare production capacity is crucial to Saudi Arabia's strong geopolitical position in the international system.

While acknowledging that the Saudi role may be unintentionally underemphasized, the lack of attention paid to Bahrain is more intentional. This decision is related to Bahrain's marginal contribution to oil markets, its distinct (within the GCC) sectarian character and political dynamic; the problem that analysis of stresses to the energy portion of its social contract are overshadowed by more pressing political stability concerns, and the external (mainly Saudi) reinforcement of its political economy which enables endurance of rentier-structural crises that might otherwise force policymaking action. I also do not present detailed cases on non-GCC oil states in the interest of preserving depth within the countries researched.

The design of two research methods, a public survey and an expert elicitation, was done amid constraints in funding and with deference to time constraints of respondents. The public survey was limited by the polling firm to six questions that could not be differentiated by country. I was unable to ask important questions about respondents themselves, such as about whether they were responsible for paying bills, or about their consumption habits. Some of the wording on the expert elicitation questionnaire was deliberately vague, particularly the question asking experts whether domestic consumption posed an "economic threat" to the country in question. This question was meant to capture a respondent's overall positive or negative characterization of energy consumption in a country prior to making detailed queries about particulars. Since low-priced energy is typically understood as an *advantageous* input for economic growth (witness the current perception of

⁸ Although parts of it were nominally controlled by the Ottoman Empire. In an April 14, 2011 speech, former US Ambassador to Saudi Arabia Chas Freeman said the kingdom's never-colonized status shapes its relations with its neighbors, all former colonies, as well as with the West. "Saudi Arabia is the only society on the planet never to have experienced coercive intrusion by Western militaries, missionaries, or merchants. The kingdom has never compromised its independence. When the West finally came here, it came not as a conqueror, spiritual tutor, or mercantile exploiter, but as hired help."

inexpensive shale gas in the United States) the large negative response elicited in some GCC countries offers an atypical and countervailing example.

In developing theoretical revisions, this dissertation points out weak constructs in rentier theory and proposes an alternate portrayal of subsidy, however it does not get involved in attempts to divine the extent of damage to regime support flowing from a hypothetical reform of subsidy, or whether or not that loss of support needs to be replaced by an alternate benefit or policy. These questions depend on distinct and complex political contexts in individual countries. My limited response to this question comes in the form of case studies of two successful subsidy reforms, in Dubai and Iran. Divining potential benefit-reform exchanges elsewhere lies outside the scope of this dissertation.

Finally, it should be mentioned that these limitations were necessary to enable the depth of this thesis' audit of rentier theory through examination of energy policy. What follows is a detailed and thoroughly analyzed multi-method corrective to some of the most common scholarly orthodoxies in Gulf studies and Middle East political economy. A broader scope would sacrifice some of this depth. Scholarly merit is achieved here through critical analysis of existing theory and by providing extensive empirical evidence not previously brought together, rather than offering extensive new theoretical tenets. However, my critical analysis of existing theory aims to improve the theoretical framework through which the political economy of the Gulf Arab monarchies is currently understood, and as such will provide a solid foundation for future theoretical advances in this crucially important area of research.

1.3 Key Definitions and Assumptions

This thesis' findings also depend on assumptions that, while they may not comprise a chief focus for this research, lie behind the approach. They are therefore stated and supported below.

- The term “energy subsidies” includes domestic sales at prices below those prevailing internationally
- Price subsidies have made a significant contribution to energy consumption in the Gulf monarchies, relative to other contributing variables such as income and population growth
- Reducing subsidies will reduce demand
- Reducing subsidies will bring substantial savings to economies
- Continued rises in domestic oil consumption, all else constant, will affect the ability of GCC producers to export
- If exports are reduced, export revenues will also be reduced.

1.3.1 Defining Subsidies

I accept IEA and OECD definitions that subsidies constitute “any measure that keeps prices for consumers below market levels”⁹ and “any government action that concerns primarily the energy sector that lowers the cost of energy production, raises the price received by energy producer or lowers the price paid by energy consumers.”¹⁰ Perhaps the most applicable subsidy definition for this research is the difference between a commodity’s selling price and its opportunity cost.¹¹ According to the Little-Mirrlees Rule, allocative efficiency is achieved when the domestic price equals the real marginal opportunity cost, the best estimate of which is the world reference price for that commodity prior to the imposition of any local taxes.¹²

Arguments against fossil fuel subsidies in exporting states are especially pertinent in the Middle East, the region with the world’s lowest average energy prices and highest per capita subsidies. (Table 1.2) On a total cost basis, Iran and Saudi Arabia are the world’s No. 1 and 2 subsidizers of fossil fuels.¹³

	Oil	Gas	Coal	Electricity	Total subsidy 2011 (\$bn)	Total subsidy as share of GDP	Subsidy per capita 2011 (US\$)
UAE	3.9	11.5	0	6.4	21.8	6%	\$ 4,303
Qatar	2	1.9	0	2.1	6	3%	\$ 3,661
Kuwait	4.3	2.1	0	4.7	11.1	7%	\$ 3,185
Saudi Arabia	46.1	0	0	14.8	60.9	9%	\$ 2,284
Brunei	0.3	0	0	0.2	0.5	3%	\$ 1,232
Iran	41.4	23.4	0	17.4	82.2	16%	\$ 1,123
Turkmenistan	0.8	4.4	0	0.7	5.8	20%	\$ 1,084
Venezuela	22	1.9	0	3.2	27.1	9%	\$ 947
Iraq	20.4	0.3	0	1.6	22.2	12%	\$ 711
Libya	2.3	0.2	0	0.7	3.1	5%	\$ 483
Ecuador	5.4	0	0	0.1	5.6	7%	\$ 384
Algeria	11.3	0	0	2.1	13.4	7%	\$ 384
Kazakhstan	3.2	0.3	0.6	1.7	5.8	3%	\$ 358
Russia	0	21.9	0	18.3	40.2	2%	\$ 283
Malaysia	5.4	0.9	0	0.9	7.2	2%	\$ 258
Azerbaijan	0.6	0.8	0	0.5	1.9	3%	\$ 212
Mexico	15.9	0	0	0	15.9	1%	\$ 144

⁹ OECD, cited in United Nations Environment Program 2008, 11

¹⁰ IEA, cited in United Nations Environment Program 2008, 11

¹¹ Some hold that Saudi Arabia is a special case; that its low domestic energy prices do not constitute subsidies because spare production capacity allows it to set or influence global market prices. I acknowledge these arguments but, in the interest of simplicity, accept the IEA’s characterization of Saudi underpricing as a subsidy. For a more nuanced argument, see Alyousef and Stevens 2011

¹² Little and Mirrlees 1968, cited in Brito and Rosellon 2010; Alyousef and Stevens 2011

¹³ International Energy Agency 2011

Indonesia	15.7	0	0	5.6	21.3	3%	\$ 91
Angola	1.1	0	0	0.3	1.3	1%	\$ 70
Nigeria	3.6	0	0	0.7	4.3	2%	\$ 28
Source: Subsidy data provided by IEA at author's request, 2013; GDP figures (in current US\$) and population figures from World Bank, World Development Indicators 2014							

1.3.2 Contributions of subsidy to GCC energy demand

Price is one of the chief components of energy demand, alongside income, population, technology and climate. Price affects demand in a direct way, through price-influenced choices in consumption of fuel and electricity, as well as indirectly, through choices of energy-consuming equipment and the operating efficiency of that equipment, as well as the rate of its utilization.¹⁴ In the Gulf monarchies, low prevailing prices relative to income offer less incentive for conservation than that which might arise if prices reflected those in global markets. (Further detail in Chapter 4)

Several authors have reached similar conclusions. Alyousef and Stevens describe low and subsidized prices in Saudi Arabia as “*the single most obvious explanation for the extremely high levels of energy use in the Kingdom.*”¹⁵ Mehrara finds that subsidies in oil exporting countries explain their otherwise “*implausibly high energy intensity*” that has caused energy consumption to grow much faster than overall economies. If unaddressed, Mehrara argues, subsidy-driven demand will turn exporters into net importers.¹⁶ Bourland and Gamble document trends of increasing energy intensity and reductions in efficiency of energy use in Saudi Arabia, comparing trends in the kingdom with global norms in which these indicators move in opposite directions. They show that the kingdom uses ten times the global average of oil per unit of GDP, and argue that the “*key reason for the rise in consumption is very low energy prices.*”¹⁷ Deutsche Bank examined rising domestic consumption in OPEC member-states and found that demand increased more than four times faster than the world average during the last decade, 56% versus 13%. Adjusting for population growth, which in OPEC was double the world average, the authors found that OPEC oil demand still grew at a much stronger rate, 1.4 barrels per capita per year for an increase over the decade of 24%, versus 0.03 barrels per capita globally, an 0.7% increase. The authors conclude that “*there is a very strong prima facie case for saying that the subsidies on domestic oil consumption in OPEC countries are the main reason why per-capita consumption within OPEC has increased so much more quickly than per-capita consumption for the world as a whole over the last decade.*”¹⁸

¹⁴ Medlock III 2011

¹⁵ Alyousef and Stevens 2011, emphasis added

¹⁶ Mehrara 2007

¹⁷ Bourland and Gamble 2011, emphasis added

¹⁸ Lewis and Hsueh 2012, 13–14, emphasis added

However, it remains prudent to mention that while low prices may explain a large portion of consumption (as will be demonstrated in Chapter 4) reforms that eliminate subsidies may not, by themselves, resolve increases in demand for energy. The GCC states are also experiencing strong rates of growth in population, wealth and industrialization which, as mentioned, contribute to demand.

1.3.3 Demand effects of reduced subsidies

It is possible to estimate the contribution of subsidies to energy demand in the GCC countries by using a price elasticity calculation that involves a hypothetical removal of subsidies by the means of an increase in prices. In Chapter 4, I demonstrate that a rationalization of energy prices would significantly reduce demand for energy in the Gulf monarchies. The results allow us to infer the large portion of demand attributed to subsidized prices. A second calculation in the same chapter uses the less hypothetical example of comparing subsidized electricity demand in Abu Dhabi with unsubsidized consumption in Arizona, which offers a way of controlling for some income and climate effects. By raising Abu Dhabi prices to Arizona levels, demand falls sharply, but average consumption in Abu Dhabi still remains higher than that in Arizona.

Regardless of the political feasibility of such an increase, even at the relatively low levels of price elasticity of demand estimates¹⁹ that circulate in literature on the Gulf, the price increases required to cover the full cost of various energy products is so large that corresponding reductions in demand become significant. It is clear that price exerts strong encouragement of energy demand in the Gulf monarchies.

1.3.4 Reducing energy demand will bring substantial savings to Gulf economies

As mentioned above and demonstrated in Chapter 4, reducing subsidies – in this case, raising retail energy prices – will exert an effect on demand, all else constant. It follows that reduced demand will result in reduced public expenditures and increased state revenues, since energy prices in the Gulf monarchies are controlled by the government and set at rates far below those in unsubsidized markets. This is because subsidies impose a cost, in fiscal terms and in terms of foregone opportunities to earn market revenues and domestic taxes. The more energy “sold” in these subsidized markets, the greater the cost to the government.

Gupta et al. show that the average rate of subsidy among major oil exporters was 3% of GDP and more than 15% of government budgets in 1999.²⁰ More recent data from the IEA (Table 1.2) place the GCC countries at the top of the ranks of global energy subsidizers, with energy subsidies accounting

¹⁹ Many scholars predict that energy demand in the Gulf (and elsewhere) is not very sensitive to increases in price; i.e. a \$1 increase in price would have a smaller corresponding effect on demand. A price elasticity of -1 implies a one-to-one relationship between price and demand; price elasticity of -0.3 implies a 1-to-0.3 relationship and an elasticity of -0.5 implies a demand response half as large as the price increase.

²⁰ Mehrara 2007; Gupta et al. 2002

for roughly 9% of Saudi GDP, 7% of that of Kuwait and 6% of the UAE.²¹ Rodriguez et al. show that rationalizing prices would allow Kuwait to recoup a significant portion of the outlays it currently expends to subsidize energy. Even if consumers were given a cash rebate equal to the value of lost welfare (the value of energy consumed without the excess demand attributed to the subsidy), Kuwait would capture net permanent savings of between 1.8% and 2.8% of GDP, which comprise “potentially large long-term benefits from reforming energy subsidies.”²² Besides the increased revenue, there would be significant savings in energy use and reduced opportunity cost in terms of forfeiture of export revenue. In terms of primary energy savings, the demand response to rationalized prices (a 183% increase using gasoline prices as a reference) in Kuwait would save the equivalent of nearly 18 million barrels of oil per year, about three weeks’ exports, worth \$1.9 billion at current prices. Similar effects would be expected in neighboring monarchies. (See Table 4.5 in Chapter 4)

Since energy subsidies generate so much waste and typically accrue disproportionately to the wealthy, subsidy costs represent a diversion of public funds and/or national resources that could be used to generate greater social benefit. In this sense reformed prices that make energy products more expensive raise revenues for the state, while inducing consumers to adopt habits and technologies that increase conservation. This, in turn, reduces state spending and preserves resources for export. Reduced emissions are another benefit. Damette and Seghir find that energy intensity is high enough in oil-exporting countries that price reforms can be made to preserve exports and revenues without adversely effecting economic growth.²³

1.3.5 Continued rises in oil consumption will affect the ability of GCC producers to export

Several studies have shown the effects on exports of continued increases in demand within the GCC. As mentioned, their authors predict the demise of spare production capacity and, if policies are not adjusted, a decline in exports. These predictions are based on production of crude oil reaching a plateau, for reasons that include geological capacity, availability of funds for capital investment, access to technology, preferences for intergenerational equity, and planning for depletion. With production held constant, rising domestic demand first displaces any spare production capacity and then begins to displace exports. Figure 1.3 below uses Saudi Arabia as an example, and combines forecasts prepared by Riyadh-based investment bank Jadwa Investment and Business Monitor International for production and domestic consumption, which it uses to calculate exports. Forecasts of Saudi production capacity are derived from statements by oil minister Ali Naimi about long-term

²¹ International Energy Agency 2011 (data provided to author by IEA.)

²² Rodriguez, Charap, and da Silva 2012

²³ Damette and Seghir 2013

capacity being maintained at 12.5 m b/d.²⁴ At current rates of demand growth, all else constant, Saudi Arabia would consume all of its production capacity and become a net oil importer around 2043.

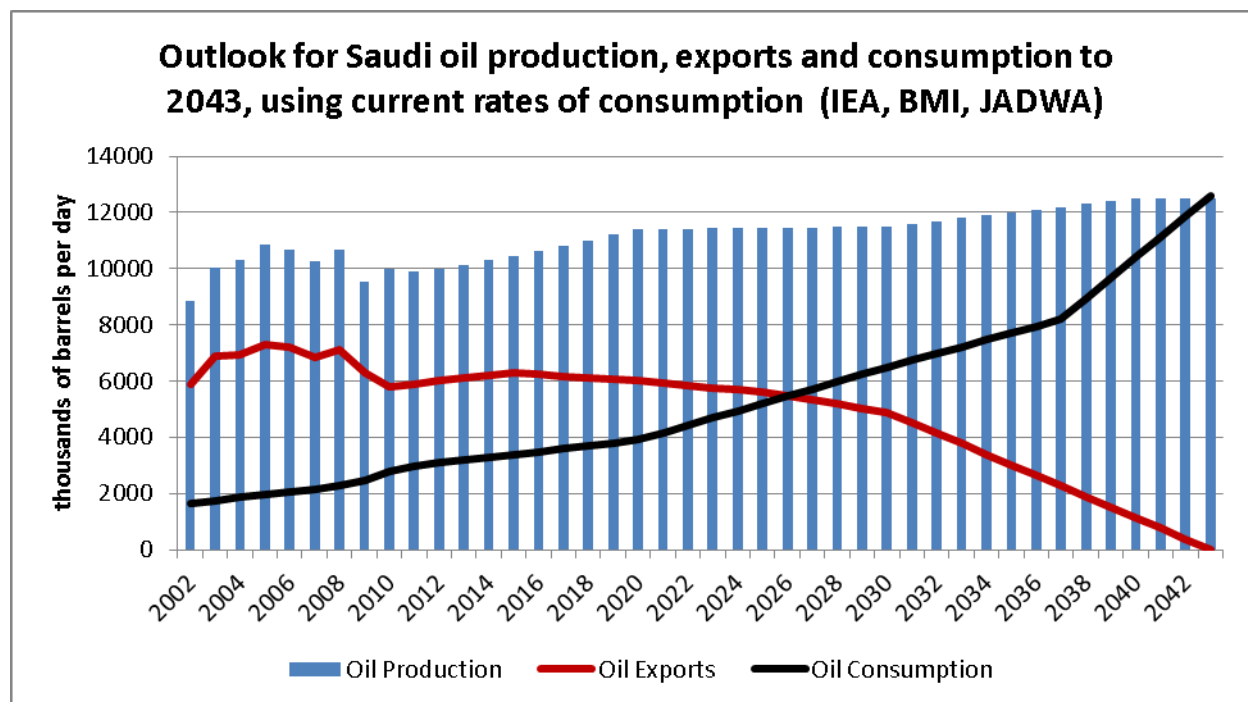


Figure 1.3: Effects of Domestic Consumption on Saudi Oil Exports

It should be stated that longevity of exports can and probably will be extended beyond the dates in these illustrative “business as usual” forecasts through increasing production capacity and/or reducing domestic demand, and by substituting for oil in domestic economies. This dissertation does not create such a study since the phenomena have been so widely documented. Rather, it uses existing work as a starting point for analysis of potential reforms. I illustrate consumption trends not because I claim that an end to exports is inevitable, but because these trends apply pressure on political systems and theory. A short-term end to oil exports is therefore not an inevitability, but rather a source of pressure with which politics and theory must reckon. In fact, if exports are extended through price reforms, this dissertation argues that such a development would represent a theoretical breach. One or more of the Gulf monarchies may also extend the current state of affairs by maintaining exports and simultaneously meeting future increases in domestic demand through increases in oil production, perhaps through adding new reserves and making capital investments required to extract and market more oil.

²⁴ DiPaola, Anthony and Yuji Okada. “Saudi Aramco Plans ‘Massive’ Spending to Extend Field Life.” *Bloomberg*. Oct. 14, 2013. Note that Saudi prince Turki al-Faisal suggested in 2013 that the kingdom would need to increase production capacity to 15 m b/d, but Naimi disputed that statement saying that the kingdom’s long-term production forecasts did not call for any such increase in capacity. See: Said, Summer and Keith Johnson. “Rift Emerges Over Saudi Oil Policy.” *Wall Street Journal*. Apr. 30, 2013. [<http://online.wsj.com/news/articles/SB10001424127887323528404578454683761056470>]

It is important to recognize that all oil-exporting states, including those no longer exporting, face or have faced the winding down of exports in favor of domestic demand. For example, China and the United States were once net oil exporters, but increased demand transformed them into net importers. Indonesia has recently reached this point, and Egypt and Malaysia are nearing it.²⁵ For the Gulf monarchies, the demise of exports is being hastened by trends in domestic consumption:

- Bourland and Gamble’s 2011 study for Jadwa Investment finds that for Saudi Arabia, “if local oil consumption continues to grow at the same pace that it has over the last eight years, then by 2020 it would reach 3.9 million barrels per day and by 2030 it would be 6.5 million barrels per day. Extending the trend even further, by 2037 domestic consumption would exceed the Kingdom’s current production and by 2043 it would be greater than current production capacity of 12.5 million barrels per day.”²⁶ (Fig. 1.3)
- Lahn and Stevens’ 2011 study, one of a number of Chatham House research papers examining depletion trajectories among oil producers, projects in its business-as-usual case that Saudi domestic consumption will displace exports by 2038, despite a rise in production capacity to 13.1m b/d.²⁷
- Gately, al-Yousef and al-Sheikh argue that major international energy forecasters, including the IEA, BP and US Department of Energy (DOE), have serially underestimated growth in Saudi domestic demand, and as a result are most likely overestimating future Saudi supply to world oil markets. They argue that these forecasts rely on Saudi consumption growth of less than 2%/year when historical yearly average growth has been 5.7%. The authors forecast that “continued high growth rates for domestic oil consumption are more likely than the dramatic slowdowns projected by IEA, DOE and BP.”²⁸
- A Citibank research report in 2012 forecast that, at continued 8% yearly growth in peak electricity demand, and no changes in the current electricity feedstock mix (more than half of which is comprised of crude oil, fuel oil and diesel), Saudi Arabia would quickly become a net oil importer: “Our analysis shows that if nothing changes Saudi may have no available oil for export by 2030.”²⁹

Public statements of policymakers and executives have backed up these findings on the role of subsidies in demand and the subsequent threat posed to exports and revenues, as have my interviews. For instance, Saudi oil minister Ali Naimi predicted oil consumption would double by 2030 – a

²⁵ See, for example: Krauss, Clifford. “Oil-Rich Nations Use More Energy, Cutting Exports.” *New York Times*. (Dec. 9, 2007) [<http://www.nytimes.com/2007/12/09/business/worldbusiness/09oil.html>]

²⁶ Bourland and Gamble 2011, 22

²⁷ Lahn and Stevens 2011; see also Mitchell and Stevens 2008; Stevens and Mitchell 2008

²⁸ Gately, Al-Yousef, and Al-Sheikh 2012

²⁹ Rehman 2012

forecast which uses a lower level of growth than those which extrapolate from historical trends – and called for a “highly efficient rationalization program with the participation of the public and private sectors and all citizens in order to reduce consumption.”³⁰ Ahmed al-Khateeb, CEO of Jadwa Investment, argued that energy consumption could only be reduced by raising prices, which, he said, should be levied on all but the poorest. “While we all like cheap energy and water, the government has to revise its system of offering subsidies. An individual, whether Saudi or expatriate, with an income of SR10,000 should pay the global market price of electricity and fuel. The government's subsidies should not be applicable to them.”³¹ Oman’s energy minister was most blunt. “We are wasting too much energy in the region and the barrels that we are consuming are becoming a threat now, for our region particularly... I think we have a serious problem,” Mohammed bin Hamad al-Rumhy said during an energy conference in Abu Dhabi. “What is really destroying us right now is subsidies... We simply need to raise the price of petrol and electricity. In some countries in our region electricity is free and you leave your air conditioning for the whole summer when you go on holiday. That is really a crime. Our cars are getting bigger, our consumption is getting bigger and the price is almost free. So you need to send a signal to the pockets of the public.”³²

1.3.6 If exports are thus reduced, export revenues will be impaired

The final link in the chain of subsidy effects is that which projects that, if exports are reduced, state revenues from hydrocarbon exports will also be reduced. This assumption is based on a declining volume of oil exports and corresponding revenues. Indonesia, a onetime major oil exporter and former member of OPEC that has also grappled with energy subsidies, has already experienced these effects. Indonesian oil exports declined after reaching their peak of nearly 1.4 million barrels per day in 1978. Oil rents as a percentage of GDP also began to trend downward, albeit with periodic interruptions from increases in oil prices. (Fig. 1.4) A similar fate may await GCC oil exporters. In the long term, reduced exports will probably mean reduced oil rents in GDP. However, the two are not perfectly correlated. A sufficiently large increase in oil prices could outweigh a decrease in export volumes and bring an increase in oil rents, as happened in Indonesia when prices spiked in 1979 and rents shot up from 13% to 30% of GDP, despite a drop in exports. A reduction in GCC oil exports – unless it was preceded by receding external demand – could *by itself* raise market prices and export revenues. Thus, given the right market conditions, a loss of exports from Saudi Arabia or another key supplier that coincided with an environment of strong oil demand could wind up augmenting revenues, at least temporarily. However, in the long run, as demand adjusted or new sources of supply were brought on stream, a decline in exports is most likely to result in a decline in revenue and GDP contribution.

³⁰ Dourian 2012

³¹ Arab News. “Al-Khateeb: Energy subsidies need review.” Feb. 19, 2013. [<http://www.arabnews.com/al-khateeb-energy-subsidies-need-review>]

³² Fineren, Daniel. “Oman oil minister slams Gulf culture of energy subsidies.” *Reuters*. Nov. 10, 2013. [<http://www.reuters.com/article/2013/11/10/gulf-energy-subsidies-idUSL5N0IV07V20131110>]

After 1985, Indonesia's oil exports reached this long-run state, remaining a smaller contributor to GDP than they had when exports peaked in 1978.



Figure 1.4: Effects of Declining Oil Exports on Magnitude of Oil Rents in Indonesia (Source: IEA-exports; World Bank-rents)

Factors beyond domestic demand may also impact exports of oil from the Gulf monarchies. Conceivable possibilities include internal disruptions to production, embargo, importers' energy security concerns or reactions to the global climate change agenda. Whatever the cause, past experience has shown that reduced exports tend to correlate with reduced rents over the long term. This dissertation does not consider the political effects of such scenarios because they offer little insight into the robustness of rentier political structures that describe energy subsidies as citizens' rights.

1.3.7 Other Assumptions and Definitions

Sustainability: This dissertation uses the term "sustainability" in the more typical dictionary sense, i.e. "the ability to be sustained, supported, upheld or confirmed," rather than in the ecological sense of maintaining biological diversity or sustaining human life on the planet, or the economic sustainability debate about intergenerational equity,³³ or even the Brundtland Commission's definition of sustainable development which refers to ability to meet the needs of the present without

³³ See, for example, Anand and Sen 2000

compromising those of future generations.³⁴ Sustainability for my purposes refers to the ability of states to calibrate political economies in a way that aligns domestic energy needs with those of the export sector.

Regime vs. State: By regime, I refer to governance that concentrates power in the hands of a certain social group. The regime endures beyond changes in government if the new government is led by the same social group.³⁵ By contrast, the state is the “inclusive concept that covers all aspects of policymaking and enforcement of legal sanctions,” as Larson writes. Thus the state also endures beyond changes in government, but comprises a more structural institution (or system of institutions) than the more socially derived regime.³⁶

Political Stability: When using this term I mean simply that the political environment is predictable. By political instability, I refer to the propensity of a government to collapse.³⁷ I acknowledge, like Shepherd, that a stable or durable political environment can also involve long-term dependence on aid or governance by corrupt and authoritarian regimes, along with practices that can inhibit foreign investment and economic growth.³⁸ However, since these factors do not comprise key phenomena for my study, I accept the more simple definition above.

Other forms of legitimacy: Regime provision of subsidized energy is one legitimacy-generating practice among many that play a role in the complex relationship between ruler and citizen. While this dissertation focuses on energy subsidies because of their role in the demand equation and what I believe is a flawed portrayal of their significance in the literature, I acknowledge that several other factors contribute to regime legitimacy, among them other forms of rent distribution and patronage, as well as personal charisma that is linked to traditional fealty to sheikhs as “royals;” long records of achievements in development; proven records of survival in times of crisis; rulers’ international stature and reputation as skilled handlers of international relations; traditional and local legitimacy flowing from conscious adherence to elements of tradition, as well as to local kinship ties and frequent social interaction; and even religious legitimacy.³⁹ A substantial volume of literature on legitimacy examines these issues in far more detail than is possible here.

Regimes that cannot reform subsidies are not necessarily doomed: As the findings of Chapter 6 show, actual political conduct does not follow the input-output assumptions of rentier theory, which imply that a decrease in patronage must be followed by a corresponding increase in repression or in

³⁴ United Nations World Commission on Environment and Development (aka Brundtland Commission) 1989

³⁵ Calvert 1987, 18; Fishman 1990, 428; S. Lawson 1993

³⁶ Larson 1980, 19; cited in Lawson 1993

³⁷ Using the definition from Alesina et al. 1996

³⁸ Shepherd 2010

³⁹ Nonneman 2005 Also see: Abdulla 2010, Schlumberger 2010, and Nonneman 2006

political participation. In Chapter 5, I follow the literature's reductionist logic and hypothetically suggest that regimes which cannot reform subsidies will fall or undergo changes in character, compensating for the reduced patronage by either becoming more democratic or repressive. While these sorts of reactions are possible, they are not inevitable. First, economic diversification as seen in Dubai offers an avenue toward new sources of rents and preferential business options which can also bolster support for the regime. Second, reforms do not necessarily require a quid pro quo, as Dubai has also demonstrated. Other iterations are also possible. Third, Chapter 6 shows that the public appears more accepting of reform than portrayed in the literature, which suggests that regimes have more room for maneuver – potentially due to the array of non-patronage legitimacy resources listed above – than some authors suppose.

1.4 External Factors

Reforming the Gulf subsidy conundrum is crucial for the countries involved, of course. But, as the IEA argued in 2008, it is also important for global markets and the world economy, so dependent upon continued energy supply from the Gulf. My research focuses on circumstances inside the countries identified, but it is worthwhile to mention the external environment. Consumption trends point to a premature, albeit long-term, erosion of Gulf oil export capacity, and the simultaneous transformation of the region into a substantial importer of natural gas. Successful reforms of subsidies would enable the imposition of energy efficiency measures that could slow these trends, but, as mentioned, these reforms risk undermining citizen support for regimes.

The uncertainties raised about the GCC's ability to maintain its role as a key global energy supplier have attracted surprisingly little urgency from institutions representing importing countries. The issues illustrated here appear to have been overshadowed by the concurrent supply shock from US tight oil and gas, and other major finds off Brazil, East Africa, the Levant and elsewhere. These increases in supply coincide with and have outpaced sluggish growth (at the time of writing) in global demand for oil and gas.⁴⁰ The unexpected appearance of new non-OPEC supply may thus have muted the urgency of any reduced long-term export potential from OPEC.

Further, experts and policymakers interviewed for this research expressed assumptions that the Gulf monarchies, led by Saudi Arabia, would be able to reduce or even stop growth in domestic demand for export commodities through various policy adjustments (few of which had been enacted at the time of writing). These include reducing subsidies, as well as by generating more power through gas, nuclear and renewables; and by imposing greater efficiency (some of it legally mandated) in buildings, vehicle fleets and cooling systems. A senior analyst who forecasts long-term international

⁴⁰ IEA Medium Term Oil Market Report 2013 [http://iea.org/media/news/MTOMR_2013_OVERVIEW.pdf], IEA Medium Term Gas Market Report 2013 [<http://www.iea.org/Textbase/npsum/MTGMR2013SUM.pdf>].

oil demand at the US Energy Information Administration (EIA) said: “We do expect Saudi Arabia will make necessary changes to retain its position as a major oil exporter over the next decades.”⁴¹

Other scenarios are certainly possible. Threats to spare oil production capacity in the Gulf could also be magnified by, perhaps, a return to faster growth in oil demand, especially among the non-OECD countries; or a sustained supply outage; or disappointing output from one or more recently booked sources of supply. The EIA adds that uncertainty among major exporters over “strategic choices” (presumably in infrastructure investment and demand management) adds to market uncertainty about future supply and prices.⁴²

The pan-Arab uprisings of the Arab Spring – accompanied by major anti-government demonstrations elsewhere – broke out during my research, and have dampened enthusiasm and expectations for subsidy reform.⁴³ While Arab republics with long-serving autocrats bore the brunt of the uprisings, the Gulf monarchies were not immune. The Bahrain uprising of 2011 brought a significant portion of the population into the streets, triggering a brutal crackdown and intervention by the Saudi and Emirati militaries. Bahrain’s Sunni monarchy survived, but the virulence and scale of the uprising appear to have alarmed all of the Gulf ruling families. Oman, Kuwait and Saudi Arabia weathered less severe demonstrations, which nonetheless saw the army called in and protesters killed in Oman, the parliament building overrun in Kuwait, and killings of Shia demonstrators by Saudi security forces in the Eastern Province.⁴⁴ Ruling families also responded in ways meant to shore up citizen support and demonstrate the perils of dissent, mixing salary and benefit increases with criminal prosecution of opposition figures.

The uprisings have not just undercut impetus to reform domestic energy demand, but subsequent increases in social spending are thought to have constrained funds available for investment in supply-side infrastructure. Even before the pan-Arab uprisings, the region’s national oil companies were less revenue-efficient than their international (IOC) counterparts.⁴⁵ The Arab Spring served to expand the social welfare and job-generation roles of NOCs, which further reduced their investment capacities.⁴⁶ NOC revenue inefficiency may indeed worsen as Gulf governments increase distributive outlays to reduce the potential for unrest, while diverting oil and gas into industrial projects that aim to produce jobs. Further, financially stretched NOCs may be less able to pursue domestic gas-for-oil substitution investments, which often entail financial incentives for foreign investment in the unprofitable

⁴¹ Author interview (via email) with Linda Doman, long-term oil demand analyst, International Energy Outlook, US Energy Information Administration, Jan. 7, 2013.

⁴² EIA, Annual Energy Outlook 2013, Executive Summary.
[http://www.eia.gov/forecasts/aeo/chapter_executive_summary.cfm]

⁴³ Quantified in expert elicitation results in Chapter 5.

⁴⁴ Matthiesen 2012 provides detailed coverage of the underreported Saudi uprising.

⁴⁵ Hartley and Medlock III 2013

⁴⁶ Marcel 2006, 229-231, describes NOC social welfare functions and effects on investment.

upstream gas sector.⁴⁷ Finally, the region's rising risk profile may also deter outside investment, since technological advancements allow for renewed focus on depleting fields and unconventional resources in more stable locales.⁴⁸ For these reasons and others, the Gulf states appear unlikely to initiate substantial increases in export capacity.

It is possible that supply uncertainties will prompt external actors to weigh in on the Gulf's demand conundrum. The GCC countries have shown susceptibility to outside pressure in the past, particularly in evidence during Saudi Arabia's economic reforms ahead of joining the WTO.⁴⁹ Rising carbon emissions could present another opportunity for international pressure, given the climate change implications of the region's world-leading per-capita emissions output. Aggregate GCC emissions are nearly as large as those of Japan, despite a population less than a third as large.⁵⁰ The IEA and IMF have made recent high-profile calls highlighting the role of fossil fuel subsidies in climate change. A recent IEA report found that an unspecified "partial" reduction in consumption subsidies would accomplish about 12% of the carbon emissions reductions required to meet the target associated with the 2-degrees-by-2020 goal.⁵¹ The Gulf monarchies' status as large suppliers, subsidizers and consumers of fossil fuels exposes them to any shift in international opprobrium on climate change.

* * *

The intricacies of the Gulf energy conundrum create a fascinating puzzle for scholars as well as policymakers. Understanding the motivations behind policy provides insights into state-society relations in autocracies, and in economies dominated by energy exports. The research question that drives this scholarship is appealing on two levels. Energy policy reforms pose a challenge to the most important academic theories of governance of these rentier states, while also giving a window onto the potential for survival of these seemingly anachronistic, now nearly unique, governance systems.

⁴⁷ Darbouche and Fattouh 2011

⁴⁸ IEA Medium Term Oil Report 2013.

⁴⁹ Covered in Hertog 2010a

⁵⁰ BP 2012

⁵¹ International Energy Agency 2013b

Chapter 2: Literature Review

2.1 Introduction

The goal of this chapter is to present an in-depth review of the literature on rentier states and other resource-exporting political economies, and investigate the factors that set such states apart from others. An understanding of the literature will assist in assessing questions about the sustainability of the rentier energy practices that concern this thesis. The chapter details works from all phases of rentier theory, from the classic phase that reflected a simpler era of undeveloped states undergoing the initial impact of an oil boom, to the most recent works which have incorporated substantial revisions to compensate for the deepening complexity within these states. I widen the pool of literature to touch upon scholarship examining social contracts and the expectations of citizens regarding welfare benefits. Works examining postwar “retrenchment” of social welfare cutbacks elsewhere offer insights into the creation of benefit constituencies and the unpopularity and political risks of reform. Theories of political violence, especially those dealing with the social-psychological concept of “relative deprivation,” offer another rationale for the “stickiness” of consumption subsidies.

Finally, assembling this puzzle involves disentangling subsidies from rentierism to examine the state’s perception and treatment of natural resources. This includes the economic value with which resources are assigned within the state’s overall portfolio of assets and whether those resources are being depleted in an optimal manner. Works on these topics can provide a window on the relative tradeoffs faced by regimes and the resulting opportunity costs in terms of foregone investments and intergenerational equity. I conclude the literature review by contrasting the differing views of subsidy retraction within the various literature strands, and present a revised theoretical framework for examining consumption subsidies in the rentier state.

* * *

The ideas behind rentier theory begin with a simple idea: There is no such thing as easy money. This notion – that unearned wealth is a route to trouble, even poverty – is a long-held one. Those whose wealth flows not from work or financial risk but from unearned rents have been maligned for centuries. Fourteenth century historian Ibn Khaldun denigrated “weak minded” opportunists who “discover property under the surface of the earth and make some profit from it.”⁵² The 16th century French philosopher Jean Bodin wrote that “Men of a fat and fertile soil are most commonly effeminate and cowards” while “a barren country makes men temperate by necessity, and by consequence careful, vigilant and industrious.”⁵³

⁵² Khaldūn 2005, 301

⁵³ Quoted in Sachs and Warner 1999

The idea that easy wealth undermines competitive instincts and the work ethic has also been extended to states. Adam Smith surmised that the need to overcome poverty was one of the chief catalysts for building an effective state, while quick riches wrought the reverse: 16th century Spain, its rentier nobility awash in gold and silver bullion from the New World, slipped to the verge of famine, gyrating into bankruptcy and succumbing to a bout of the plague. Karl quotes an economist of the era lamenting that “if Spain has no gold or silver coin, it is because she has some. What makes her poor is her wealth.”⁵⁴

These simple ideas were forerunners to a body of literature that informs this dissertation. Its works falls under the broad rubric of political economy, with streams that fall on both sides of the political science-economics divide. Most relevant here are works in rentier state theory, which Herb describes as “the most influential theoretic paradigm in the study of the comparative politics of the eastern Arab world” which “has increasingly been applied to the study of natural resource exporters in other regions.”⁵⁵ Also useful is related scholarship that explores the hypothesis of the “resource curse.” Rentier state theory argues that externally sourced rent, when it forms the chief source of a government’s revenue, influences (some say determines) a country’s politics, which tend to be authoritarian because rents displace taxes in government revenues. The resource curse literature tries to prove (or disprove) that reliance on commodity exports, especially oil, undermines economic growth or democracy.

While both streams examine issues relevant to energy consumption in the Gulf monarchies, rentier theory presents the most relevant theoretical lens for a work dealing with the energy sector, which happens to be the *engine* of the rents that support these political economies. Thus energy production, domestic consumption and rent-generating export sales are closely intertwined. The rentier literature is best placed to host a discussion of the role of energy distribution within overall rent distribution, since rentier works already predict the effects of rents on state-society relations and describe the manner in which regimes use distribution to cultivate political support. By contrast, the more quantitative resource curse works tend to overlook these links in favor of measuring statistical variations in political participation or economic performance among panels of oil exporting countries.

Rentier works are also germane because they tend to be tailored to the Gulf region and context. They are usually written from the regime standpoint, which provides a useful perspective for understanding choices in public policy that at times appear to contravene economic logic. Regime motivations tend to be understood as complying with and bounded by the state-society social contract, the importance of which is regularly echoed in casual conversations about policy formulation in the region. This

⁵⁴ Karl 1997, 32–40; the economist quoted is Martin Gonzalez de Cellorigo.

⁵⁵ Herb 2002

transportability makes the rentier framework for evaluating everyday politics, which cannot be matched by the comparative statistical calculations of the resource curse literature.

Finally, this thesis is concerned with rentierism because it will *revise* some of the theory's established views, especially those on rent distribution, while documenting threats to rentier systems from maintaining these practices, which rentier scholars tend to associate with political stability. For that reason, this research engages to a lesser extent with other explanations for autocracy, such as works espousing historical factors or political culture considerations, which – while offering useful explanations for variations in political behavior – are less central to a discussion of energy policy which, necessarily, is so tightly interwoven with rent.

As Luciani observed, natural resource rentierism and the curses or blessings of resources are temporary phenomena.⁵⁶ At some point, and for varying reasons, oil exporters stop exporting. Economies either diversify or face profound social and economic challenges. My research puzzle concerns these ideas, that oil and oil rents have helped cement near-absolute monarchs in power long after the demise of this form of government elsewhere. These resources are vitally important for maintaining the social contract between family-based regimes and their citizens into the future. Yet, despite the importance of these resources, Gulf monarchs been largely unable to curb the domestic resource consumption that could jeopardize their exports. How does the extant literature describe the possibility of reform? How robust are the limitations it perceives? These questions inform the literature review that follows.

2.2 Economic Rent and Resource Depletion

Rentier theory is predicated on political economies that depend on economic rents, which are usually described as excess returns originating from a situational or natural resource advantage. The concept of economic rent dates to the earliest endeavors in economic theory, but David Ricardo's 1821 interpretation of rent as a "gift of nature" remains among the most useful when examining rents associated with oil production.⁵⁷ Mineral resource rents typically comprise income paid to landowners that extends beyond the opportunity cost of production. In the case of petroleum, the rent portion is generally accepted as the surplus left over after oil is sold, and allowances are made for the costs of exploration, production, transport, refining and marketing. In low-cost states like those in the GCC, rent typically makes up 90 percent or more of the gross receipts from international sales.

While the Gulf ruling families' collection and deployment of hydrocarbon rents is the focus of this work, it should be noted that the oil rents that began to flow in the 1930s – and especially after 1973 –

⁵⁶ Luciani 1987, 81–2

⁵⁷ Ricardo 1817; 191-2

were channeled into a pre-existing framework for collecting and distributing rents based on the “situational” advantages described by early theorists such as Ricardo and Adam Smith before him.⁵⁸ Foley shows how the al-Saud relied on Hajj fees to fund as much as half of the state budget before the onset of oil. The Hajj rents allowed the al-Saud to build a base of clientelist allies while avoiding the extraction of taxes. Even then, dependence on external rents appears to have left the pre-oil state just as vulnerable to cyclical forces as is the case with present-day budgeting, which depends on international oil prices. During the Great Depression and World War II far fewer pilgrims traveled to the holy cities, severely undermining the Saudi budget.⁵⁹ Davidson offers similar evidence to show how tribal rulers in nearby Sharjah and Dubai collected rents from Britain in return for aircraft landing rights, and used those rents to buttress their positions. The same families retain power today.⁶⁰ The idea is that rents did not create regimes or even the allocative framework used to distribute those rents; rather rents accentuated and strengthened these pathways. In doing so, rents helped increase regime durability.

2.2.1 Resource Depletion

Rent earned from an “imperishable” locational or situational advantage based on ownership of land is distinct from rent earned by mining that land for the depletable resources that lie beneath the surface. In 1914, Lewis Cecil Gray argued that decisions to exploit natural resources needed to account for their limited long-run availability, including the possibility of total exhaustion.⁶¹ Works by L.C. Gray and other early resource scholars argued that maximizing social welfare required policy intervention by governments, rather than allowing markets too much influence over rates of production. Theories of depletion that grew from the early literature refined these views in the interest of intergenerational equity, while later work warned of a path-dependent trap for states that undervalue natural capital.

In 1931 Hotelling argued that there was an *optimum* rate of oil and gas production which tended to be exceeded when control was left to industry. He held that government taxes and drilling prohibitions were required to stem the “great wastes” stemming from what he described as “peculiarities” in the oil and gas sector. These include the “suddenness and unexpectedness of mineral discoveries, leading to wild rushes.” In particular, Hotelling decried the loss of huge volumes of oil and gas from the practice of mineral rights holders drilling multiple “offset wells” into a single field. Mineral rights ownership in North America, distinct from state ownership elsewhere, incentivizes property owners to favor current over future production, because by delaying they would otherwise bequeath their share of the resource to neighboring property owners. These zero-sum practices often resulted in storage and

⁵⁸ A. Smith 1776

⁵⁹ Foley 2010; 23-4

⁶⁰ Davidson 2005; 35-7. See also Krane 2009; 35-6

⁶¹ L. C. Gray 1914.

transport infrastructure being overwhelmed, reduced market prices and profits, and subsequent uneconomic consumption, along with resources wasted through flaring and venting.⁶²

More recent work by resource economists focuses on *sustainable* depletion, in which the state⁶³ is endowed with a duty to maximize the national wealth upon which state income is based, and to which petroleum resources contribute. An important aspect of sustainable depletion is intergenerational equity, which holds that resources should be shared equally by current and future generations.⁶⁴ Discussions of intergenerational equity revolve around economic diversification, in which depletion policies should leverage exhaustible resources to develop the non-oil economy and prepare the country to gradually replace depleting resource sectors. Authors such as Stauffer, John Mitchell, Stevens and Mitchell, and Heal maintain that oil and gas are assets in the wealth portfolio of a state, a ledger which also includes financial and capital assets.⁶⁵ By producing hydrocarbons, depletable resource stocks are converted into cash, which represents a transfer of one type of asset to another. Thus, revenues from sales of natural resources should not be considered income. Sustainable depletion requires conversion of below-ground assets into forms of above-ground wealth, which include investments required to maintain production within the oil and gas sector itself, but also those which can generate income for future generations. Heal, like Stauffer, argues that oil revenues should not be reflected in GDP figures, since these revenues stem from disposal of an asset rather than earnings.⁶⁶ Heal contends that a country becomes poorer by spending resource income for any purpose other than capital investment which offsets the decline in resource stocks.

A counterpoint to this argument is found in a 2012 article by Luciani which argues that standard measures underestimate diversification in oil-dependent economies like those in the Gulf. Significant rent is required to buy political consensus in the same way that governments in democratic countries use shares of tax revenue to buy consensus. What matters, Luciani argues, is that the GCC countries still manage to invest sufficient resource rents in diversification.⁶⁷

The diversification imperative, write Stevens and Mitchell, should compel states to follow disciplined resource depletion practices that conform to geological conditions and maximize economic and social welfare. This boils down to optimizing the level of production. Rationale for slowing oil and gas

⁶² Hotelling 1931

⁶³ Outside North America, where mineral rights can be bought, minerals are property of the state, or the state is the legal guardian for the nation. Even in North America, the state oversees offshore resources and those on public land.

⁶⁴ Intergenerational equity has spawned a large volume of literature, including works by detractors who argue that it is often better to consume now rather than preserve for future generations. Hartwick's work offers a strong argument in its behalf, while Asheim reviews the various strands. *See*: Hartwick 1977; Asheim 2010

⁶⁵ Stauffer, Thomas 1987; J. V. Mitchell 2006; Stevens and Mitchell 2008; Heal 2007

⁶⁶ Heal 2007; Stauffer, Thomas 1987

⁶⁷ Luciani 2012; 9

production includes onset of “resource curse” factors (discussed below) as well as expectations for higher future prices, such that the value of the oil in the ground increases faster than the rate of return on financial assets purchased through oil sales. At the same time, rates of production must be balanced with the use of oil income for diversification. Development of a non-hydrocarbon sector insulates the economy from oil market volatility, and may also create industrial sectors that can provide jobs and income. In the short run, oil producers can diversify by investing in profit-generating assets abroad, such as those held by so-called sovereign wealth funds. However, while these investments carry advantages in terms of imposing fiscal discipline and bringing in non-oil revenue, they present weak substitutes for the longer-term broadening of the domestic economy.⁶⁸

Segal declares in more sanguine fashion that citizens of resource-producing countries “rightly feel that their natural resources belong to them and that they have a right to benefit from them.”⁶⁹ But he argues that current distributive practices, such as subsidies on electricity and fuel consumption and public sector overemployment, represent regressive and inefficient methods of allocation. Segal, like authors cited in Section 5.3 below, advocates distribution of rent in its most parsimonious form, as cash. Poverty alleviation, he argues, offers the best opportunity for maximizing intertemporal social welfare, the crux of depletion policy.⁷⁰

A more accepted paradigm among resource economists calls for depreciation of natural capital as it is consumed, on the logic that natural resource stocks should be incorporated into national accounts, with withdrawals such as oil production counted against yearly measures of net national product.⁷¹ Hartwick proposes a simple way of tallying the accounts by deducting the earned rents against the amount of resource consumed in a given period. In this way, the natural environment receives a value that incentivizes thoughtful exploitation. When analyzed in this way, the subsidized domestic distribution of natural resources in the Gulf constitutes the simple disposal of natural capital with little or no remuneration. Consumption under these circumstances reduces the economy’s means to diversify, restricts reinvestment into the resource sector, and gives rise to depletion of an exhaustible resource without the capture of its full value. Dasgupta argues that early resource undervaluation produces a deeply ingrained path-dependence that can only begin to be addressed through appropriate price signals.

“When environmental resources are free, there is absolutely no incentive to economize in their use. Technological innovations which are profligate with them look profitable, certainly more so than they ought to look. Over time, an entire sequence of resource-intensive

⁶⁸ Stevens and Mitchell 2008

⁶⁹ Segal 2011a

⁷⁰ Segal 2011a

⁷¹ Dasgupta 1990; Dasgupta and Heal 1979; Hartwick 1990

technologies is thus installed. And, if we add to all this, the fact that there are often strong learning-by-doing and learning-by-using effects, even at the stage of research and development, we arrive at a depressing conclusion: it may require a big push to move societies away from their current profligacy in the use of environmental resources.”⁷²

In other words, natural resources are “too cheap for the good of future generations,” to borrow from Hotelling’s still relevant 1931 argument, and “in consequence of their excessive cheapness they being produced and consumed wastefully.”⁷³

2.2.2 Resource Curse Arguments

Whereas the economics literature above argues that bad decisions about resource investment and valuation can lead to waste and squandered natural capital, another set of scholars argues that it is the natural resource endowments *themselves* that produce bad outcomes for societies and economies. This hypothesis runs counter to prior assumptions that held that large deposits of natural resources like oil and gas provided countries with means to reduce poverty and promote development more readily than states lacking these endowments. Yet empirical studies have shown that resource-poor countries have outperformed their resource-rich counterparts for long periods, due to a phenomenon known as the “resource curse.”

Like the rentier literature, resource curse works argue that rents are behind deficiencies in development. But while rentier scholars focus on the sociological and political impact of rents, most resource curse scholarship examines macroeconomic factors. It argues that commodity export dependence shapes economies in ways that make them underperform their resource-poor counterparts, exposing them to “Dutch disease” effects of currency appreciation, which harm non-oil exports such as agricultural products or those from domestic manufacturing sectors.⁷⁴ Sachs and Warner use econometric methods in an attempt to explain the poor performance of petroleum exporters after the first oil shock. Their study of growth across 95 developing countries claims that large revenue inflows had undercut development; exports of agriculture, minerals and fuels were negatively linked to growth between 1970 and 1990.⁷⁵ Likewise, Auty finds that per capita incomes grew two to three times faster in resource poor countries than those well-endowed, between 1960 and 1990.⁷⁶

⁷² Dasgupta 1990

⁷³ Hotelling 1931

⁷⁴ In so doing, Dutch disease can also trigger political unrest even during boom periods, while the so-called “demonstration effect” of increasing wealth disparity can lead to perceptions of relative deprivation and political dissatisfaction among broad segments of the population. Resource curse literature is ably reviewed in: Stevens 2003. Demonstration effects are described by: Wayne Nafziger and Auvinen 2002

⁷⁵ Sachs and Warner 2001; 14

⁷⁶ Auty 2001 cited in Stevens 2003

A separate stream of the resource curse literature uses large-*n* studies to seek correlations between natural resources and autocracy. These latter works overlap in many ways with rentier theory and will be visited in Section 2.3. Both the rentier and resource curse streams examine the effects of relying on external rents, which – when captured by the state – allow the government to finance expenditures without building institutions for taxation and penetration of society, and allow political elites to “buy” public consent by creating dependency among the citizenry.⁷⁷ Thus commodity flows are said to correlate with authoritarian and clientelist politics while stifling institutional robustness.⁷⁸ Some scholars extend the resource curse to mistreatment of minorities and women⁷⁹ and allowing autocracies to finance development of state security apparatuses that make them more repressive and prone to conflict.⁸⁰

More qualitative resource curse scholarship portrays oil-rich “petro-states” on path-dependent trajectories set by decisions made in the early stages of their development. Karl, (but also Anderson 1987, and Hertog 2010) write that reforms in hydrocarbon-exporting Middle East states are rarely tackled head-on, by challenging the citizen-clients with government extraction, but through spending that creates parallel institutions. Karl finds this true in Venezuela, Iran, Algeria and Nigeria,⁸¹ and Hertog in Saudi Arabia. By pursuing spending solutions, problems tend to become unmanageable. The institutional setting becomes a barrier to change, expanding state jurisdiction and weakening its domestic authority. Political survival dictates “profligacy and waste,” writes De Soysa, rather than provision of public goods.⁸²

While autocratic effects will be discussed below, it appears that the economic effects of the resource curse thesis may have been influenced by a nearly two-decade drought in oil prices which coincided with the period under study. Since 2002, IMF data show that economies dominated by resource exports have performed about twice as strongly, on average, as the world.⁸³ Further, even during the oil bust, resource effects were far from uniform.⁸⁴ Mikesell writes that the difference between the “cursed” states and those deriving a “blessing” from their resource export booms came down to the regime’s management prowess, rather than any inexorable result of exports. Venezuela’s debt problems and its loss of agricultural and industrial production were caused by bad government

⁷⁷ Karl 1997

⁷⁸ DeSoysa 2006

⁷⁹ Ross 2012

⁸⁰ Bueno de Mesquita and Smith 2010; Bellin 2004

⁸¹ Anderson 1987; Hertog 2010a; Karl 1997

⁸² DeSoysa 2006; 49

⁸³ 6.4% GDP growth on average, among major hydrocarbon exporters, versus 3.8% for the world, on average: Gross Domestic Product, Constant Prices, from International Monetary Fund 2012

⁸⁴ In his survey of the literature, Stevens writes that some states – Chile, Botswana, Norway and Indonesia among them – used resources to derive clear benefits for society. Stevens 2003

management, while Chile's avoidance of those excesses stems from better policy.⁸⁵ More recent work finds that countries with high-quality institutions were able to use them to raise aggregate incomes, while countries with poor institutions succumbed to rent-seeking that acted as a drag on growth.⁸⁶ Stevens argues that the effects are more accurately described as a "resource impact."

Meanwhile Brunnschweiler, along with Alexeev and Conrad, take aim at the central theme of the resource curse hypothesis, and the work of Sachs and Warner.⁸⁷ They find no evidence that oil harms economic growth or damages institutions like government effectiveness and the rule of law. On the contrary, the authors declare that oil *helps* economic growth. The argument of Alexeev and Conrad is simple: If country A has higher GDP per capita than country B, then country A must have experienced higher economic growth over the long term. Brunnschweiler's conclusions rely on measurements of a state's "natural capital" per capita, rather than Sachs and Warner's use of export data. These papers back up earlier findings by Herb (discussed below) that rentierism has not harmed institutions, because, counterfactually, these states would have been among the world's poorest if they had not produced oil, and their institutions would have been no better. The worst that can be said, Alexeev and Conrad argue, is that resource rents have not improved institutions.⁸⁸

2.3 Rentier State Theory

Resource economics and the resource curse literature delve into macroeconomic and institutional effects of reliance on hydrocarbon exports. But my research is interested in the sociopolitical effects of resource reliance, and in particular the political structures linked to domestic *demand* for in-kind resources, as distinct from resource exports and rents. It is rentier theory which provides the best environment for exploring these themes.

Rentier theory was developed by economists to explain the longevity of family-based regimes that persisted in the Middle East long after the demise of this form of governance elsewhere, and as a response to the failed predictions of modernization theorists who declared that rising wealth would bring democracy.⁸⁹ The major contribution of rentier economists was in correlating monarchical longevity with the external sources of state revenues, rather than in declaring it as the product of religion, tribalism or one of the other culturally determined explanations found in once-popular theories of oriental despotism.⁹⁰

⁸⁵ Mikesell 1997

⁸⁶ Mehlum, Moene, and Torvik 2006; Elbadawi and Soto 2012

⁸⁷ Brunnschweiler 2008; Alexeev and Conrad 2009

⁸⁸ Alexeev and Conrad 2009

⁸⁹ Lipset 1959; Huntington 1968, 140–91

⁹⁰ Brynen et al. 2013, 193

Despite a number of challenges that will be detailed below, the core theory retains considerable robustness in explaining state-society relations and predicting regime behavior, especially among the extreme rentiers of the Arabian Peninsula. For a work such as this one, which examines the drivers behind high energy intensity in the region and barriers to reform, rentier theory offers a strong paradigm that illuminates the state's rationale for perpetuating political structures that are commonly understood to undermine its economy. Despite these strengths, the rentier theoretical model contains weaknesses that can be revised to improve its explanatory power.

2.3.1 Basic Premises

The basic premise of rentier theory holds that the massive influx of externally derived economic rent plays a large, perhaps dominant, role in shaping the political and social relationships between state and society. The enduring truth of this basic premise sustains the relevance of rentier theory and its persistent attraction to scholars. The theory and the literature it spawned grew from two origins. First, social scientists attempted to come to grips with the effects of the enormous rent windfalls earned by oil exporting states, particularly after nationalization of oil industries and the 1973 oil embargo, when prices quadrupled. Second, academics needed to explain the durability of autocracy and especially monarchy in the Middle East after the discrediting of works which either predicted its demise⁹¹ or attributed its persistence to culturally derived explanations.⁹²

Rentier theory allowed scholars to move beyond exceptionalist political culture approaches to the region which held that Arab states were prone to autocracy because of patrimonialist or “morally obtuse” tendencies within Islam or tribalism which inhibited their readiness for democracy.⁹³ Instead, rentier theory attributed the nature of politics to economic factors, especially the structure of political economies and their interaction with the world economy. Rentier works argue that inflows of external rents allow governments to “purchase consent” of the governed without imposing taxes, the levying of which is a bedrock element within reallocative or democratic bargains. This exchange of patronage for political acquiescence is enshrined within a social contract, which, in turn, is said to bring rulers

⁹¹ Lerner 1958; Halpern 1963; Huntington 1968

⁹² Such as Oriental Despotism, see: Wittfogel 1957; Ayubi 1995, also political culture approaches cited by Anderson 1995

⁹³ Among the examples in Anderson 1995 are works by Allen Howard Podet (1992) “The Gulf War: Religious and Cultural Considerations,” in Carol Rae Hansen, ed., *The New World Order: Rethinking America's Global Role* (Flagstaff: The Arizona Honors Academy Press), p. 216; Also John Entelis, *Culture and Counterculture in Morocco* (Boulder: Westview Press, 1989), p. 27-28; Also: James A. Bill and Robert Springborg, *Politics in the Middle East*, 3rd Ed. (Glenview, Ill.: Scott, Foresman/Little, Brown, 1990), p. 88-19, 97, 161. Also: Elie Kedourie, *Democracy and Arab Political Culture* (Washington D.C.: Institute for Near East Policy, 1992), p. 1, 5; and David E. Long and Bernard Reich, *The Government and Politics of the Middle East and North Africa* (Boulder: Westview Press, 1986), p. 19.

wide autonomy in decision making, while releasing them from the need to concede democratic participation in policymaking.⁹⁴

The first work to describe “rentier” effects in this way was Hossein Mahdavy’s 1970 case study on the effects of “substantial amounts of external rent” on prerevolutionary Iran. Mahdavy described a complacent monarchy endowed with a stream of hydrocarbon income that provided the means to develop, while undercutting the urgency with which development was pursued.⁹⁵

It was the 1987 release of an edited volume containing the writings of economists Beblawi and Luciani that became the genre’s essential work. *The Rentier State* offered an attractively parsimonious portrayal of a new form of state-society relationship that positioned the state in an autonomous allocative role in which it need not raise income from or consult with society. This condition was the effect of “the oil phenomenon” on the state. Prior to oil, many of the state structures that existed in Arabia required British subsidies to ensure their survival. Oil, Luciani wrote, “drastically changed the picture.” The wealth flowed into territories that were either under colonial administration or had just emerged from it, or which remained quasi-tribal sheikhdoms.

Weak states won financial resources that provided for their independence and allowed the British to exit the region in 1971. Oil energized a pre-existing patronage system that “restructured political life” and “produced a new kind of economy, built on rents,” wrote Crystal.⁹⁶

The oil income stream allowed ruling elites to sideline rivals and cement their families into a more centralized, autocratic governing role.⁹⁷ Groups that played a political role in the pre-oil past, such as merchants and tribal sheikhs, saw their political power replaced by a share of the wealth, sometimes expressed by exclusive import licenses or partnerships with foreign businesses.⁹⁸ The new balance of power greatly favored ruling families. “The merchants’ withdrawal from public politics suggests that participation demands are tied to extraction of taxes . . . Since in the rentier oil economies extraction of wealth from the population by the state does not occur, neither does the demand for political participation.”⁹⁹ In this way, rents permitted the quashing of any tenuous advances toward democracy and funded the rapid construction of the complex distributive welfare states of today.¹⁰⁰

Beblawi assigned rentierism four key characteristics: The predominance of rent situations; the foreign origin of rents; state control of their receipt and distribution, and the participation of a minority in

⁹⁴ Mahdavy 1970; Luciani 1987; Beblawi 1987

⁹⁵ Mahdavy 1970

⁹⁶ Crystal 1990, 6

⁹⁷ Crystal 1990, 6–11

⁹⁸ Gause III 1994, 80; Davidson 2005

⁹⁹ Crystal 1990, 10

¹⁰⁰ Crystal 1990, 6–11; Davidson 2005, 70–96

their generation and a majority in receiving the benefits.¹⁰¹ The result was to separate the state's income from the domestic economy, Luciani wrote. The state's income came from overseas. It did not depend on the skills and productivity of the national population or the support of economic elites.¹⁰² Mahdavy argued that the state was able to achieve financial independence because it did not need to tax or otherwise extract from society. Luciani described a state needing only to "allocate" to citizens, providing them with increasing welfare and prosperity. This state of affairs freed the state from the need to extract income domestically, which requires citizen consent and sets up a legitimacy quandary for the government. Taxpayers would mobilize to demand oversight of the spending of their revenues and "the question of democracy becomes an unavoidable issue."¹⁰³

The link between raising taxes and government legitimacy commonly expressed in the reversal of the adage "no taxation without representation."¹⁰⁴ For an allocative state, that rejoinder might be: "No taxation? No need for representation." In the Saudi case, a pre-existing tax bureaucracy was dismantled.¹⁰⁵ The state was assumed to be liberated from the building of domestic bases of political support or legitimacy, which afforded it wide autonomy to spend rent income as it liked, as long as a portion was delivered to the public.

The policymaking autonomy of rentier regimes is a key concept of the classic literature. Crystal argues that other states in history have leveraged high degrees of autonomy from society, but that oil states were bestowed with an *unusually high level of autonomy from society that was part of a structurally determined process unique to oil*, and unmatched by other exports such as coffee and cotton, which at least required accommodation between rulers and local elite middlemen which control the workforce.¹⁰⁶

Beblawi, Luciani and several other scholars credit the lack of democratic participation as an outcome of rentierism.¹⁰⁷ Given these circumstances, Luciani argued the state did not even need a domestic economic policy, just an "expenditure policy."¹⁰⁸

In the rentier state, dependence on unearned income is said to undercut state accountability, responsiveness and public participation.¹⁰⁹ Collective bargaining is discouraged, and citizens lack motivation (or the political space) to forge civil society groups. Individual rent-seeking options can be

¹⁰¹ Beblawi 1987

¹⁰² Luciani 1987

¹⁰³ Luciani 1987, 73

¹⁰⁴ Luciani 1987; 72-73

¹⁰⁵ Chaudhry 1997, 6

¹⁰⁶ Crystal 1990, 6-7

¹⁰⁷ Crystal 1990; Gause III 1994; M. Moore 1998; Ross 2001; Jensen and Wantchekon 2004; Sandbakken 2006; Yom and Gause III 2012

¹⁰⁸ Luciani 1987, 74

¹⁰⁹ M. Moore 1998; 85

more lucrative than productive activity.¹¹⁰ To use Hirschmann's organizational theory terms, in the richest rentier states, leaving the country, or "exit," involves a loss in income and privilege, and "voice" entails risks. The rational choice is "loyalty" to the regime.¹¹¹ Superficial vestiges of democracy act as pressure valves. For any remaining nonconformists, mild use of repressive apparatus – itself funded by oil rents – is all that is needed.¹¹²

In describing the social effects of hydrocarbon income, Beblawi echoed ibn Khaldun and Jean Bodin, describing the onset of a *rentier mentality*, in which a "break in the work-reward causation" generates a mentality of complacency. In the richest rentier states, economic rewards come from citizenship, not from work or financial risk.¹¹³ Mahdavy, examining Iran in the 1950s and 1960s, found a striking lack of concern about economic and educational underperformance. Foreshadowing the resource curse, he described the widening of development and prosperity gaps between oil-rich and resource-poor countries. In undeveloped countries, this kind of result would lead to alarm and "some kind of political explosion aimed at changing the status quo." But in the rentier state, the urgency for change and economic growth is lacking. "Consequently, the economic and technical backwardness of the rentier states may easily coincide with a more serious kind of backwardness: socio-political stagnation and inertia."¹¹⁴ Yates, in his work on the West African oil economies, describes an "institutionalized largesse" on behalf of the state in Gabon which created among its leadership and citizens an attitude that wealth was an "isolated fact" rather than the result of hard work and sacrifice.¹¹⁵ Minnis extrapolates rentier theory to educational underperformance by Canadian aboriginals and argues that a similar, albeit subnational, centralized distribution has created a "rentier mentality" that incentivizes rent-seeking over education.¹¹⁶

Classic rentier theory holds that the result of rent-based development is institutional weakness. Since rentier states relinquish their extractive capacities, they became unable to mediate, regulate, and understand or represent their citizenry, or to develop legitimate and efficient institutions based on voluntary or compulsory compliance.¹¹⁷ Gause argues that prohibitions on extraction damage national security, because citizens reject obligatory military service.¹¹⁸ Since rent distribution follows political criteria based on traditional relationships and proximity to the ruler, much of the activity in rentier states takes place in informal spaces beyond the reach of formal institutions. The classic rentier

¹¹⁰ Some of these rules are paraphrased from the compendium in Hertog 2010a; 265-6.

¹¹¹ Hirschman 1970

¹¹² Luciani 1987, 74; Wedeen 1999, 27, noted that regimes depend not only on the capacity to eliminate opponents, but as much or more so upon strategies that make such actions unnecessary.

¹¹³ Beblawi 1987, 52

¹¹⁴ Mahdavy 1970, 436-8

¹¹⁵ Yates 1996, 204-11

¹¹⁶ Minnis 2006

¹¹⁷ Schwarz 2008; Ayubi 1995, 400

¹¹⁸ Gause III 1997, 65-6; discussed further in section 1.3.3.2

political economy presents a portrait of “stagnating stability based on a social contract, the mutual obligations of which would perpetuate the separation of state and society and render democratization unlikely, even irrelevant.”¹¹⁹

2.3.2 Revisions to Rentier Theory

The parsimonious and wide-ranging claims of rentier theory’s early “classic” phase have been criticized as deterministic and over-generalized by revisionist scholars, who subjected rentier theoretical claims to close empirical examination inside and outside the Middle East. However, it bears mention that many characteristics and practices of the states the authors described in the 1980s have changed or grown more complex, as Luciani himself acknowledged.¹²⁰ Until at least the 1980s, these states were indeed able to avoid or dismantle taxation, while enjoying rent streams that were proportionally large enough to guarantee jobs and generous benefits to small populations of the day. Rentier distribution practices generated widespread citizen gratitude and regime support, especially given that many in the population harbored first-hand memories of famine, illiteracy and high infant mortality. Family-based regimes did enjoy autonomy, at least for a time, and deployed oil rents as they saw fit, creating the institutions that shaped the modern state.

As these countries developed and populations grew, however, the simplicity of some theoretical tenets became a liability. The literature coped with numerous updates and revisions reflecting the establishment of economic and industrial policies and development schemes, the growth of a politically influential private sector, the loss of state autonomy amid path-dependent institutional design, and the rising expectations of and deference to citizens. Some authors even advocated diluting the effects of oil rents in favor of a reprise of cultural and religious influences. Follow-on works that expanded the rentier genre also substantiated and fleshed out some of the original links between rents and autocracy and underdevelopment, which were left unsupported in the original literature.

One of the most thoroughgoing analyses of rentier theory’s initial missteps is found in Gray’s 2011 research paper, which argues that the classic works enjoyed validity in explaining oil state dynamics from the 1950s until the 1980s, but that their conclusions had been outstripped by the pace of development and increases in complexity of these states and societies. Other works took issue with rentier theory’s simplified explanatory claims, including what Pete Moore termed an excessive reliance on economic factors and disavowal of historical and cultural factors.¹²¹ Still others repudiated its claims of regime autonomy and supplicant societies, pointing to, among other things, varied levels of political participation among states with similar rentier characteristics. As Hvidt has shown, early theoretical notions of the superfluous nature of economic development soon gave way to an

¹¹⁹ Springborg 2013, 302

¹²⁰ Luciani 2005

¹²¹ P. W. Moore 2004

acknowledgement of the tendency toward state capitalist approaches that followed clientelist and neopatrimonial lines,¹²² while Luciani amended his earlier position by documenting the emergence of an autonomous Saudi national bourgeoisie.¹²³

In many ways it is inevitable that scholars would seek to challenge rentier explanations. A theory deployed to explain the remarkable stability and continuity of these seemingly anachronistic regimes has simultaneously coped with transformative socio-economic change in the polities under study. As Crystal writes, "... these regimes have survived precisely because of those transformations."¹²⁴ In other words, as the on-the-ground context adjusts, so has the literature.

Despite the myriad critiques, many authors who find aspects of economic determinism or overgeneralization in rentier theory take pains to emphasize that core tenets of rentier theory remain useful and valid, if less comprehensive in their explanatory power as originally envisioned. For instance, Herb gave more credence for monarchical survival on the unique institutions created by ruling families, but added that these caveats "in no way call into question the need for a rentier state theory, that is, for a theoretical framework to explain the distinctive economic, political, and social consequences of rent wealth."¹²⁵ Pete Moore, Foley and Brynen et al. argue similarly that rent effects remain important, but that oil rent flowed into pre-existing frameworks that dictated how it was deployed.¹²⁶ Examination of these states therefore should not exclude important historical, political and institutional factors, especially those retained from pre-oil days.

Less skeptical are Kamrava and Gray. Writing about Qatar, Kamrava declares that patronage-derived legitimacy reigns supreme. "By far the most central pillar of state power in Qatar is the power of patronage, with the country today being a rentier state par excellence thanks to revenues from hydrocarbon exports."¹²⁷ Gray states that "rents and rentierism are central to an understanding of the nature of Gulf regimes, their durability, their behavior, and the nature of their relationship with society." And while "other non-rent characteristics affect the political dynamics of the region, the explanatory primacy of rentierism should not be under any serious challenge."¹²⁸ Springborg, in his

¹²² Hvidt 2011

¹²³ Luciani 2005

¹²⁴ Crystal 1990, 187

¹²⁵ Herb 2005

¹²⁶ P.W. Moore 2004; Foley 2010; Brynen et al. 2013

¹²⁷ Kamrava 2013; on p. 130-7 Kamrava writes that former Qatari prime minister Hamad bin Jassim al-Thani once said that *enriching Qatari nationals was the country's most important domestic priority*. In this pursuit, Qatar has met unparalleled success. Estimates of per capita GDP of Qatari nationals (when mainly low-wage expatriates are excluded) range between \$450,000 and \$700,000 per year. Kamrava cites stability emanating from secondary legitimacy sources cascading from rent distribution, such as the upward mobility of highly educated Qataris who owe their positions to the state's free educational benefits, and as a result, their allegiance to the ruling family. The result is a stable system of royal autocracy. "Qatar's dictatorship," he writes, "is genuinely popular." Also see Kinninmont 2013 cited in J. S. Mitchell 2013, 2

¹²⁸ M. Gray 2011a, 36

review of a four-volume edited work on the Gulf,¹²⁹ summarized several of the myriad contributing authors as finding the rentier “concept remains relevant but needs to be modified in light of changed circumstances, including that of the steady transformation of rents into private fixed capital, accompanied by the development of state institutions able to perform more functions than simply allocating rents.”¹³⁰

2.3.2.1 Arguments in General Agreement with RST

Numerous revisionist works served to flesh out and strengthen the rentier thesis, with minor counterarguments. Gause offered an early example, reiterating the importance of external rents, but arguing that rents alone were unable to explain the longevity of Gulf monarchies. Two other factors reinforced the role of rents, namely the external security guarantees based on alliances with western powers, and the institutional strength of ruling families and their skilled pursuit of domestic politics.¹³¹ Karl’s resource curse work on Venezuela echoed many of the rentier findings in a more participatory political context, including the dismantling of domestic tax systems and the “substitution of spending for sensible statecraft.” She documented the familiar exchange of patronage for political quiescence, and, like scholars writing later, argued that regime autonomy was lost amid binge-hiring of unqualified bureaucrats whom degraded the state’s capacity. The state’s institutional weakness in terms of extraction was stylized in her statement that the state “can only give; it cannot take.”¹³²

Other recent works displayed less interest in the state’s ability to extract from society, shifting the focus to the related effects of patronage spending on state-society relations. These include scholars using econometric techniques to test for rentier effects in panel data, which led to an intertwining of the resource curse and rentier genres. Several authors tried to discover explanatory factors behind the stubbornness of autocracy by investigating whether commodity exports lie behind the developmental underperformance of mineral-rich states and the longevity of their authoritarian regimes.¹³³

In 2001, Ross produced a large-*n* study that offered quantitative evidence in favor of the rentier thesis. Ross looked at resource-rich states in general, making a point of comparing Middle Eastern states with counterparts elsewhere, since rentier theory tended to focus only on the Middle East, while those studying resource effects on democracy tended to exclude the oil-rich Middle East.¹³⁴ Using time-series cross-national data from 113 states between 1971 and 1997 and Ross found a statistically robust tendency for oil to inhibit democracy, and for authoritarian regimes to use rentier techniques – low tax

¹²⁹ Springborg 2013; Luciani et al. 2012

¹³⁰ Springborg 2013

¹³¹ Gause III 1994; Gause III 2000; 176-7

¹³² Karl 1997; 16, 91, 99

¹³³ Ross 2001; Ross 2009; Ross 2012; Herb 2005; Alexeev and Conrad 2009; Haber and Menaldo 2011

¹³⁴ Ross 2001; P. W. Moore 2002

rates and high government spending – to defuse pressure for political openings.¹³⁵ The influential paper was considered a vindication of rentier state theory, widening its applicability outside the Middle East. Ross reiterated his conclusions in his 2012 book, using a mix of case studies and panel data to argue that the onset of oil’s harmful effects began in the 1970s when governments nationalized their resource sectors, capturing the oil rents from international oil companies. Regimes then wielded those rents in an opaque fashion to stifle democracy (and sometimes repress women and minorities).¹³⁶ Several authors have contested the findings, discussed in Section 2.3.2.4.

In 2004, Smith published results of a cross-national test of 107 developing countries that found oil strongly correlated with regime durability. Smith took issue with portrayal by Crystal, Karl and Chaudhry of the inherent weakness of rentier states and the tenuousness of their stability, arguing that oil wealth has allowed regimes to build strong institutions and political organizations that helped them survive the long oil bust of the 1980s and 1990s. Few regimes faced serious challenges, even during this period.¹³⁷ Weiffen came to a similar conclusion, determining that autocracy in the Middle East was reinforced by oil rents in combination with traditions based in Islamic cultural institutions which, during economic downturns, deflected pressure for political concessions.¹³⁸ A 2009 paper by Desai, Olofsgard and Yousef tested the rentier “authoritarian bargain” thesis and found it to be accurate across a panel of 80 autocracies. They found political rights and welfare expenditures determined by common factors, and that democratic openings tended to act as substitutes for distribution when rents waned.¹³⁹

The drumbeat of quantitative affirmation of rentier links between oil and autocracy served to introduce rentier theory to a broader range of scholars, whose writings were further simplified by journalists trumpeting links between oil and various ills, including war, terrorism and dictatorship.¹⁴⁰ Ironically, write Brynen et al., these affirmations of rentier theory arrived concurrently with much more critical works by Middle East scholars, whom began to study and reject elements of rentier theory (examined in the following sections). Critics of the quantitative rentier works argued that statistical approaches oversimplified complex state-society relations. It was as if autocracies governed with a fixed set of inputs and outputs: When patronage is reduced, regimes respond with a corresponding increase in repression or in political participation.¹⁴¹ “Without factoring in the

¹³⁵ Ross 2001

¹³⁶ Ross 2012, 8–11

¹³⁷ B. Smith 2004

¹³⁸ Weiffen 2008

¹³⁹ Desai, Olofsgard, and Yousef 2009

¹⁴⁰ Brynen et al. 2013; 193-4; lists several examples including New York Times columnist Thomas Friedman’s “The First Law of PetroPolitics,” *Foreign Policy*, April 25, 2006.

¹⁴¹ Foley, Sean. Email correspondence with author, June 12, 2013.

complexities of culture, values, beliefs, ideology, and legitimacy we risk being left with arid economic reductionism,” writes Hudson.¹⁴²

Later quantitative approaches provided more nuanced correlations. Ali and Elbadawi examined resource rents, public employment and levels of political repression in the Middle East and found strong indications of the co-optive power of resource rents, and of the staying power of rentier regimes. Countries with higher rent-to-population ratios, such as the Gulf monarchies, were able to avoid popular revolts by funneling rents to the population through jobs in the state bureaucracy. Thus “authoritarian regimes with access to substantial natural resources who rule over small populations have a policy tool that is simply unavailable to other authoritarian governments... these governments have the wherewithal to distribute enough resources to their populations to effectively remove the incentive to revolt.” These co-optive practices significantly reduce requirements for deploying state repression in most of the wealthy rentiers. The opposite is true in moderately resource-endowed Arab states with large populations, which were unable to provide the same guarantees of public sector employment and thus relied more on state security.¹⁴³ Of course, rents, if they are unsupported by statecraft and stabilizing institutions, are insufficient by themselves to ensure regime longevity, as was seen in Libya (in 2011 and 1969) and, arguably, in the shah’s Iran.

Regime responses to the Arab Spring revolts tended to fall along the lines of the rent-to-population thesis, where Arab states with large populations relative to resource rents relied mainly on repression, while richer rentiers in the GCC (albeit not Bahrain) were more likely to spend their way out of potential trouble. Springborg argues that this revelation offers evidence that Gulf states “have returned to the rentierism of old, seeking to temper protest with allocation and, when that fails, with more severe repression.”¹⁴⁴

Scholars embraced rentierism for other reasons as well. Anderson argued that rentier constructs provided a plausible explanation for the lack of democracy in the Arab Middle East that allowed the avoidance of “exceptionalist” arguments based on political culture approaches. These, she wrote, were “sentimental favorites” of Western scholars whose normative biases led them to brand undemocratic societies as politically perverse or immature. Many such political culture arguments sought undemocratic properties within Islam, tribalism, Bedouin communities, neopatriarchal organizations of families and societies, even linguistic and biological factors.¹⁴⁵ Ironically, political culture approaches are encouraged by the posturing of ruling families themselves, which channel tribalism and Islamism to bolster their legitimacy. “They want their citizens and the rest of the world to think

¹⁴² Hudson 1995, 62

¹⁴³ O. Ali and Elbadawi 2012

¹⁴⁴ Springborg 2013

¹⁴⁵ An excellent summary of political culture approaches can be found in Anderson 1995; 77-92. Also see Hudson 1995, 61–76, in the same volume.

they are embodiments of centuries-old Arabian traditions and deeply held cultural beliefs,” writes Gause. “This is the core of the ideological legitimization strategies of all the Gulf monarchs.” But Gause dismisses both as neutral cultural distinctions that are as likely to buttress regime legitimacy as threaten it, as can be seen in the Islamist political opposition in Kuwait or the fundamentalist insurgency in Saudi Arabia last decade.¹⁴⁶ Gause and Anderson argue that these cultural characteristics are less important than the positioning of these monarchies in the international political economy, where survival has been a factor of powerful allies, domestic political prowess and, of course, plentiful flows of hydrocarbon rents.

2.3.2.2 Autonomy of the State vs Deference to Citizens

However, as indicated, many works investigating rentier systems deviated from the key tenets of classic rentier theory. Perhaps most importantly, given the claims of early theorists, several authors have confronted the claim of regime autonomy from society. By focusing on allocation and swearing off of extraction, regimes were supposed to maintain great autonomy in decision-making. An early change in thinking was encouraged by Ayubi, who declared that distributive politics was engendering rising societal expectations and corresponding increases in *deference* on behalf of regimes toward their citizens. While the theoretical work of the 1980s and early 1990s focuses on the power and autonomy of the regime, Ayubi emphasized the power and autonomy of the rentier citizen. Ayubi writes that decades of coddling have institutionalized a situation where *the citizen claims the right to tax the state*, rather than the other way around.¹⁴⁷ The state is less dominant and society less feeble than portrayed in the classic literature.

Citizens’ sense of entitlement appears to have expanded since the early decades of the oil boom era, as will be discussed below, and this sense extended to a refusal to recognize the state’s authority to carry out any extractive function. As Gray points out, rentier states were never truly autonomous from society. All engaged in some reactionary policymaking in response to pressure arising from society, up to and including the threat of revolution. Responsiveness has only grown with time, and is a prerequisite for long-term survival of the state.¹⁴⁸ Foley, who also discounts theory’s autonomy claim, adds that social and technological evolution poses a recurring challenge to regimes by enabling social actors and forces.¹⁴⁹

Society’s resistance to extraction extends beyond taxation and subsidy reform, to include the refusal to submit to military service. Gause argues that regime deference to the rentier bargain (the one-way delivery of resources and services from state to citizen) winds up undermining national security, since

¹⁴⁶ Gause III 2000, 176–7

¹⁴⁷ Ayubi 1995, 323–5

¹⁴⁸ M. Gray 2011a, 10

¹⁴⁹ Foley 2010, 4–5

instituting obligatory military service required to staff defense forces would upset this implicit deal, and probably trigger demands for political participation. Hence, Gulf militaries have sought to circumvent these restrictions by purchasing high-tech weaponry that can make the most of limited manpower, while hiring foreign mercenaries and crafting defense alliances with Western powers.¹⁵⁰ (However, assumptions barring conscription were being challenged by recent developments. Qatar introduced mandatory conscription in 2013 and began training 2,000 male conscripts in 2014.¹⁵¹ The UAE Cabinet endorsed a similar law that would make military service compulsory for young male citizens.¹⁵²)

Jones emphasized the great advantage not of rentier regimes, but of their citizens, whose sensibilities required careful attention. Citizens of wealthy rentier states reap remarkable benefits from their acceptance of the ruling family's position. Nationals "possess a strong sense of civic entitlement, while lacking a corresponding sense of civic obligation." They expect the state to provide an increasing standard of living through state employment, subsidies and other perks, while feeling unobliged to contribute through taxation or personal effort.¹⁵³

In his 2010 book, Hertog made an examination of state autonomy a centerpiece of his unpacking of the Saudi state. He found that oil rents allowed the ruling al-Saud "an extraordinary degree of autonomy from society when it came to designing their state in the 1950s and 1960s" just as rentier theory predicts.¹⁵⁴ In similar fashion, Herb shows that the Saudi ruling family – like their counterparts in the other Gulf monarchies – "fell upon" the state, using initial oil rents to create and fund departments and fiefdoms that quelled disputes and converted ruling families into ruling institutions.¹⁵⁵ The result was the creation of "dynastic monarchies" which Herb presents as a new type of regime, based around family domination of the state.¹⁵⁶ Likewise, Niblock describes the Saudi royal family, with its 7,000 princes, as comparable to a political party in a one-party state, with its members "embedded in all parts of the military, security and administrative frameworks, holding the most sensitive positions in the state infrastructure, providing information to the leadership, and sometimes acting as channels of communication between parts of the population and the

¹⁵⁰ Gause III 1997, 65–6

¹⁵¹ Badawi, Nada (April 1, 2014). "Qatari men report for first day of national service." *Doha News*. [<http://dohanews.co/first-day-mandatory-national-service-kicks-2000-recruits/>]

¹⁵² Bayoumy, Yara (Jan. 19, 2014). "With eye on troubled region, UAE plans military service for men." *Reuters*. [<http://www.reuters.com/article/2014/01/19/us-uae-security-military-idUSBREA0I0C420140119>]

¹⁵³ Jones 2011

¹⁵⁴ Hertog 2010a, 15

¹⁵⁵ Herb 1999, 2–3

¹⁵⁶ Herb 1999; 3, 7–10. Herb differentiates most of the eight surviving Arab monarchies from those which fell by the level of family control over the state, arguing that deposed monarchs in Libya, Iraq and elsewhere had not institutionalized their families into the power structure in sufficient manner to create interest in defending the monarchy beyond the reign of an individual ruler.

government.¹⁵⁷ Dynastic monarchies have proven remarkably resilient. “No regime of this type has fallen to revolution,” Herb declares.¹⁵⁸

The early autonomous state-building process, fueled as it was by oil rents and carried out with little concern for public opinion, allowed for unconventional institutional design in these states. Elites, many of them members of ruling families, were given means and authority to control portions of the state through the creation of government agencies. The result was a sprawling and unplanned array of patrimonial institutions which quickly evolved into “statelets within the state.” A few operated with great efficiency, others acted more as labor-absorbing enterprises that established seemingly unbreakable clientelist relations with employees. Regime autonomy, however, was fleeting. Hertog argues that the initial regime autonomy that shaped the bureaucracy melted quickly away after the initial decisions on institutional design. The subsequent ballooning of the Saudi state expanded these bureaucratic compartments through patron-client cooptation of Saudi citizens into the distributive system. In this way, the clientelist social contract, a key facet of classic rentier theory which was supposed to provide for regime autonomy, had, by the post-boom years of the mid-1980s, wound up *constraining* the state’s autonomy.

Hertog, following Karl’s work in Venezuela,¹⁵⁹ discovered that the Saudi government could not fire unproductive bureaucrats, and in some cases could not even control them. Likewise, the monarch’s freedom of action on domestic policy had been weakened by his government’s constant need to buttress legitimacy. The regime could neither retract its clientelist obligations to provide jobs nor its subsidies on water, food, fuel, housing and electricity. Accumulating spending commitments tied up ever-greater revenues within an inefficient bureaucracy and confounded the regime’s ability to launch new policy. “The large cascades of rentier clients accrued over time have been useful in pacifying society on the political level, but their immovable presence in and around the bureaucracy makes reform and day-to-day administrative control more difficult.” The ensuing limits to governing decision freedom came not through collective social forces, but through the regime’s own distribution obligations.¹⁶⁰

The loss of state autonomy detailed by Hertog and Karl follows a typical rentier pattern that went undocumented in classic theory. “Oil rents are politically centralizing. However, as the revenues are spent, new domestic actors emerge (as contractors, agents, recipients of subsidies) who, in turn, begin to limit the freedom of maneuver of the state. This is a very typical pattern; state autonomy may rise

¹⁵⁷ Niblock 2013, 14

¹⁵⁸ Herb 1999, 3

¹⁵⁹ Karl 1997

¹⁶⁰ Hertog 2010a; 4, 18-20

in a particular conjuncture but then typically will decline with its exercise over time.”¹⁶¹ Contributing to that decline is either the mobilization of social groups, or the state reacting to pre-empt that mobilization, as stylized in Fig. 2.1.

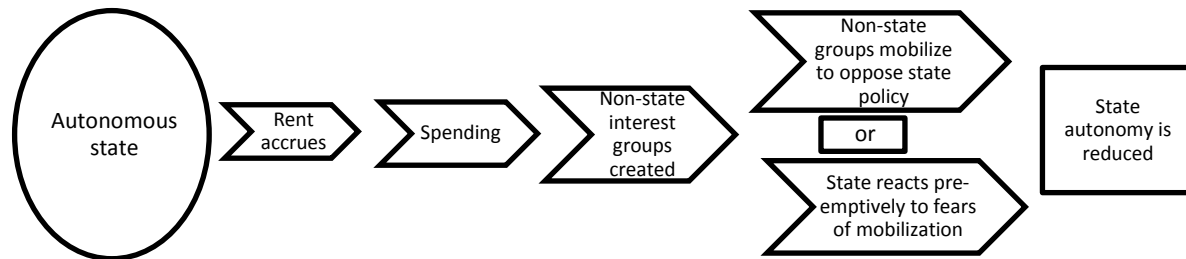


Figure 2.1: Evolutionary path to limits on rentier state autonomy as depicted in literature

Subsidies restrict the autonomy of rentier regimes in another way. Karl, echoing themes in standard economic treatment of subsidies and Pierson’s work on welfare states,¹⁶² found that establishing these special bargains creates vested interests in their preservation, constraining the regime’s latitude for policy maneuver and creating groups of beneficiaries which coalesce around their interests and can threaten political leadership when their benefits are jeopardized. Faced with an economic crisis that would move an extractive state to retrenchment, rentier regimes are immobilized, unable to separate economic rationality from political expediency.¹⁶³ Finally, Gray argues that while rent distribution did allow allocative states to “remain aloof” from class interests more readily than was the case among extractive states, their autonomy was never complete. Even in the heady days of the first oil spike, rentier regimes still encountered the omnipresent possibility of revolution.

The revisions to the early theoretical principle of regime autonomy can be summed up by arguing that the social contract between monarch and citizen channels policy through a narrow range of acceptability that restricts extractive action that would undermine citizen benefits, including reductions in energy subsidies. This loss of autonomy makes regime pursuit of subsidy reform – the issue of interest to this thesis – especially difficult. Revisionist works cited thus far do not challenge the notion that subsidies are protected, nor do they directly challenge the early theoretical principle of citizen passivity. The perception that regimes have shown increased deference to their citizens, in terms of responsiveness to complaints and avoidance of antagonizing them with increased prices, does not mean that citizens have mobilized, per se, but rather that regimes are wary of mobilizing them. However, the principle of the passive citizen would also be challenged.

¹⁶¹ Richards and Waterbury 2008, 17

¹⁶² Pierson 1996

¹⁶³ Karl 1997, 242

2.3.2.3 Citizen Quiescence

For the price enshrined in the social contract, citizens were expected to assume political quiescence and let rulers to the ruling. Early literature provides few, if any, hints that this state of affairs could change, or that society might *demand* a greater say in political or socio-economic affairs. After all, this was the claim of 1950s and 1960s modernization theorists such as Lerner and Huntington that rentier scholarship sought to refute. Despots overseeing these anachronistic kingdoms – which, as late as the 1950s, governed the majority of Arabs – were supposed to be felled by the postcolonial growth of an educated urban bourgeoisie which would no longer accept its voiceless role.¹⁶⁴

Revisionist scholarship has downplayed this assertion of citizen quiescence. Pete Moore argues that core rentier theory placed too much emphasis on the power of economic structures and too little on political choices and behavior.¹⁶⁵ Populations are not as latent as classic theory portrays them. Protests break out in times of relative plenty, during the Arab Spring, and in times of scarcity. The oil bust of the 1980s and 1990s brought significant political opposition to rentier states, including the Gulf monarchies. Okruhlik found that rentier theory lacked any mechanism that could explain this rise of political opposition, which, she argues, was based in inequitable rentier distribution practices that were squeezed during the oil bust. “Generalizations about loyalty and dissent that were derived from the boom period (1973-86) cannot be applied to the postretrenchment and postwar period,” Okruhlik argued. “The receipt of oil revenues per se does not explain development or opposition or relations between ruler and ruled. The manner in which the rent is deployed, however, tells us much.”¹⁶⁶

Even in ultra-rentierist Qatar, Jocelyn Mitchell found flaws in Luciani’s original hypothesis that economic relations between state and society were the *only* interaction required to maintain political stability. Qataris were neither complacent nor even particularly compliant when it came to unpopular government policies. Mitchell provides evidence that Qatari society views welfare benefits and other economic allocations a “birthright” rather than as “gifts from a benevolent ruler that should be rewarded with political silence.” As such, economic inducements did not restrain Qataris from protesting sweeping educational reforms launched in the mid-2000s. Vociferous public opposition forced the regime to reverse key aspects of those reforms. Ruling elites’ dogged focus on non-economic legitimacy building, including investments in cultural and religious heritage and a national myth, betrays a regime understanding that the allocation-acquiescence bargain cannot maintain long-run political quiescence.¹⁶⁷

¹⁶⁴ Lerner 1958; Huntington 1968

¹⁶⁵ P. W. Moore 2004

¹⁶⁶ Okruhlik 1999

¹⁶⁷ J. S. Mitchell 2013, p. 6, 83.

The hypothesis of public quiescence was undermined further by the Arab Spring uprisings that began in Tunisia in late 2010 quickly engulfed six Arab countries, including Bahrain, where anti-regime protests attracted as much as one-fifth of the citizenry.¹⁶⁸ Smaller protests occurred in most of the other Arab monarchies, including Jordan and Morocco. Only Qatar experienced no such protests, either physical or, as in the UAE, in the form of prominent online petitions. Gulf regime responses to the Arab Spring uprisings have followed the time-honored techniques of increases in patronage as well as repression of demonstrators and those demanding political openings. Mitchell argues that rentier theory's characterization of the state-society compact as an economic relationship amounts to a "fundamental misconception" which should be recast as a necessary but not sufficient source of political legitimacy. She finds, like Okruhlik and Hertog, that state and society penetrate each other, and that successful state-society interaction strengthens the state, while autonomy ultimately weakens it.¹⁶⁹

Gray bundles theoretical revisions related to autonomy and quiescence in his Theory of Late Rentierism to describe a "responsive but undemocratic state" rather than a state that is autonomous from its society. These are consultative states which respond to the population's concerns, especially those of citizens impacted by policy. This responsiveness is aimed at maintaining the political status quo without increases in pluralism.¹⁷⁰ In similar fashion, Peterson argues that regimes ignore the public's grievances at their own risk. When citizens mobilize in accepted ways, it is not generally the state's repressive apparatus that gets called upon to respond – à la the "mild repression" of Luciani – but more likely that the regime takes steps to reinforce its side of the social contract, otherwise acceptable forms of criticism may escalate into visible discontent.¹⁷¹

2.3.2.4 Oil Effects Questioned

More significant for the durability of the rentier thesis, a few qualitative works have targeted its central theoretical assumption. These have questioned the centrality of exogenous resource revenues, arguing that the effect of rents is conditional upon other factors that also play roles in influencing regime type.

The most significant challenge to the rentier model comes from Herb's 1999 book *All in the Family*, which argues that rents are less predictive of monarchical longevity than internal dynastic factors. Herb points to the fall of monarchs in Iraq (1958), Libya (1969) and Iran (1979) as evidence that rents alone are not enough to maintain the rule of a monarchy lacking more requisite stability resources. His argument revolves around dividing monarchies into two groups: "dynastic monarchies" with

¹⁶⁸ Yom 2012

¹⁶⁹ J. S. Mitchell 2013, 30-3.

¹⁷⁰ M. Gray 2011a

¹⁷¹ Peterson 2012

succession mechanisms based on family consensus, and those without these characteristics. In the first type, rulers assemble large family coalitions by buying members off with valuable offices and appointed posts. Succession disputes are resolved by a process of bandwagoning among ruling family members who get behind a favored candidate, not necessarily guided by primogeniture.

Of the eight current Arab monarchies, five are dynastic: Saudi Arabia, the UAE, Kuwait, Qatar and Bahrain. Outside these, Jordan and Morocco are more “intermediate cases” with smaller roles for ruling families, who face competing centers of power outside the monarchical institutions. Oman is a hybrid case, given Sultan Qaboos’ long history of nearly single-handed rule (with British help in the early days) and his lack of male heirs or immediate family. Herb ascribes the three intermediate monarchies with less resilience to challenge and argues that regimes in Jordan and Morocco might have been brought down long ago but for the failure of plots against them.¹⁷² Their cases look similar to failed monarchies in Iraq, Libya and Iran – albeit with improved statecraft – and to the other failed, non-dynastic monarchies in the region: Egypt, where monarchy was overthrown in 1952, North Yemen, in 1962; and Afghanistan, in 1973.

Herb’s argument provides a useful lens for examining and distinguishing surviving monarchies. His explanation for the persistence of regimes in Jordan and Morocco – a combination of skilled statecraft and good luck – compensates for their lack of direct access to oil rents. But his downplaying of the role of oil rents is overdone. It should be no surprise that the five monarchies with dynastic characteristics are those that can afford them, by the providential access to oil rents. Oman’s case, Herb admits, would probably be similar had Qaboos managed to produce an immediate family. This amounts to a round-about way of acknowledging the co-optive power of rents and the strength of the rent-to-population thesis, which, I believe, offers at least as strong an explanation for the failure of monarchies in Iraq and Iran, where rents relative to population were low. Herb says as much in a later paper, arguing that rent effects are strong enough to warrant a theoretical framework to explain their influence.¹⁷³

In Libya, where rent-to-population ratios were smaller than those in the GCC – but not by much, as Fig. 1.2 shows – is where Herb’s thesis is strongest. Libya’s King Idris worked actively against the principles of dynastic succession, excluding his relatives from rule, and ensuring they had no interest in defending the monarchy after his death. The king’s handpicked crown prince had little support or influence. In fact, observers were so pessimistic about the monarchy’s survival that competing coup plots were launched amid a scramble for power. The 1969 overthrow of the 80-year-old king, while

¹⁷² Jordan’s King Hussein was nearly overthrown by an uprising in 1957, and Morocco’s King Hassan’s royal jet was almost shot down in a mutiny led by air force pilots who managed to disable two of its three engines. Herb 1999, 236–7

¹⁷³ Herb 2005

on vacation abroad, was a foregone conclusion.¹⁷⁴ “The crucial difference between Libya and the Gulf regimes, the difference that explains why the former fell and the latter survive, is the absence of the ruling family in the Libyan state and the related failure to solve the problem of succession.”¹⁷⁵ In this case it might be more accurate to state that the king’s access to rents could not compensate for his incompetence. His refusal to create – or even allow – institutional structures that could outlast him ultimately overrode the stabilizing opportunities of oil rents.

Herb’s book comprises the most exhaustive attempt to move beyond the rentier thesis across the theoretical heartland of the Middle East. Several others also contest “determinist” rentier explanations for autocracy and regime durability, or otherwise argue that oil rents merely strengthened preexisting authoritarian distributive structures. Gause (with Yom at times) plausibly attributes durability of the Gulf monarchies to three factors. Like Herb, he credits the strong monarchical institutions. But he does not discount the equal importance of oil rents – which provide the distributive liquidity required by those institutions – as well as geopolitical support from outside powers like the United States, which also deter tampering with the status quo.¹⁷⁶

Pete Moore argues that econometric studies linking oil to autocracy, including Ross’ as well as those done under the rubric of the resource curse, discounted important political and historical factors that were being teased out more accurately in in-depth qualitative case studies done by regional specialists. These factors include informal patrimonial networks that may or may not be energized by oil, as well as cultural and religious resources, and creation of national identities.¹⁷⁷ For instance, Anderson’s examination of Tunisia and neighboring Libya unearthed large differences in development and political culture. This she attributed to historical factors, such as Tunisia’s long colonization by Ottomans and Europeans in which it had established centralized institutions of a bureaucratic state, Libya’s short bout with Italian colonists had left it with few such institutions that could challenge its long-standing tribal structures and regional schisms at independence.¹⁷⁸ Oil rents are an important variable in maintaining autocratic structures, but rents flow into pre-existing frameworks (which account for differences between states) rather than upending the old structures and creating new ones.

Several other scholars take less issue with the influence of oil rents, but present strong cases for including historical and cultural factors – or the state’s manipulation thereof – in the legitimacy formula that has bolstered these regimes. Niblock, along with Nonneman, argue that patronage, or as Niblock describes it, “eudaemonic legitimacy,” is just one of four pillars of regime legitimacy in Arab states, the others being religion and ideological sources, traditional leadership and personal charisma,

¹⁷⁴ Herb 1999, 195

¹⁷⁵ Herb 1999, 188

¹⁷⁶ Gause III 2000; Yom and Gause III 2012; Yom 2012

¹⁷⁷ P. W. Moore 2004 and writing in Brynen et al. 2013

¹⁷⁸ Anderson 1986

and skill in statecraft.¹⁷⁹ Writing on Oman, Valeri argues that Sultan Qaboos performed a feat of “identity engineering” by fashioning an “imagined community” for multicultural Oman. Qaboos used a national ideology to weave together a “timeless Omani national identity which has relied on standardized collective references” allowing him to place himself at the center of a unified state with no previous history of a single ruler, and, alongside his distributive feats, became an effective source of legitimacy.¹⁸⁰ Also in this camp is Davidson, who finds himself in 2005 highlighting institutional stability of Gulf monarchies through their adept mixture of charismatic, patrimonial, religious and ideological sources of legitimacy.¹⁸¹ By 2012, however, Davidson argues that these assets are insufficient to protect Gulf rulers from the rising costs of maintaining their ruling bargains, nor can they prevent citizens from using distributed communication technologies to organize against regimes. He predicts the imminent downfall of all six by 2017.¹⁸² Weiffen adds Islam to the stabilizing mix of historical and cultural factors.¹⁸³ Herb, in his 2005 paper, cites proximity to other autocracies as a strong predictor.¹⁸⁴

Finally, several scholars have approached the rentier/oil effects question using quantitative techniques, producing large-*n* studies that have made cases both for and against the rentier and resource curse theses. As mentioned, Ross’ 2001 paper and Smith’s work in 2004 found strong links between oil exports and autocracy and regime durability, while others challenge those findings, asserting that oil is unassociated with autocracy and institutional underdevelopment. Herb is one who challenges the oil-equals-autocracy conclusion, this time using a quantitative examination of 144 countries over 28 years. He declares that rentierism has little or no effect on a state’s tendency toward democracy, because, in a counterfactual world, few of the world’s current oil states would have developed democracy even if they had no oil. Herb notes that rentier states are typically drawn from among the world’s poor countries which are more likely to be authoritarian, especially in the Middle East and Africa. The high likelihood that neighboring non-oil states are autocracies bolsters the argument. There is “little reason to think that political outcomes in the absence of rent wealth would have been very good. Rent wealth does not make countries better governed, but neither is it a curse.”¹⁸⁵

Haber and Menaldo wield an exhaustive series of statistical tests that found no evidence to support a link between resource reliance and regime type. Instead, they found increases in natural resource income associated with small increases in democracy. They found cases where dictators used resource

¹⁷⁹ Niblock 2013, 9–13; Nonneman 2005

¹⁸⁰ Valeri 2009, 119

¹⁸¹ Davidson 2005, 65, 104

¹⁸² Davidson 2012, ix

¹⁸³ Weiffen 2008

¹⁸⁴ Herb 2005

¹⁸⁵ Herb 2005

rents to maintain power, but argue that authoritarianism in resource-rich states is probably more closely associated with states that were weak before the discovery of oil – as in the Gulf – and rulers exploiting those resources to remain in power. The paper found omitted variables and reverse causality in several resource curse papers, and declared they could not find a systematic tendency that matched the phenomenon.¹⁸⁶

Ross, with Andersen, responded that Haber and Menaldo may have been correct about the lack of a resource curse before the nationalizations of the 1970s, but that their use of data dating to 1800 had obscured antidemocratic effects that occurred in the last 30 years. In comparison with the speed of democracy's embrace by non-oil exporters, oil producing states adopted participatory institutions much more slowly. Their paper argues that the transfer of rent-capturing capability from international oil companies to national oil companies, mainly in the 1970s, in combination with rising global demand and tighter market supply, gave autocratic petro-regimes resources to survive the democratic wave that swept away less-endowed authoritarian regimes in the 1980s and 1990s.¹⁸⁷ Andersen and Ross concede that the preponderance of academic evidence does not support an oil curse before the 1970s, or on countries where the government does not dominate the oil industry (agreeing with Jones Luong and Weinthal¹⁸⁸), or on regimes that had strong institutions before the capture of oil rents, embracing the argument of Douglass North and other “new institutionalists” like Elbadawi and Soto who say that the resource curse exists, but is based on “bad political governance.” States with high levels of political inclusiveness and checks on government power are able to use resource rents as a growth driver.¹⁸⁹

2.3.2.5 Late Rentierism

As depicted above, the abundance of comparative political scholarship investigating, undermining and reaffirming the basic rentier thesis has introduced competing and overlapping models that grouped varying numbers of states and types of regime. These works have introduced new levels of complexity and diversity to analysis of rentier questions. At the same time, decades of population growth, globalization and business pressure have added new layers of complexity to the rentier state. Even narrowing the focus back to the GCC, recent scholarship has determined that classic rentier theory's still useful core required updating. Building upon the work of Hertog, Pete Moore, Davidson and Hvidt,¹⁹⁰ Gray argues for the theory's continued relevance, but with a reduced role for oil revenues. He finds that classic works were overambitious in declaring rentierism a “structural characteristic” of the state. Instead, he posits, rentierism is better described as a political economy

¹⁸⁶ Haber and Menaldo 2011

¹⁸⁷ Andersen and Ross 2013

¹⁸⁸ Luong and Weinthal 2010

¹⁸⁹ North 1994; Elbadawi and Soto 2012

¹⁹⁰ Hertog 2010a; Brynen et al. 2013; Davidson 2008; Davidson 2005; Davidson 2011; Hvidt 2009; Hvidt 2011

dynamic of state-society relations in countries that have undergone significant modernizations, yet which manage to retain an allocative spending model.¹⁹¹

Gray documents seven features of what he describes as evolved *late* rentier states. These include an openness to globalization and foreign investment, which provides new channels for wealth creation and rent distribution. This significant “diversification” of the rentier model allows resource-poor rentiers such as Dubai to replace oil rents within existing social contracts, while resource-rich rentiers expand into energy-intensive sectors such as refining, petrochemicals and metals production. Where classic theory once held that states needed no economic policy because they could use external rents to co-opt the opposition, Gray documents an activist Gulf economic policy that takes the form of reinvigorated state capitalism with a strong planning component. Strategic state investments have established government-owned businesses – witness the Saudi petrochemicals firm SABIC or Dubai’s Emirates Airline – that compete effectively in the global marketplace.¹⁹² Gray argues that the more advanced (i.e. late) rentier states acknowledge the need to create meaningful jobs for citizens and otherwise demonstrate responsiveness to society if they want to avoid democratic reforms. And finally, competitive and open economies are required to pursue diversification into permanent and more productive sources of state income. Given the doubtful prospects for long-term reliance on simple energy rents, profits and taxes from state owned firms (and foreign partners) will provide a growing portion of state budgets and, if these states manage to retain their rentier structures, distributive outlays. As rentier states and institutions have complexified, elites have been forced to adapt with nuanced and engaged approaches to society and policymaking. Export rents have underwritten those changes and lie at the core of the relationship, but the structural dominance of rents has diminished.¹⁹³

2.4 Rentier Theory and Energy

My research argues *against* a diminished role for natural resources in these states. While I agree with the portrayals above that call for more theoretical nuance and complexity, I argue that theory should be extended to include a deeper and more structural role for hydrocarbons in state formation and institutional outcomes. How could the role of energy be insufficiently depicted in the rentier state literature? At first glance, energy issues appear to pervade the literature. Energy is treated as an economic asset that produces rents. Scholars credit the discovery of hydrocarbons with guiding state formation and enabling independence, and even influencing the drawing of borders. Rentier economies are described as dependent on oil and gas exports to the extent that cyclical price swings

¹⁹¹ M. Gray 2011a

¹⁹² Hertog 2010b

¹⁹³ M. Gray 2011a

have gained a role in the literature's discussions of political stability, and requirements of diversification beyond – or “away from” – energy.

Notwithstanding these caveats, the rentier literature is strangely disengaged with the *use* of energy within rentier states, including the intensity of that use. The literature says little about the regime buying support through distribution of cheap feedstock and fuel, nor does it credit these practices with influence on residents' behavior or the physical shape of the built environment in the Gulf monarchies. The downplaying of energy was probably justified in the classic period of rentier scholarship, but now – given the burgeoning dependence of petro-states on in-kind energy itself – a reassessment is due.

Luciani, an energy economist, is one of the few authors to engage with the topic. Yet his 1987 evaluation and dismissal of a structural role for energy set the tone for subsequent literature. Since then, this assessment has remained unchallenged. In particular, Luciani examined whether oil commanded the centrality that water achieved within the literature on oriental despotism, especially within of Wittfogel's exhaustive 1957 book that bears this title.¹⁹⁴ Wittfogel, bundling Marx's scattered musings on the Asiatic mode of production,¹⁹⁵ put together a Theory of the Hydraulic Society, declaring that exploitation of water through irrigation wrought profound effects on the state formation process, through which centralized, despotic bureaucracies such as those in Mesopotamia and Egypt resulted. These “hydraulic” structures shaped states that subjugated society through alliances with the dominant religion, with weak systems of private property and with very few independent societal or constitutional checks on power. The result was harsh “hydraulic despotism.”¹⁹⁶

Luciani, while discounting Wittfogel's overall argument, finds initial similarities between the impact of oil and that of water. Crude oil is a liquid that requires similar infrastructure and centralized coordination to that of water irrigation. Oil production requires a comparable division of labor that includes technocratic expertise in geology, chemistry and finance. Oil's location in “basins” has, like water, influenced the territorial definition of states, and forced regions with no oil (such as the Hijaz, parts of Libya and the UAE's northern emirates) to forgo aspirations for independence and band with oil-rich neighbors. But Luciani finds more differences than commonalities. Oil production is not a labor-intensive pursuit that requires popular mobilization. Oil is less central than water to the population's physical survival. In contrast to water, Luciani argues that access to oil *revenue* is the crucial aspect of production (however, like water, these revenues are mediated by the state). Oil is mostly consumed abroad. Oil “has value only to the extent that it is exported.” Oil is not “traded

¹⁹⁴ Wittfogel 1957

¹⁹⁵ Synopsized nicely in Ayubi 1995, 42

¹⁹⁶ Wittfogel 1957, 49-53, 101-111. Or see Ayubi 1995, 43

domestically in the oil-producing countries.” Luciani concedes that oil products are consumed locally, but it is the oil *export revenues* (once distributed) that allow residents in rentier states to consume goods that include oil products.¹⁹⁷

Gray also discusses the role of oil and gas in rentier theory, but – rather than calling for an increase in its prominence – also argues that oil, or rather, oil rent, has over time become even less dominant within late-phase rentier states. Economies should be described as “energy-driven” rather than “energy-centric” due to diversification into energy-intensive industrial and even post-industrial sectors, some of which compete globally and have pushed economies far beyond simple hydrocarbon rents.¹⁹⁸

This research calls for a reassessment of energy’s role that elevates its importance for producer states like the Gulf monarchies, where dependence on actual energy – in its primary form and as refined products or secondary forms such as electricity – has *increased* since the heyday of the oil boom period. Energy availability and government pricing policy has created a path-dependence that has shaped these societies far more deeply than the literature allows. While sources of rent have diversified, sources of energy have not. The Gulf monarchies now form the epicenter of a region identified by the IEA as a growing center of global energy demand and intensity, the result of decades of compounding annual demand growth.¹⁹⁹ When the following factors are considered, it appears that the Gulf monarchies have moved closer to the “hydrocarbon society” status rejected by Luciani in 1987.

Factor 1: The Middle East as a Center of Demand

International energy authorities no longer consider the Gulf and the broader Middle East as a “supply” region alone, but also a demand center of increasing importance. Domestic distribution of oil and gas has increased over the years in terms of total scale, as well as on a per capita basis. Oil is increasingly diverted from export sales into domestic markets and refined (often using domestic capacity that did not exist in 1987) into products that are distributed at subsidized prices for domestic use. The supply and demand of energy is as crucial for producer states as it is elsewhere, perhaps more so since the Gulf monarchies – in contrast to much of the rest of the world – depend for nearly 100% of their primary energy on domestic oil and gas, given their lack of coal, hydropower, biomass, and, for now, nuclear and renewable sources.

Factor 2: Increasing Local Role for Energy Commodities

¹⁹⁷ Luciani 1987, 65–8

¹⁹⁸ M. Gray 2011a, 30–2. Also discussed in M. Gray 2012, 9–13.

¹⁹⁹ International Energy Agency 2013c, 23

Oil and gas have increased their roles in sustaining life in the Gulf since the era of classic rentierism. Hydrocarbon feedstocks provide the desalinated water that now dominates supply of this vital resource, and hydrocarbons also enable the climate conditions – through ubiquitous cooling services – required to render workplaces and housing habitable. In the days of classic rentier theory, water was still mainly drawn from underground aquifers. Air conditioning, which became available as these states electrified, was far less prevalent in the 1980s. Domestic consumption of hydrocarbons has thus supported population growth and immigration that have integrated the Gulf into the global economy in ways that states with similar geographic and climactic conditions have been unable to achieve.²⁰⁰

Factor 3: Path-Dependence on High-Intensity Demand

Availability of plentiful inexpensive oil and gas early in the state-building process has created a path-dependence on energy-intensive development. Pierson describes path dependence as a process in which initial steps in a particular direction induce further movement in the same direction. Over time, the probability of further steps along this early path is influenced by an increasing returns process that provides additional benefits from maintaining the current activity while increasing the costs of exit.²⁰¹ As Levi argues, “the costs of reversal are very high... the entrenchments of certain institutional arrangements obstruct an easy reversal of the initial choice.”²⁰² In the Gulf, initial pricing and supply patterns shaped cities and infrastructure, allowing developers to reduce costs by ignoring energy efficient techniques and “locking in” a pattern of energy intensive development that has become difficult to change. The result has been energy-intensive sprawl. Settlements which once maximized natural cooling and favored pedestrian mobility have been converted by oil into havens for the private automobile, replete with energy inefficient buildings designed to specifications inappropriate for the Gulf climate. Cheap energy has shaped personal preferences and habits that, in combination with existing infrastructure design, have created path-dependence on high levels of consumption.

Factor 4: Competing Internal and External Priorities for Energy Production

Energy in the Gulf monarchies exhibits a duality in its role. In-kind energy, like fiscal rent, comprises a key distributive component in the social contract between state and society. Subsidized energy is used to buy citizens’ political support. A threat to domestic energy distribution therefore implies deep-rooted consequences for politics and governance. Simultaneously, hydrocarbons remain the region’s economic underpinning, as an export commodity comprising the paramount source of national income. As such, threats to exports of energy could have dire economic consequences, as well. This duality of energy has fostered competition between internal and external sources of demand. As

²⁰⁰ For example nearby Yemen, Eritrea and Djibouti have far smaller known energy endowments and consume a tiny fraction of the energy used in the GCC states.

²⁰¹ Pierson 2000; Thelen 1999

²⁰² Levi 1997, 28

production reaches a plateau, increases in internal demand endanger the ability to maintain constant exports. Subsidized domestic energy distribution carries further significance for intergenerational equity, for the continued prominence of the Gulf states in world energy markets, and for diplomatic and strategic relations with global powers such as the United States. (See Chapter 4 for further discussion.)

Factor 5: Energy's Influence on Institutional Design

As discussed above, hydrocarbon dependence, like that of water dependence in the creation of “hydraulic despotism,” is linked by numerous scholars to the perseverance of autocratic systems and the thwarting of democratic institutions. Ali and Elbadawi have taken this rentier thesis a step further to demonstrate that the size of the resource base per capita – and the consequent per capita distribution of rent and public wages – also influences the type of internal security apparatus as well as the level of repression wielded by the state.²⁰³ As mentioned in the previous chapter, Arab Spring unrest tended to inflict countries with smaller per-capita resource production and higher levels of state repression, and, for the most part, bypassed states with those with larger production per capita. Although this factor closely follows the rentier thesis, it is distinct to the extent that it links resources to institutional design.

Through these five factors, in-kind hydrocarbons – as distinct from export revenue – have shaped these societies in a direct way, rather than in the secondary manner enshrined in theory. That is a long way from arguing that these are hydrocarbon societies in the Wittfogel sense, and I acknowledge, like Gray and others, that there are numerous and growing nonoil dimensions to Gulf economies. However it bears pointing out that theory has consistently underplayed oil's physical, behavioral and strategic influences on these states. The enormous influence and effects of hydrocarbons and especially the availability of cheap oil and gas on the shape, preferences and habits of these societies; and on their governance and their positions in the global trade and power structure, should at least be *acknowledged* within the rentier literature.

This dissertation provides an initial attempt to come to grips with this task. Chapter 5 will show that oil and gas are key components of the distributive stream. In-kind energy is allocated alongside financial distributive flows and similarly incorporated into social contracts. However domestic oil and gas are distinct from financial distribution in that they flow from finite reserves subject to production limits. Their domestic consumption at low fixed prices generates a rising opportunity cost in terms of foregone export revenue. I argue that rentier theory erroneously correlates energy resource distribution with political stability, when in the longer run, it appears more likely to undermine

²⁰³ O. Ali and Elbadawi 2012

stability. In this way subsidized hydrocarbon distribution amounts to self-defeating rentierism. And, by framing these energy subsidies as *political rights*, the literature has enmeshed itself in the same reform challenge that now confronts Gulf regimes.

2.5 Rentier Theory and Subsidies

This discussion now turns to the theoretical construct within the literature to which this dissertation intends to contribute. As mentioned, rentier theory portrays subsidies as rights of citizenship that cannot be reformed. This is because subsidies are enshrined within state-society governance pacts, where they are provided in exchange for the political quiescence of recipients. These “unreformable” subsidies may include housing and land benefits, health care, education, food staples, funds for marriage costs and unemployment benefits. Those of concern to this research are subsidies on fuel, desalinated water and electricity, which encourage consumption of the same energy commodities that simultaneously comprise the chief exports of these states. The following section examines the rentier literature’s portrayal of subsidies and its characterization of the potential for reform. It also scours rentier and other scholarship for portrayals of benefits as fixed or as fungible; that is, whether benefits can be withdrawn or replaced at the behest of the state.

As will be shown, rentier scholarship affords little ambiguity on regime options vis-à-vis citizen subsidies. While scholars depict variation in levels and types of benefits – from jobs and loans to parcels of land and business licenses – these are portrayed as vital components of citizenship which, collectively, comprise the citizen’s most important inducement for acquiescence to his government’s rule. A preponderance of the literature declares that benefits cannot be retracted without offsetting their loss with a corresponding increase in democratic legitimacy. To do otherwise would challenge the basis of the state. Scholars’ treatment of substitution of benefits is only slightly less categorical.

2.5.1 Subsidy Treatment in the Classic Literature

As mentioned above, a key issue in the rentier social contract is the rejection of taxation and other forms of extraction from society. Among the prohibited extractive behavior is “retrenchment,” or the retraction of welfare benefits and subsidies. Acts of retrenchment are portrayed in the literature as equivalent to the loss of an income transfer or the imposition of a tax. In this sense, Waterbury argues that the “bread riots” that followed state-mandated price increases in Egypt, Algeria, Sudan, Jordan and elsewhere should be viewed as taxpayers’ revolts.²⁰⁴ This portrayal of subsidies as rights has grown more rigid over time. Some early characterizations of welfare benefits, including those on energy, describe them as once being understood by citizens as a ruler’s patrimonial gift. But any

²⁰⁴ Waterbury 1997, 157

vestige of the latter understanding has since been eclipsed by the widespread acceptance by scholars of these benefits as customary entitlements or rights of citizenship.²⁰⁵

In their introduction to a 1987 edited volume that is considered the cornerstone of the rentier literature, Beblawi and Luciani declared that subsidies, once extended, become permanent endowments that weak and legitimacy-deficient rentier states could neither retract nor restrict to the poor. “Cutting subsidies,” they wrote, is “not qualitatively different from raising taxes: either of the two is *feasible only if the state enjoys solid democratic legitimation*, justifying the degree of repression which may on some occasions be necessary.”²⁰⁶ Beblawi distills the subsidies-as-rights notion into a formulation that defines citizenship in the authoritarian rentier state as “*a source of economic benefit*” or a “sort of financial asset and hence a source of income” that extends beyond the traditional relationship between a man and his homeland: “Nationals live more in a rentier economy and *associate with its financial manna all the rights of citizenship*.”²⁰⁷ In similar fashion, Crystal describes a growing perception of state welfare functions as “rights” claimed on the basis of nationality.²⁰⁸ Writing in 1994, Gause argues likewise. After two decades of oil-derived state benefits, “a substantial part of the citizenry has ceased to regard these benefits as temporary benefices from their rulers, and has *come to see them as rights of citizenship*.”²⁰⁹

These classic theoretical works emerged during the oil bust of the 1980s and 1990s, a period that saw regime finances stretched thin. Some authors predicted, in similar fashion to this work, that the tendency to view subsidies as “unreformable” would lead to crisis. Beblawi and Luciani wrote that the specter of rentier governments clinging to “detrimental” spending policies that “very clearly cannot be sustained in the long run” was a symptom of state weakness.²¹⁰ Farsoun in 1988 warned of dangers inherent in the metamorphosis of subsidies into “a political right of the citizen.” Attempts to dismantle them in hard times “will likely trigger movements of opposition against the regime. In short, unwittingly, all states of the Arab Mashriq are planting the seeds of an important political principle: that is, *the citizen's political (not merely humanitarian) right to economic security*.” Farsoun predicted

²⁰⁵ These arguments have been articulated in the literature by numerous authors. See, for example, classic rentier works by Beblawi and Luciani 1987, 16–17; Crystal 1990, 2, 191–2; Gause III 1994, 82; Farsoun 1988, 20–1; Farsoun and Zacharia 1995, 262; Chaudhry 1997, 274–5; and more revisionist material from Okruhlik 1999, 301, 309; Hertog and Luciani 2009; Tetreault 2012; Davidson 2005, 97; Gause III 2011, 12; Peterson 2012; J. S. Mitchell 2013, 6.

²⁰⁶ Beblawi and Luciani 1987, 16–17, emphasis added

²⁰⁷ Beblawi 1987, 53, 56, 59

²⁰⁸ Crystal 1990, 191

²⁰⁹ Gause III 1994 specifically mentions state payment of citizen utility bills in this formulation. See p. 82 and p. 61.

²¹⁰ Beblawi and Luciani 1987, 16–17

that “This right may then emerge in the early twenty-first century as the central issue of domestic Arab politics.”²¹¹

Implications for imposing extraction extend from loss of regime autonomy, by inviting citizen scrutiny and demands for involvement in government policymaking; to diminished legitimacy; and even reduced prospects for regime survival, through decreased political support or perhaps popular insurrection. Gause was under no illusions about the centrality of social contract benefits to political stability. “Were the Gulf monarchies to find themselves unable to meet their end of the economic bargain with their citizens, *the future of their political systems could be called into question.*”²¹² In 1997, Gause again found little room for either imposing taxes or cutting welfare expenditures, since doing so “holds the risk of alienating large portions of their populations who have come to expect extensive welfare state benefits as *their right as citizens.*”²¹³

The perils of reforming energy subsidies can be seen in contributions to recent political unrest in Nigeria, Ecuador, Bolivia, Indonesia and Jordan, in Iran’s gasoline riots of 2007, and the toppling of regimes in OPEC members Indonesia in 1998 and Venezuela in 1993. In Venezuela in 1989, hundreds of people were killed in rioting after the government attempted to raise gasoline prices.²¹⁴ Government withdrawals of food subsidies have ignited serious unrest in poorer parts of the Middle East, with dozens killed in the “bread uprisings” in Egypt in 1977 and as many as 500 perishing in 1988 riots in Algeria. Food riots also broke out in Morocco and Tunisia in 1984, Sudan in 1985 and Jordan in 1989. As Siddiki showed, governments in all countries stricken by bread riots responded by increasing political participation – a boilerplate rentierist response to an inability to maintain distribution – and an outcome that Gulf ruling families would strenuously avoid replicating.²¹⁵

2.5.2 Subsidy in Revisionist Works

Revisionist works in rentier theory took issue with aspects of classic scholarship, as shown above, but retained, and in some cases intensified the subsidy-as-rights theme. Several authors portrayed the state’s obligations toward the ruling bargain as growing increasingly rigid, alongside rising citizen expectations and increases in individual wealth. Chaudhry’s examination of institutional effects of boom-bust cycles finds that Saudi “welfare programs *defined* citizenship” to the extent that the government was unable to retract benefits it could no longer afford. This failure was exemplified by

²¹¹ Farsoun 1997, 21; emphasis added

²¹² Gause III 1994, 147; emphasis added

²¹³ Gause III 1997, 80; emphasis added

²¹⁴ In Venezuela, where the world’s lowest gasoline prices remained fixed at 6 US cents per gallon at the time of writing, cheap gasoline is similarly considered “almost an inalienable right of citizenship.” See: Neuman, William. (Jan. 20, 2014) “Venezuela May Meet New Reality, and New Price, at the Pump.” New York Times. (<http://www.nytimes.com/2014/01/21/world/americas/venezuela-gasoline-prices.html>)

²¹⁵ Siddiki 2000

the Saudi government's failed attempt in 1988 to reduce subsidies on fuel, water and electricity.²¹⁶ Herb, while questioning the effects of oil on monarchical longevity, embraces theory's subsidies-as-rights principle. "The Gulf Arabs feel an entitlement to their share of the countries' oil wealth," he writes. Citizens do not (if they ever did) feel gratitude to ruling families for sharing oil rents, because they "think that they themselves, as citizens, own the oil, not the ruling families. ... Few are particularly grateful on receipt of something they think is theirs in the first place."²¹⁷ Okruhlik reiterates that "the receipt of goods and services through distribution is now *perceived as a right of citizenship* rather than the happy consequence of a boom period" and argued that reducing subsidy would be opposed as illegitimate, as if it were a tax.²¹⁸

Likewise Schlumberger's examination of regime survival strategies through the long oil bust period attributes longevity to the dogged delivery of patronage in the face of economic decline. "Given the absence of meaningful participation and democratic legitimacy, these *welfare services to the local population can be seen as the single most important source of political legitimacy*," he wrote.²¹⁹ Similarly, Schwarz identifies the rentier state's provision of welfare benefits as its *chief stabilizing function* which is threatened during times of fiscal scarcity. Political acquiescence is gained "as long as there are enough resources to be allocated both for the state and the whole of society." Insufficient distribution increases the chances for political change, even "collapse" of the state.²²⁰

Foley documents the inability of governments to address the oil bust shortfalls through the "most logical approach" namely "reducing spending and imposing income and other taxes, which had virtually disappeared in the Gulf during the 1970s."²²¹ With oil revenues collapsing, "it became clear that their populations were unwilling to countenance any reductions in welfare spending." Gulf regimes maintained spending and subsidies despite falling into debt.²²² As mentioned above, Mitchell uses survey and case study evidence to depict Qatari society rejecting the idea that welfare benefits are "gifts from a benevolent ruler that should be rewarded with political silence," but rather that these outlays constitute "a *birthright due them as citizens*." She describes the near-total lack of state extraction from citizens, despite being "unique in the history of states" as having evolved over years of increasing citizens expectations to become "the new normal." As an example, she cites complaints

²¹⁶ Chaudhry 1997, 149, 274-5

²¹⁷ Herb 1999, 241-2

²¹⁸ Okruhlik 1999, 301; emphasis added

²¹⁹ Schlumberger 2006a, 3

²²⁰ Schwarz 2008, 607

²²¹ Foley 2010, 90

²²² Foley 2010, 85

by Qatari nationals over the implementation of parking charges at a shopping mall as a sign of the unwillingness “of Qatari society to accept any forms of extraction, no matter how small.”²²³

In his works on the UAE, Davidson usefully differentiates among types of social benefits often lumped together, cataloging myriad sources and types of government benefit transfers. These range from business licenses granted to early political rivals, to “marriage funds” and housing grants aimed at the poor; to institutionalized privileges for business owners in terms of favorable loans and contracts; start-up loans and provision of business quarters and land for entrepreneurs; generous allowances for importing and control of foreign workers, and complimentary restrictions on business ownership by non-nationals. As some of these benefits have reached saturation levels – for instance business licenses and government employment – others with larger capacities have been extended.²²⁴ However, despite what initially appears as a substitutable variety of benefit choices available for deployment by the regime, Davidson also declares a prohibition on the notion of retractability. He writes that citizen understanding of these benefits has evolved from one of regime benevolence to entitlement. Among younger Emiratis, he declares that subsidies and benefits of the distributive economy are perceived as an “*irreversible birthright*.”²²⁵ Rentierism has “created a generation of nationals that has no experience of an extractive state.” The “complete abolition of all taxes and the introduction of the ‘ruling bargain’ subsidies from the 1970s onwards has effectively created a population incapable of coming to terms with any form of future demands from the state.”²²⁶ In his 2009 book on Abu Dhabi, Davidson finds “a citizenry has been cultivated over thirty-five years that is now wholly accustomed to material benefits and to no forms of extraction.” In comparison with relatively poor expatriates who must remain satisfied with tax-free salaries, the “entire national population forms a natural upper class, as they are the only members of society entitled to explicit government transfers.” As such, their national identity must be “fiercely preserved” since it implies a “guarantee of financial prosperity.”²²⁷

Much of Hertog’s 2010 book is dedicated to demonstrating how the Saudi state’s distributive outlays become fixed commitments. He argues that the government’s accumulated “distributive *obligations*” are not only un-reformable, as portrayed in rentier literature, but also constrain the state’s policymaking autonomy by accounting for ever-greater amounts of government budgets. Meanwhile, factions created by distributional imperatives can veto policy that threatens their privileges.²²⁸

²²³ J. S. Mitchell 2013; 6, 18-20

²²⁴ Davidson 2005, 70–105

²²⁵ Davidson 2005, 97; emphasis added

²²⁶ Davidson 2008, 197–80

²²⁷ Davidson 2011, 149

²²⁸ Hertog 2010a

*“Rent distribution means incurring obligations, even if individualized, and these can reduce a regime’s leeway to change institutions over time. This is perhaps the most striking feature of state autonomy in Saudi Arabia as a rentier state: oil money initially gave its elites vast autonomy to create and reshape institutions. This autonomy, however, has declined precipitously. Other rentier states seem to have seen similar shifts. Mechanisms of bureaucratic growth and entitlement tend to reproduce institutional trajectories once they have been decided upon. Entitlements and fiefdoms in countries as different as the Gulf monarchies and Venezuela have proven remarkably sticky. All GCC states saw institutional stagnation in the lost years of the 1980s and 1990s; the fiscal crisis did not trigger reforms as it might have in nonrentier states, and attempts to revoke entitlements by and large went nowhere.”*²²⁹

Far from allowing these outlays to be tamed, benefit portfolios are subject to increase over time. Herb, followed by Mitchell, argues not only that benefit outlays are “fixed commitments,” but the level or type of patronage required to secure a citizen’s consent to ruling family control tends to rise over time. “[T]he price of support is not fixed: it is subject to inflation,” Herb writes.²³⁰

Other works describe states’ needs to reform accumulating fiscal commitments, but portray tinkering with rentier social contracts as fraught with political risk. This scholarship retains the subsidy-as-rights formulation, while focusing on “dangerous” links between increasing social welfare obligations and dependence on favorable oil markets. Hertog and Luciani address – and dismiss – the possibility of rationalizing energy prices, conceding that raising residential electricity tariffs is nigh impossible because *“reduced prices have traditionally been perceived as part of the ruling bargain and attempts to increase them have been repeatedly reversed.”*²³¹

Gause champions the durability of the Gulf monarchies with a pointed critique of scholarly predictions of their imminent downfall, particularly Davidson’s 2012 forecast that all six monarchies will be swept away by 2017.²³² Gause argues in papers in 2011 and 2013 that the perseverance of monarchies through the Arab Spring attests to their resourceful and durable nature, aided by useful inventories of experience in surviving crises. However, regarding natural resource consumption that is the focus of this dissertation, Gause agrees that, in Saudi Arabia, “something will have to give.” But that the conventional responses of reducing spending or imposing taxes are unavailable to the Saudi

²²⁹ Hertog 2010a, 267

²³⁰ J. S. Mitchell 2013, 19; Herb 1999, 242

²³¹ Hertog and Luciani 2009; 7, 40; emphasis added.

²³² Davidson 2012, ix.

regime because they would “*challenge the basis of the oil state* the al-Saud family has built since the early 1970s, with uncertain political consequences.”²³³

Elsewhere, the subsidies-as-rights formulation is implied. Coates Ulrichsen argues that social contracts will have to be reformulated away from resource dependence, but that doing so is risky, since patronage-based states are vulnerable to unstable transitions.²³⁴ Tétreault cautions similarly that the post-oil lack of “shared sacrifice” in rentier society translates to fickle citizen support for the regime, which poses risks for welfare reform.²³⁵ Jones portrays UAE educational reforms as a stealthy monarchical attempt to reduce unwieldy social contract commitments. But rather than confront subsidies in illegitimate top-down fashion, the state encourages “grassroots” reforms by “educating” students to reject rent-seeking behavior and adopt “virtues” that run counter to their financial interests.²³⁶

Whether stated outright or inferred, the formulation of government subsidies as rights of citizenship has been and remains a fundamental tenet of rentier theory that is incorporated within the foundation of the literature’s arguments and narratives. In the scholarship examining the wealthy rentier states of the Gulf, I can find no author arguing that these benefits are fluid or that regimes merely exhibit a tendency to trade subsidies for political allegiance. What happens in practice is another matter. But within the literature, benefits are sacrosanct.

2.5.3 Substitutability of Welfare Benefits

There is virtually no dissent in the rentier literature that subsidies are viewed as rights, or that they are traded for quiescence. However, that statement does not close the door on the fungibility of benefits. Can welfare benefits be replaced when their continued provision damages other aspects of the governance structure? Can they be offset with new benefits? For instance, could electricity subsidies be replaced by subsidized mobile telephony services, or even a cash benefit? Is the menu flexible, governed by a level of spending rather than a specific set of benefits? The wherewithal of regimes to replace benefits is not addressed head-on in the literature, which, perhaps since it characterizes these benefits as *rights*, appears to assume that they are not substitutable. In addition, rentier works tend to theorize at the macro level without delving into the on-the-ground application of the rules, where, as I will later show, exceptions have emerged. However, a few authors visit subsidy substitution on the margins. Findings are mixed.

²³³ Gause III 2011b, 11–12. Gause also touches on distinctions between fiscal expenditures, and implications of resource demand for the income side of the budget. See also: Gause III 2013

²³⁴ Coates Ulrichsen 2011

²³⁵ Tétreault 2012

²³⁶ Jones 2011

Benefit substitution would most likely occur under periods of duress, when a financial or other hardship provided pressure. Literature examining state-society relations during the oil bust of the 1980s and 1990s generally focuses on regimes' doggedness in *maintaining* benefits, to the point of deficit spending and accruing debt.²³⁷ In the long run, however, a rentier political bargain is stable only as long as it is supported by sufficient resources. Schwarz argues that a fiscal crisis therefore entails a "fundamental crisis of the state itself." He finds that the rentier state avails two options to manage a fiscal crisis, neither of which entails fully removing or otherwise reformulating pre-existing benefits. First, the state can seek alternate sources of rent to distribute. Second, it can more effectively deploy its existing rents by narrowing their delivery to groups whose political support is most important for regime legitimacy.²³⁸ Gulf states have adopted both techniques. In the first case, Gray and Davidson have documented the broadening of the rent sources, especially in Dubai.²³⁹ In the second instance, this dissertation's Chapter 5 examines policies that have focused rent distribution toward the most politically important groups, chiefly citizens, while reducing outlays for those whose support is deemed less crucial to regime legitimacy, such as commercial entities and expatriates.²⁴⁰ In this sense, a few authors have depicted regimes revealing limited flexibility on sources and delivery of benefits.

In similar fashion, Lawson describes economic liberalization policies imposed during the 1990s oil bust as "innovations" that helped revenue-strapped monarchies cope with onerous social welfare mandates. "[R]eductions in government expenditure proved virtually impossible to implement in the face of widespread popular support for the continuation of government subsidies, *particularly for public utilities and staples.*"²⁴¹ Governments turned to privatizing state services, with the intention that sales of (for example) telecommunications monopolies would bring temporary infusions to state budgets while allowing citizens to purchase assets that might eventually provide them with a replacement financial return. When these intentions went unrealized, Lawson suggests that the lesson gleaned by regimes was not that benefits are fungible, but that they are rigid. He documents the response to a short-lived rise in oil prices in the early 1990s that coincided with an increasing wave of Islamist and sectarian citizen political expression. Given that "the potential for popular disorder was rising throughout the region," Lawson shows regimes doubling down on their distributive

²³⁷ Foley 2010, 85, writes that, even with oil prices and government revenues collapsing during the oil bust, "it became clear that their populations were unwilling to countenance any reductions in welfare spending" and governments had to maintain spending and subsidies even if they were going into debt.

²³⁸ Schwarz 2008, 610

²³⁹ M. Gray 2011a; Davidson 2005

²⁴⁰ Bueno De Mesquita et al. 2003, 38, argue that the rentier bargain does not hinge on equality of distribution or even equivalent satisfaction among citizens. As long as the "winning coalition" of essential regime supporters remains satisfied and materially preponderant, one can expect regime survival.

²⁴¹ F. H. Lawson 2005, 23; emphasis added.

commitments. The Saudis reduced gasoline and electricity prices in 1992 (and again in 2006²⁴²), while Bahrain in 1992 imposed substantial cuts in prices of electricity and water.²⁴³ Numerous scholars have documented similar increases in spending and benefits in reaction to the Arab Spring. However a significant exception bears noting: none of the Gulf monarchies reacted to the pan-Arab crisis by providing new or increased subsidies on energy, despite such actions constituting a staple of previous mollification efforts.

Neither Schwarz nor Lawson argue that benefits can be retracted and replaced, per se; but they do document regime tinkering with allocations and income sources. To date, Iran is the only country which has directly compensated citizens for raised energy prices with cash transfers. This development is discussed at length in Chapter 6. Residents of Alaska also receive a yearly cash transfer generated from returns earned by an energy fund, but these are not linked to the absence or retraction of subsidies. In Chapter 5, I document Dubai's subsidy reform, which was implemented without an explicit replacement benefit. Although it triggered citizen protest and a modicum of regime backtracking, the fact that a reduced level of benefit remains in force in Dubai suggests that some regimes have more room for maneuver than that portrayed within the rentier literature. Iran's reform has been subject to a number of studies (outside the rentier literature) and scholars have advocated similar actions elsewhere, including in the Gulf monarchies. These prescriptive works typically urge states to recast rents or in-kind subsidies as more efficient cash benefits described as a "resource dividend" or "citizens income."

Segal, along with Tabatabai, encourages cash transfers on grounds of poverty eradication and economic efficiency.²⁴⁴ The efficiency of distributing cash rather than providing in-kind benefits has long been advocated by economists.²⁴⁵ Tabatabai argues that cash payments constituted a necessary part of Iran's reform because *citizens view energy subsidies as entitlements*. Thus "the metamorphosis from price subsidies to cash subsidies is seen as merely a change of form in that entitlement." In this sense Iran's exchange of in-kind to cash "faced no psychological hurdle" among Iranians.²⁴⁶ An IMF report concurs, concluding that Iran's recasting of in-kind benefits as cash enjoyed broad public support, at least initially.²⁴⁷

Although the Iranian experience is undeniably useful, a different context prevails in the monarchies across the Gulf. Fiscal balances and external pressures (including via international embargo) exert

²⁴² See: Saudi Press Agency "Al-Naimi Hails King's Order To Slash Prices of Petrol and Diesel" (May 1, 2006): <http://www.spa.gov.sa/English/details.php?id=357585>

²⁴³ F. H. Lawson 2005

²⁴⁴ Segal 2011a; Tabatabai 2011

²⁴⁵ For example, see Thurow 1974

²⁴⁶ Tabatabai 2011; Segal 2011a

²⁴⁷ Guillaume, Zyteck, and Farzin 2011

lower levels of reform urgency than those which faced Iran at the end of 2010, and the political dynamics that enabled the reform – a populist Iranian president playing to his political base – appear improbable. Even so, Hertog has also advocated replacing subsidies on energy and other forms of rent allocation in the Gulf monarchies with direct cash distribution, which, he argues, would allow regimes to reform entitlements that otherwise damage long-term economic development. In doing so, he underscores the political necessity of maintaining distribution as “a political fact” in which “abolition is not an option.” This was proven by experience in the oil bust of the 1990s when “public employment and cheap public services were the very last budget items that regimes dared to touch.” Hertog is more circumspect about the actual possibility of imposing such dramatic reform in the GCC. “Even if ideal solutions might never be implemented in practice, it is important to develop them as a theoretical benchmark, if only to deepen our understanding of the fiscal sociology of GCC rentier states.”²⁴⁸

While there may be strong economic reasons to convert in-kind distribution to cash, Wintrobe suggests that ruling elites harbor equally compelling reasons to preserve distribution on an in-kind basis. He argues that delivering benefits in cash introduces a level of transparency that is undesirable in the autocratic context, since “the desire to obfuscate the true level of redistribution is one reason why redistribution often takes place in kind and not in money.”²⁴⁹ Resource revenues have long been described as “stealable” and easily kept secret.²⁵⁰ In-kind distribution allows regimes to maintain control over the type of services delivered, as well as preserve a more directly dependent patrimonial relationship with their citizens.²⁵¹ Indeed, Segal’s argument in favor of distributing cash resource dividends could easily be understood by ruling families as an excellent reason not to do it: “[A] resource dividend is the easiest form of expenditure to make transparent: Once the media and population know the total quantity of resource revenues and the size of the population, they know how much each individual should receive. It is very easy for citizens to know if they are receiving their due, and such transparency is likely to reduce ‘leakage’ or theft of revenues before they reach their intended recipients.”²⁵²

Additionally, state jobs and subsidies serve as constant patrimonial reminders that link people more closely to the state than does the distribution of cash, which confers more independence in decision-making and, at the same time, generates a greater public interest in government decisions that could affect the flow of resource dividends. In short, cash conversion would reduce governing autonomy. As Berman has shown in Alaska, the onset of the Alaska Permanent Fund did just that, converting

²⁴⁸ Hertog 2012

²⁴⁹ Wintrobe 2007; Ross 2012, 69-71, makes a similar point against transparency in the authoritarian context.

²⁵⁰ Michaels 2010

²⁵¹ Wintrobe 2007, 98

²⁵² Segal 2011b, 19

Alaskans into stakeholders in the state's energy policy and inculcating in them a desire to scrutinize public spending, at times successfully challenging it. Since the onset of the Permanent Fund, writes Berman, "a bad proposal is likely to wither under public scrutiny."²⁵³ Thus, although benefit substitution is addressed in literature, treatments mainly occur outside rentier works that cover the Gulf monarchies. Hertog's article is the main exception. Even his work includes a caveat which declares that, while it would be nice if benefits were fungible enough to be exchanged for cash, actually following through with such a trade is probably impossible.

2.5.4 Subsidy Reform

The difficulty of reforming subsidies, and the hostility of beneficiaries to losses of benefits, is well known, within and beyond the rentier literature. Recipients can be counted upon to defend subsidies when their gains exceed their share of the economic or environmental costs. Society at large, which typically bears the cost, is usually less motivated to support political action to remove the subsidy, since the cost is likely to be much smaller in per capita terms than the benefit to the recipients.²⁵⁴ Politicians tend to be reluctant to publicly reveal the economic costs of a subsidy.²⁵⁵

In the rentier state, subsidies are even more difficult to reform. First, the energy subsidies described here are not restricted to narrow interests, but delivered to all of society (or at least all citizens), and therefore receive widespread backing. Second, they are delivered in exchange for political support for the regime, whereas in extractive states, subsidies are typically used to protect industries or vulnerable groups. Third, as mentioned, subsidies are understood as political rights. Thus, even though subsidies on exportable energy products constitute self-defeating rentierism by eroding the source of the state's rents, they are difficult to do away with.²⁵⁶

One of the shortcomings of the literature with regard to subsidies is the lack of differentiation among them and indeed among the entire stream of state benefits – i.e. "rents" – that is exchanged for loyalty. As this dissertation will show, major differences exist among social benefit types, and the importance of reforms of some outweigh that of others. Even though the literature does not address withdrawal or exchange of benefits in a comprehensive fashion, these sorts of reforms may indeed be possible. As Chapter 6 will show, the perceived difficulty in reforming subsidies is less marked among citizens and more so among elites and experts. Perhaps, as outlined above, subsidies cannot be eliminated or recast

²⁵³ Berman 2005

²⁵⁴ This analysis is typical of producer subsidies, which tend to benefit individual industries or sectors, and which involve a smaller number of beneficiaries than do consumer subsidies. The discrepancy in difficulty of reform is demonstrated by Saudi Arabia's success in its recent abolition of producer subsidies for wheat farming. While farm subsidies were retracted, those on consumer products, including on food products, were not.

²⁵⁵ United Nations Environment Program 2008, 25

²⁵⁶ Again, the rentier literature's prohibitions notwithstanding, and as mentioned, prices on gasoline and diesel fuel have been reduced in Qatar, Oman and the UAE, as have those on electricity and water in Dubai.

as cash, not because citizens prefer reduced electricity and water bills, but because the state wants the broad, regular political benefits that are less pronounced through other rent disbursement methods. In this case, the state is more constrained in reformulating benefits than are citizens in accepting cuts or substitutions. The propensity for refashioning social contract benefits is also likely to be heterogeneous, even among the Gulf monarchies. First, there are varying levels of urgency: Qatar's domestic resource consumption remains insignificant as a fraction of exports, while Omani demand has already begun to displace exports. Second, there are differing political barriers to reform. For example, Kuwait's parliament is empowered to block the sort of reform proposals that have been imposed by emiri decree in Dubai. Ultimately, subsidy reform is closely related to – and dependent upon – an understanding of the social contract, which rentier theory conceives as the central reference point for state-society relations.

2.6 Theories of Social Contract, Retrenchment and Political Violence

The concept of the social contract has been invoked to explain a range of state-society interactions, among them the rise of postwar welfare states and social entitlements in the advanced industrial economies, as well as the resulting path-dependence that complicates reform.²⁵⁷ Social contracts have been cited to illustrate divergences between European and American social values²⁵⁸ and the difficulties of restructuring in democratic transition countries.²⁵⁹ In autocracies, the social contract becomes an “authoritarian bargain” that features strong state control and an exchange of guaranteed employment and public services for strict limits on political participation.²⁶⁰ Cook describes the results of the abrogation of that authoritarian bargain in her study of the collapse of the Soviet Union, discussed below.²⁶¹ Mick Moore and Karl argue that “resource curse” states can improve governance and maximize benefits from resource depletion by establishing a “fiscal social contract” that uses taxation to increase state accountability.²⁶² Finally, in the Middle East, where centralized states act as chief providers of public welfare, distributive social contracts have been invoked to explain the longevity of autocracies²⁶³ as well as society's unsustainable expectations for entitlements.²⁶⁴ Several scholars, among them Yousef and Heydemann, have called for reforms of “unsustainable” Middle East social contracts.²⁶⁵ Several of these studies offer insights for the Gulf experience.

²⁵⁷ Pierson 1996; Esping-Andersen 1999

²⁵⁸ Benabou 2000

²⁵⁹ Karl 1990; Haggard and Webb 1993; Sisk 1995

²⁶⁰ Desai, Olofsgard, and Yousef 2009

²⁶¹ Cook 1992

²⁶² M. Moore 2004; Karl 2007

²⁶³ Anderson 1986; Beblawi and Luciani 1987; Ross 2001

²⁶⁴ Coates Ulrichsen 2011; Forstenlechner and Rutledge 2010; Vandewalle 1998, 169; Yousef 2004a

²⁶⁵ Yousef 2004a; Heydemann 2003a; Heydemann 2003b

2.6.1 Retrenchment in Welfare States

Literature on democratic welfare states which describes the risks of “retrenchment,” or retracting benefits, offers some relevance to the experience in autocracies. Government largesse inevitably creates groups of beneficiaries who can then rise up and threaten political leadership when their interests are jeopardized. Pierson argues that welfare societies thus maintain a constant *potential* for mobilization that raises their stakes of reform.²⁶⁶ Centralized state power structures offer little help. Concentration of authority may facilitate benefit cutbacks by reducing the number of veto wielders, but it also concentrates accountability, which impedes reform. Political regimes that cut benefits are thus exposed to the full force of public reaction, and can only pursue these policies during periods when they feel they can absorb the political consequences, or when they are sheltered from blame. This is best done under conditions of budgetary crisis or during reforms mandated by an external body such as the IMF or WTO.²⁶⁷ (However, scholars such as Tsebelis and Chang argue that systems with fragmented power and multiple veto players – such as Switzerland or the United States – find it more difficult to pursue benefit cuts than systems with more streamlined powers, such as those with Westminster-style parliaments.²⁶⁸)

Benabou traces long-lasting alterations in social contracts to sectoral shocks such as increases in immigration, or shifts in demand, technology and voting rights. In more egalitarian settings, these shifts tend to bring redistributive rebalancing through expansion of welfare states. In others, especially those exhibiting higher levels of inequality, they trigger the dismantling of benefits. In comparison with America, more homogeneous societies like those in Europe are more likely to maintain popular consensus on social insurance benefits.²⁶⁹ In the Gulf, the distributive consensus is maintained because benefits are reserved for citizens, a status essentially unavailable to immigrants.

Retrenchment is regarded as inherently unpopular and difficult to pursue, because it pits reformers against path-dependent institutions. Pierson shows how the Thatcher and Reagan governments, elected with mandates to dismantle welfare states, failed to implement the sweeping reforms promised or even weaken political foundations. Digging into this, Pierson and other scholars found retrenchment unpopular among voters as well as vulnerable to mobilization of interest groups created by expanded benefits, such as pensioners’ lobbies. Deep entrenchment among welfare institutions restricts changes to incremental adjustments that take place only within structural frameworks. When politicians and voters enter the mix, retrenchment becomes feasible only by stealth: politicians avoid radical or visible cuts and concentrate on blame avoidance. Pessimism about reform opportunities has

²⁶⁶ Pierson 1996

²⁶⁷ Pierson 1996; Arnold 1992; Patashnik 2003

²⁶⁸ Tsebelis and Chang 2004

²⁶⁹ Benabou 2000

led to a “resilience thesis” among welfare state scholars.²⁷⁰ On the other hand, Tanzi and other scholars argue that retrenchment is an inevitable feature of globalization, that as countries integrate economically, competition among states will force cutbacks in social protection, especially when funded by taxes. These trends can lead to a sense of “permanent austerity” within the welfare state.²⁷¹

2.6.2 Social Contracts in the Rentier State

Most literature on the Middle Eastern social contract is bound up with rentier theory. Even so, a few points bear mentioning. Social contracts in the Middle East are freighted with more institutional magnitude than those in the advanced industrial democracies, which tend to mediate between organized labor and the state. (Table 2.1) Yousef describes how they encompass the shared expectations and guidelines for organizing the polity; even defining “the boundaries of acceptable policy choice.”²⁷² The state supervises society, promising prosperity and social and economic freedoms, in exchange for unfettered control of politics. Public dissent tends toward demands that rulers adhere to traditional obligations of economic equity and transparency. When they acquiesce, ruling families *attempt* to present improvements as gifts of the regime, rather than rights of the people.²⁷³

The outcomes of these bargains on economies and societies have been substantial, both positive and negative. On the one hand, distributive compacts guided the creation of transformative institutions in education and health care, alongside sharp increases in economic growth (which stagnated in the 1980s and 1990s).²⁷⁴ On the other hand, remarkable advances have been accompanied by the accumulation of huge fiscal obligations in the form of state employment and public expectations of perpetual state largesse. Heydemann argues that Middle East social contracts remain formidable barriers to reform, despite their “negative effects on employment, productivity, foreign investment, trade, and macroeconomic performance.”²⁷⁵

Table 2.1: Features of Middle East Social Contracts Prior to 1973

-
-
- A preference for redistribution and equity in economic and social policy
 - A preference for states over markets in managing national economies
 - Adoption of import-substitution industrialization and protection of local markets
 - An encompassing vision of the role of the state in the provision of welfare and social services
 - A vision of the political arena as an expression of the organic unity of the nation, rather than
-

²⁷⁰ Starke 2006

²⁷¹ Tanzi 2002. Also see: Pierson 2001

²⁷² Yousef 2004b

²⁷³ Peterson 2012

²⁷⁴ Heydemann 2003b

²⁷⁵ Heydemann 2003a

Rentier subsidy dilemmas are ominously echoed in the Gorbachev-era Soviet reforms, which sought to dismantle the economically crippling Brezhnev social contract. As Cook explains, Brezhnev's bargain obligated the government to provide full employment, while offering extensive social services and subsidized essentials, including energy. In return, Soviet workers remained politically quiescent. In the same manner that rentier social contracts are tied to hydrocarbon export revenues, the Soviet compact required a command economy to deliver workers' benefits. Gorbachev's efforts to expand personal freedoms were part of a renewed social contract that sought to exchange reduced benefits for greater liberty. But reduction in benefits and greater opportunity for protest mobilized the once-quiescent Soviet worker and ultimately brought down Gorbachev and the Soviet Union.²⁷⁶

Social contracts in the Gulf monarchies have cemented a similar distributionist bargain in place, terms of which impose a comparable dilemma upon domestic policymaking. Heydemann and others characterize reluctance to reform as an incumbent's rational response to circumstances in which costs of reform are immediate, while benefits are delayed and uncertain. Regimes pondering changes to state benefits – including those on energy – face the daunting prospect of unbalancing the social contract.

2.6.3 Relative Deprivation

One final strand in the literature bears review, since it presents yet another perspective on subsidy reform. Theories of political violence, especially those dealing with the social-psychological concept of “relative deprivation,” offer another avenue for consideration of reforms of social contracts and welfare benefits. Gurr in his path-breaking 1970 work, defined relative deprivation as a “perceived discrepancy between men's value expectations and their value capabilities, i.e. a discrepancy between the goods and conditions of life they believe are their due and the goods and conditions they think they can in fact get and keep.” The idea is 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.²⁷⁷ Gurr's hypotheses offer an alternate model, based upon regime survival concerns, that explains government retention of economically counterproductive social benefits, as well as the resilience of related tenets of rentier theory that prohibit the retraction of subsidies.

Revolutions and insurgencies are typically preceded by popular discontent over absolute or relative declines in economic conditions, the breakdown of established patterns of community organization and belief, and the demonstrated incapacity of governments either to maintain social order or to take

²⁷⁶ Cook 1992

²⁷⁷ Gurr 1970, 24-5, 319.

remedial action.²⁷⁸ Gurr argues that a key predictor of political violence is a *progressive and palpable decline* in living standards and economic conditions, rather than the “aspirational” unsatisfied expectations for values never obtained.

In this sense, Gulf ruling elites should be expected to place greatest emphasis on maintaining economic wellbeing, because the loss of benefits produces dangerous “decremental and progressive patterns of deprivation” which render dissatisfied social groups especially susceptible to recruiting by anti-government forces. Conversely, the withholding of democratic participation is less threatening in the Gulf context because, while the level of relative deprivation may be measured by comparison with societies elsewhere, the unsatisfied expectations are aspirational and therefore less intense. Gulf societies with the exception of Kuwait, and to a lesser extent Bahrain, never attained significant levels of formalized political participation, so unmet democratic aspirations produce milder discontent. Either way, the more effective regimes are in response to relative deprivation, the greater is regime legitimacy and the less the potential for political violence.

Gurr offers a strategy for incumbent regimes to minimize the potential for collective violence. First on his advice list is to *maintain the status quo in distribution of social, economic and political goods*. In the event that reform in any of these areas is pursued, government must take pains to show that “no group, at least no discontented group, should gain less rapidly than others.” Also helpful in preserving stability are symbolic reinforcements in legitimacy, along with censorship and the provision of diversionary means for expressing hostility.

These strategies look familiar to observers of Gulf politics and regime behavior, especially through the oil bust years in the 1980s and 1990s, and including the present day tactics of maintaining energy benefits in the face of warnings over reduced exports. Regimes have single-mindedly maintained welfare benefits and subsidies, while allowing discontent to be channeled toward Islamism and solidarity with pan-Arab political grievances. Where unrest has broken out, such as in Bahrain and Saudi Arabia’s Eastern Province, it would appear that regimes did not follow Gurr’s principle about ensuring no discontented group gained less than others. Otherwise, when world price movements reduced economic wherewithal, regimes have proven resourceful in preserving economic goods such as subsidized energy, social goods such as health care, land, housing and food subsidies, and either maintained the status quo on political goods or provided incremental openings that did not curtail ruling family control. As Schwarz detailed, these strategies helped the Gulf regimes maintain order without resorting to major increases in coercion or political concession.

²⁷⁸ Gurr 1970, 338-40; also Davies 1962; Chaplin 1968

2.7 Discussion and Conclusions

The aggregated literature on rentier states, social contracts, retrenchment and political violence makes a strong case for the political hazards of subsidy reform, including energy subsidies in the Gulf monarchies. Among the barriers cited:

- Rentier theory portrays these subsidies as unreformable citizens' rights obtained in exchange for political acquiescence and loyalty toward unelected regimes.
- Subsidy reform is made difficult by the creation of beneficiary groups which fight to preserve privileges which may be economically damaging for the broader economy. The difficulties may be more pronounced in centralized states where leaders are unshielded from blame.
- Gulf regimes are growing less autonomous and more responsive to citizen needs and complaints, in part to reduce opportunities for popular mobilization.
- Public choice literature portrays in-kind benefits offering greater opportunity for creating citizen dependence on the state than those delivered in cash.
- Relative deprivation theory holds that loss of economic benefits is strongly associated with popular opposition to the regime and a common trigger for political violence.
- History is replete with examples of undesirable public reaction to previous subsidy rollbacks in the Middle East and other oil exporting countries.

On the other side of the ledger are more economics-based rationales in favor of ending subsidies as well as small signs that subsidies may be more conducive to reform than the literature posits.

- Literature on resource depletion argues that government intervention is required to combat wasteful tendencies inherent in energy production and consumption. Rationalized prices constitute one approach.
- Rising domestic consumption is incompatible with long-term maintenance of exports.
- Failure to convert production of depletable resources into fixed capital assets may constitute simple "disposal" of those resources.
- Recasting in-kind benefits as cash engenders greater efficiency in resource consumption and fairer, more progressive delivery of benefits to vulnerable groups. Iran's experience (discussed in Chapter 6) offers a model for substituting welfare benefits.
- Rentier states have demonstrated their willingness to reduce subsidies on goods delivered to less politically important groups.
- Regional elites are beginning to declare reforms to be necessary.

Giving empirical strength to these economic imperatives, I discuss in Chapter 5, Dubai's 2011 reduction of subsidies on electricity and water delivered to its most politically important group, UAE nationals in their homes. These controversial reforms triggered a backlash and saw the regime make

partial concessions, but the overall thrust of the measure remains in effect. The regime offered no substitute benefit as compensation, and the raised prices were, by and large, accepted by the population.

Despite these economic imperatives, the preponderance of literature weighs against reforms that are being portrayed in the Gulf monarchies as increasingly necessary and urgent. Oman's minister of oil and gas, Mohammed bin Hamad al-Rumhy, made an unusually strong public plea for reform in November 2013. "We are wasting too much energy in the region and the barrels that we are consuming are becoming a threat now, for our region particularly... I think we have a serious problem," al-Rumhy said. "What is really destroying us right now is subsidies. We simply need to raise the price of petrol and electricity. In some countries in our region electricity is free and you leave your air conditioning for the whole summer when you go on holiday. That is really a crime. Our cars are getting bigger, our consumption is getting bigger and the price is almost free. So you need to send a signal to the pockets of the public." These sorts of reform statements appear to be preparing the ground for a stress test of theoretical pronouncements reviewed above, although it should be made clear that al-Rumhy's reform "imperative" is more urgent for some countries, Oman among them, than others, especially Qatar.

One final factor that weighs on this debate is the character of monarchies. These features are likely to affect states' propensity for reform, and they can present useful variables in cross-country comparisons on reforms and social contracts. Where rentier theory tends to view these states as an aggregate with rules that apply uniformly, the literature on state formation and monarchy tends to stress their heterogeneity and differing levels of policymaking flexibility. This literature, along with historical case studies on individual states, reveals the complexity of regime-society relationships, including the use (or invention) of traditional cultural factors to build national feeling. Divergences that date back to state formation processes offer signals as to why, for example, Dubai can raise prices on citizens while Kuwait cannot.²⁷⁹

Anderson writes that monarchy allows the Middle Eastern regimes "unusual suppleness" that has complemented the formation of these states.²⁸⁰ This runs counter to modernization hypotheses in the 1950s and 1960s that predicted the collapse of the world's remaining monarchies, because their "brittleness" left them ill-prepared to adapt to a globalizing world.²⁸¹ After four decades of defying scholars who predicted their demise, Middle Eastern monarchs appear "far better adapted than we have suspected to the complex cosmopolitan world in which diverse communities interact through

²⁷⁹ Herb 2005

²⁸⁰ Anderson 2000

²⁸¹ Lerner 1958; Deutsch 1961

international finance and trade, labor migration and global communications.”²⁸² Monarchy allows regimes to wield inequality and social diversity, in contrast to republics and other state types that promote “formal interchangeability” among subjects. Acceptance of inequality allows policy flexibility. In energy policy, this is manifested in the dual-tariff system for citizens of the UAE and Qatar, who enjoy deeper subsidies than non-citizens and relief from the largest rate hikes.²⁸³

Byman and Green argue that the “baffling” staying power of the Gulf monarchies owes itself to six strategies: (1) strong state security services, (2) co-opting of dissidents, (3) tactics of divide-and-rule, (4) ideological flexibility, (5) pseudo-participative institutions, and (6) accommodative diplomacy. Perhaps because they wrote their article under the shadow of the long oil bust, Byman and Green do not explicitly cite rent distribution as a strategy, but rather use it as a methodology within other strategies.²⁸⁴

Monarchies also appear to benefit from a sense of fraternity that is not present among republics. Gulf monarchies banded together to prevent the toppling of the Bahraini King Hamad during the 2011 uprising, sending troops and \$10 billion in emergency aid to Bahrain and Oman. Further, amid the Arab Spring uprising, the Gulf Cooperation Council discussed extending membership invitations to the two remaining monarchies in the region, Jordan and Morocco.

Many scholars have noted that the Arab Spring tended to afflict Arab republics – Tunisia, Egypt, Libya, Yemen and Syria – while largely bypassing its monarchies. Yom discounts monarchical exceptionalism in one work, arguing that monarchies survived the Arab Spring because of strong allies and oil rents. However, in a 2013 conference presentation Yom attributed some monarchical durability to closed-doors fraternization and information sharing among Middle East ruling families, which, he argued, led all eight monarchies to “refrain from large-scale violent repression throughout the Arab Spring.” Yom argues that monarchical families form an epistemic community through the GCC and other fraternizing, including through intermarriage, and which shares information about the futility of mass repression and preferences for non-repressive policy.²⁸⁵

Perhaps less speculative are the numerous interlocking factors for monarchical stability compiled by Nonneman, starting with the basic-level legitimacy of the state and its ruling family, and the traditional sources of legitimacy which continue to be emphasized and enhanced by regimes. Further stability factors include the small size of Gulf polities (outside Saudi Arabia) and consequent proliferation of personal and kinship ties which cut across ideological and economic lines. Cultural

²⁸² Anderson 2000, 66

²⁸³ Dual tariffs for citizens and non-citizens have emerged in the UAE and Qatar, and are under consideration in Bahrain.

²⁸⁴ Byman and Green 2002

²⁸⁵ Yom 2013; Regarding Bahrain’s violent response, Yom argues that it was less repressive than commonly thought.

attributes, such as society's enduring deference to ruling families, have been suggested as factors restraining the organization of opposition movements, as have societal preferences for communal cohesion and stability over individual rights, all of which are in evidence in the Gulf.²⁸⁶ Externally, the diffusion or contagion effects that aided the spread of the Arab Spring elsewhere may have undermined its appeal in the Gulf, given that the "contagion" was cast in sectarian hues in Bahrain and Saudi Arabia.²⁸⁷ Other relevant counterrevolutionary influences include the high per capita wealth in these societies, which tends to enable political consensus and reduce the intensity of political competition, and the "segmented" nature of clientelism, which creates dependent links between segments of society and patrons in the regime.²⁸⁸

However, despite the existence of scholarly attempts to get beyond rent, it remains difficult to dispute the notion that external rent influences political systems. There is little disagreement that oil rents remain a crucial ingredient in the survival of Gulf monarchy and of its relations with citizens. Even among scholars who emphasize other pathways to legitimacy and longevity – whether in terms of cultural narrative building, dynastic institution-building, international relations or political skill – there are none that this author knows of who argue *against* a role for resource rents.

Recent iterations of rentier theory have seen it expanded to explain effects on politics in democracies, including democratic deficits in sub-national regions in Argentina²⁸⁹ the general sustenance of democratic regimes,²⁹⁰ distributive behavior of elected officials,²⁹¹ and the onset of a new form of rentier populism in South America.²⁹² Rentier effects are used to explain regime stability in Azerbaijan,²⁹³ harmful effects of aid in Afghanistan²⁹⁴ (added to a long list of aid rentiers such as Jordan, Egypt and others), the unlikely success of rentier state-owned business,²⁹⁵ military spending and conflict,²⁹⁶ even the consideration of rentier effects from water resources.²⁹⁷ The politics of natural resources and globalization merited a recent journal special issue.²⁹⁸

²⁸⁶ Nonneman 2006, 14–23

²⁸⁷ During the Arab Spring, contagion or diffusion effects in the Gulf were arguably evident in simultaneous unrest among Shia populations in Saudi Arabia and Bahrain, for example, and, potentially, in the expressions of support and overall backing of Sunni populations for regimes.

²⁸⁸ Nonneman 2006, 19–23; Hertog 2006

²⁸⁹ Gervasoni 2010

²⁹⁰ Gurses 2011

²⁹¹ Dunning 2010

²⁹² Mazzuca 2013; Buxton 2008

²⁹³ Guliyev 2013

²⁹⁴ Verkoren and Kamphuis 2013

²⁹⁵ Hertog 2010b

²⁹⁶ H. E. Ali and Abdellatif 2013

²⁹⁷ Rudra and Jensen 2011

²⁹⁸ *Comparative Political Studies* (2011), vol. 44, no. 6, <http://cps.sagepub.com/content/44/6.toc>.

The *continuity* of the core rentier bargain is a key factor concerning this dissertation. None of the Gulf monarchies have cultivated meaningful increases in pluralism nor imposed major alterations to their allocative nature described by Beblawi and Luciani in 1987. A significant share of political acquiescence is still purchased through patronage, despite the changing character and deepening complexity that Gray, Hertog, Mitchell and others describe. In practice, patronage includes in-kind distribution of energy. Energy distribution practices initiated in the wake of the 1973 oil price spike have been retained in nearly identical form today, despite major changes in the character of energy demand in these states, including growth in population, wealth, and the cost of supply. Rentier theory has proven startlingly accurate in predicting the retention of those benefits for four decades, despite large fluctuations in oil prices that taxed the ability of states to maintain fiscal components of the rentier bargain.

2.7.1 Theoretical Revisions

The pace of change in the rentier Gulf has been remarkable. In the 1930s, when Saudi rents flowed largely from Hajj fees, Ibn Saud was reputed to be able to carry his entire national treasury in the saddlebags of his camel.²⁹⁹ In 1970s Oman, oil rent that comprised most of the government's treasury flowed directly into Sultan Qaboos bin Said's personal bank account. At the time, Sultan Qaboos refused to establish a state budget on grounds of excessive transparency. He told an interviewer, "Why should I do it? It is only a technical issue about which almost all our subjects know nothing. We take decisions in the country's interest. It is better if they are not questioned by ignorant people."³⁰⁰ At the time of writing, of course, Gulf rents flowed not just into national treasuries but also into large and complex investment authorities, from where they are deployed worldwide in search of financial returns and political influence.

Rentier theory has kept pace with these states through similar transformation. In the late 1980s, Luciani declared that the unsophisticated rentier state need not "formulate anything deserving the appellation of economic policy; all it needs is an expenditure policy."³⁰¹ As Luciani's subsequent works document,³⁰² current economic policy in the rentier Gulf is as complex, and, some argue, competent,³⁰³ as that in more conventional economies, with bureaucracies overseeing fiscal and monetary policies (albeit with fixed exchange rates), state-capitalist investment policies, trade policies, labor market strategies and regulating diverse and competitive private sectors. Scholars now

²⁹⁹ Yergin 1991, 284

³⁰⁰ Valeri 2009, 92. Note that in Oman, Sultan Qaboos' lack of male heirs and small family size has forced him rely more heavily on backing of traditional merchants, which continue to play a political role in government while also enjoying economic endowments aimed to cultivate their loyalty. See Valeri 2009, 225

³⁰¹ Luciani 1987, 74

³⁰² Luciani 2005; Luciani 2012

³⁰³ Hertog 2010b; M. Gray 2011a

text-analyze economic development plans for clues to future growth trajectories,³⁰⁴ delve into the intricacies of the rentier private sector,³⁰⁵ or the complex layers and silos among its bureaucracies.³⁰⁶

Despite these adaptations, rentier theory still falls short in important ways. This dissertation argues that rentier theory does not sufficiently or accurately portray the *repercussions* of allocation, especially of in-kind resources. By defining extraction to include subsidy removal, and by essentially “banning” necessary forms of extraction, rentier theory entraps itself in a self-defeating paradox. It safeguards the erosion of its rent source without allowing for reform.

This dissertation contributes to the current debate by highlighting rentier theory’s major omission: the repercussions of inflexible allocation policies which undermine rent flows. By offering a revised perspective within this academic conversation, this dissertation sets the foundation for a more predictive model of rentier state behavior in the modern world.

The literature requires updating to accommodate a new reality, that of the growing domestic burden of resource demand that is beginning to interfere with the core rentier structure. Rising domestic consumption and steady exports are incompatible. The limiting factor on resource draws is not reserves, but production; and production levels have reached or are nearing plateaus. Unless states succeed in sufficiently diversifying their economies to replace decreases in export rent, rentier practices will reduce the flow of rents. The self-defeating nature of rentierism’s resource distribution structures needs to be acknowledged in the literature, and theoretical allowances made for their reform. As will be discussed in Chapter 5, the urgency of reform and the political capacity for carrying it out is not uniform across these monarchies, which tend to be depicted with undue homogeneity. Qatar, Kuwait and Dubai offer utterly heterogeneous cases.

This dissertation makes several arguments that conflict with the preponderance of rentier scholarship on subsidies, suggesting that established views require revising to regain relevance amid evolving circumstances in the Gulf. I propose new scholarship that retains the core rentier thesis on the importance of externally generated rents, while strengthening its explanatory power by altering the portrayal of subsidies from “rights” or “entitlements” to “customary privileges.” This altered portrayal provides theoretical allowance for the retraction of social contract benefits which are traded for regime support.

I leave it to future scholars to determine whether regimes will need to extend a new subsidy or resource grant to replace those that may be reformed, and to offer policy suggestions for developing alternative sources of legitimacy. Case studies of Dubai in Chapter 5 and Iran in Chapter 6 provide

³⁰⁴ Hvidt 2012; Hvidt 2013

³⁰⁵ Hertog 2013

³⁰⁶ Hertog 2011

examples of two approaches to potential losses in regime support. In Dubai, where the regime faced substantial citizen opposition to the raising of electricity and water prices, some aspects of the price increases were relaxed. However, no *quid pro quo* benefit exchange was provided. In Iran, policymakers recast energy subsidies as cash benefits in a manner acceptable to the majority of the public. These approaches suggest that regimes interact with their societies according to the distinct terms of their social contracts and amid complex and divergent political contexts. A subsidy reform such as that in Dubai may not be possible in the political context of Kuwait, for example.

My amended portrayal of subsidies as “customary privileges” provides a path for theory to incorporate the reforms that have begun in Dubai and that other regimes appear likely to initiate. The three substantive research chapters that follow (after an examination of methodology used) examine these questions of political economy in detail, findings of which are synthesized in the dissertation’s concluding chapter. In the conclusion, and throughout this dissertation, I make the case that energy, as a physical commodity, should be accorded a more prominent role in the formation of states, institutions and the built environment in these monarchies. I argue that theoretical assertions which declare that political stability is derived from subsidies on energy should be reversed. Energy subsidies, in the longer run, appear more likely to correlate with instability than with stability. This revised framework of rentier dynamics will help strengthen our understanding of modern rentier state behavior, and it will provide avenues for re-orienting rentier scholarship in preparation for the future.

Chapter 3: Methodology

To recapitulate, the purpose of this research in political economy is to revise unquestioned theoretical assumptions on the distributive practices of Gulf monarchies, by using interviews, expert elicitations, public survey, and case studies. The thesis' central claim is threefold. First, it argues that increases in the scale of domestic distribution of natural resources has begun to undermine long-established views that citizens in rentier states are entitled to subsidized energy supplied by the state. Second, it argues that domestic demand for export commodities is incompatible with overall rentier distribution and negatively correlated with long-run political stability. Third, it argues that theory must allow for the reform of distributive practices which have been accepted in the literature as citizen entitlements or rights.

In order to support these claims, the research that follows examines Gulf regime responses to rising domestic energy consumption, analyzing patronage distribution mechanisms and documenting evidence of reform. Where evidence is lacking, I employ the method of expert elicitation to gather the views of experts and key stakeholders in predicting which countries are likely to transition to unsubsidized energy pricing, and which are unlikely to do so. The enabling environment for reform is illuminated through interviews with energy sector elites, as well as through a public survey of citizen attitudes.

3.1 Multiple Method Approach

This thesis brings together multiple methods that employ coordinated data-gathering tools to compile a single coherent work. The practice of combining of methodologies for the study of a single phenomenon is sometimes known as triangulation, which borrows from a practice known to improve accuracy in navigation by using multiple reference points. Jick, following Denzin, argues that “between methods” approaches which mix quantitative and qualitative methods tend to be more creative and offer better opportunities for converging validation. Multiple methods can counterbalance inherent weaknesses in single method approaches with compensating strengths. Thus the power of demonstrating correlations and representativeness of observations through quantitative analysis can be balanced with an explanation of the causal mechanisms and context. Jick argues that triangulation “heightens qualitative methods to their deserved prominence and, at the same time, demonstrates that quantitative methods can and should be utilized in complementary fashion.”³⁰⁷

My multi-method approach leverages these advantages to illuminate the context behind the numbers, which, it is hoped, serves to deepen understanding. Each method was chosen to inform and contribute

³⁰⁷ Jick 1979; Denzin 1978, 301. Quantitative and qualitative methods are described as complementary in a landmark methodological review of case study research; see: Bennett and George 2005, xv.

to the others in a way that would create a coherent single work. Thus quantitative data from my public survey is counterbalanced by qualitative data from semi-structured interviews and descriptive statistics. Expert elicitation data is deployed quantitatively in Chapter 5 and used as a benchmark for the public survey in Chapter 6. The questions posed in these methods were often identical or nearly so, which allowed for bootstrapping within and across these techniques so that, for example, the expert elicitation allowed for proper weighting of interview data, and public survey responses provided an alternate view of the same issues as the expert elicitation results.

Quantitative methods used mostly closed questions and multiple respondents to produce positivist data for statistical analysis using econometric methods. The qualitative processes allowed statistical results to be set into the political economy context of the Gulf, revealing the accompanying trends and related policy, presenting the thought processes of policymakers balancing politics and economics, and illuminating intangible but important concepts – such as legitimacy³⁰⁸ – which present strong policy motivations but offer few recordable metrics for econometric measurement.

3.2 Methods: Overview by Chapter

Chapter 4 uses the method of descriptive statistics to produce an in-depth view of the research puzzle: Government policies that encourage energy consumption and the potential effects of that consumption on exports and export-oriented political economies. Numerous statistical sources provide data used to profile rising consumption of oil, gas, electricity, as well as examine trends in energy intensity, and benchmark the energy balances of GCC states against those of other states. References to the economics literature allow portrayal of actual policymaking within the context of the theoretical optimum. The chapter contains a short analytical component which seeks to quantify the contribution of price (in terms of subsidized end-user prices) to energy demand in the GCC. Previous estimates of price elasticity of demand are aggregated to create a straightforward decomposition of energy demand that attempts to estimate the share attributed to energy subsidies. Descriptive statistics on growth in population and wealth are employed to infer the contributions from these alternate sources of demand growth. Interview data deepens understanding of this puzzle, by illustrating policymakers' forecasts on energy supply options, costs, and likely policy responses, as well as providing otherwise unavailable detail on public response to price increases.

Chapter 5 disaggregates regime allocation practices to focus on energy distribution, which, I argue, amounts to self-defeating rentierism which is incompatible with other modes of rent distribution. It uses descriptive statistics and projections based on extending historical trends in the data to portray effects on exports of domestic consumption. Acknowledging that future trends rarely continue in straight lines based on historical factors, it uses the method of expert elicitation to collect expert

³⁰⁸ A “mushy” concept best avoided by political analysts, in the words of Huntington 2012, 46

predictions of future policy and changes in trajectory. This method is explained in detail below. The chapter also dives deeply into the complex reality of societal extraction in the rentier-autocratic context by offering a detailed case study of energy subsidy reform, and shorter case studies of policymaking environments around the region. These are bolstered with interview data. By triangulating among the results, the chapter is able to muster sufficient supporting evidence for its prediction that answers the research question.

In Chapter 6, I analyze public survey data using multiple regression to examine public perceptions of entitlement to energy subsidies and gauge citizen willingness to submit to the loss of those subsidies. Those quantitative results are used to accept or reject hypotheses in the typical fashion. However, I augment the statistical findings by contrasting them with results from the expert elicitation, which asked nearly identical questions to a different group of respondents. The intent is to capture perceptions of the state-society social contract from both perspectives – the state’s as well as society’s – and contrast any differences. The distinctions are important because of the theoretical centrality of the social contract to regime legitimacy in these monarchies, and the centrality of welfare distribution – including of exportable energy resources – to the social contract.

It bears noting that, while a few others³⁰⁹ have employed micro-level studies to test rentier theory, none have done so in the manner pursued here: by investigating behavior within the narrow realm of energy across the GCC, and by using survey and elicitation data to build a statistical picture that reinforces the qualitative findings. Each method is presented in detail below.

3.3 Interviews

Through semi-structured face-to-face interviews with around five dozen subjects, I was able to map out an understanding of energy issues in these countries and the thinking behind strategies that aim to preserve political stability on one hand, and economic rationality on the other. Many of these discussions delved into data and sensitive topics that have not been released or discussed in public before. I selected interviewees based on their direct involvement in energy sectors and policymaking or their understanding of these processes. Interviewees comprise some of the most senior and knowledgeable experts in Gulf politics and energy, ranging from academics with understanding of rentier theory, to energy sector officials with knowledge of resource constraints. For example, in Saudi Arabia, I met with top advisers within the Ministry of Petroleum and Minerals and the Strategic Planning team at Saudi Aramco tasked with addressing domestic energy consumption in Saudi Arabia, as well as the governor of the kingdom’s national electricity regulator. In Kuwait, I met with senior officials at the Ministry of Electricity and Water, and one of the regime’s top advisers on national energy policy. In the UAE, I met with numerous senior energy policymaking officials in

³⁰⁹ For instance, Hertog 2010a on Saudi Arabia; Davidson 2005 on the UAE; J. S. Mitchell 2013 on Qatar.

Dubai and Abu Dhabi, including the executive director of Dubai's Supreme Council of Energy; Abu Dhabi's chief of electricity regulation, as well as the executive director of its Economic and Energy Affairs Unit within the Executive Affairs Authority, a key adviser to the ruling family on energy policy. In the UAE I was also fortunate enough to be invited to lecture before the entire policymaking staff within the Office of the Prime Minister, and was able to conduct numerous interviews and an expert elicitation. In Oman, where I received the support and expert elicitation participation of the Minister of Oil and Gas, I interviewed the senior adviser to minister, and the ministry's director general of exploration and production; I also interviewed Oman's electricity regulator and the head of planning and strategy at its national utility. In Qatar, I interviewed policymakers and engineers at the Qatar Electricity and Water Authority, the director of the country's largest power plant, and the director of the General Secretariat for Development and Planning who is in charge of national strategic planning, including on energy policy.

Beyond actual policymakers, I interviewed numerous economists and analysts within and beyond government, including those at banks and at Moody's, the ratings agency; at APICORP, an investment fund; and the head of commodities research at HSBC in Riyadh and the bank's chief economist for the Middle East. I also interviewed diplomatic sources, former national representatives to OPEC, and top executives within international energy companies operating in the region, including Total, Shell and GDF Suez. And finally I met with energy journalists who follow policy development and academics which research state and societal issues such as those covered here.

In most cases I digitally recorded these interviews and typed transcripts, to which I referred and cross-referenced while writing this thesis. None of the interview data in this thesis is used in a stand-alone fashion. All interview data are cross-referenced with other interviews or with findings in public surveys or the expert elicitation, or in a few cases, used to illustrate hypotheses within the literature. Mainly the interview data were used to add context to results from other methodologies, sometimes in the form of direct quotes, or to inform the narrative more generally.

Most of the sessions were conducted in-person during several trips to the region in 2010-12. These interviews flowed from a script of prepared questions based around domestic energy demand as well as the policies to avert reductions to energy exports, including reforms of subsidies.

Topics included:

- Characterization of the pace of growth of energy demand and its effect on the economy
- Characterization of thinking within the government regarding energy policy
- Descriptions of key decision makers and their positions on the issue
- Characterization of key decision makers' sensitivity to public sentiment
- Naming actors supporting and opposing subsidy reform, and the most influential among them

- Government rationale for subsidizing energy
- Characterization of subsidies as rights or otherwise
- Barriers to removing or reducing subsidies
- Conditions required to enable reduction of energy subsidies; likelihood of reform
- Discussion of risks to political stability and strategies to avert them
- Characterization of the hierarchy among customers for energy resources
- Characterization of depletion of energy resources in terms of preferences for current consumption versus saving for the future
- Characterization of citizen understanding of subsidy levels and willingness to pay more
- Characterization of applicability of Iranian subsidy reforms to the GCC case

The list of questions and topics was adjusted for specificity based on the interview subject. For instance, the director for electricity planning in Abu Dhabi was asked questions regarding specific projections for installed capacity in 2020 and 2030 and the predicted mix and cost of feedstock. Qatari energy traders were asked about the percentage of future gas production that would be allotted to domestic use, for their LNG break-even price, and how political factors influenced export decisions. Those close to ministers were asked more strategic questions about demand management, or the ruler's priorities on energy policy.

Interviewing is a longstanding and widely accepted scholarly method. Arksey and Knight argue that interviews provide strongest validity when combined with other methods, which improves upon work that either excludes or relies solely on interviews.³¹⁰ Interviews allow the researcher to understand and describe complexity, including the subject's perspective, feelings, tacit perceptions and other things that cannot be observed directly. The implicit can thus be made explicit.³¹¹

Interviews happen to be particularly useful when they complement self-completed surveys in multi-method research. Aggregated survey responses allow the researcher to check the interpretation and incidence of data flowing from interviews, providing an understanding of how widely views are held and understandings shared. Conversely, positivist survey and questionnaire data can highlight issues requiring deeper examination through interviews. The addition of post-survey interviews with survey subjects (as distinct from interviews with subjects who have not been surveyed) allows the exploration of topics in ways that are fundamentally deeper than that available through standardized questionnaires. A post-survey interview allows the subject to clarify or add context to survey answers, and for understandings to be explored in depth.³¹²

³¹⁰ Arksey and Knight 1999, 33–4; Patton 1990; McCracken 1988

³¹¹ Patton 1990, 278; quoted in Arksey and Knight 1999, 32

³¹² Arksey and Knight 1999, 32

I use both techniques. My interviews took place with subjects who also completed surveys prior to their interviews, and with others who did not complete surveys. Numerous participants in the expert elicitation provided interview data as well as written commentary through an option within the survey.

Qualitative or semi-structured interviews dovetail most readily with other methodologies because they allow the interviewer latitude to improvise and maximize the depth and detail of qualitative data collected. Interview improvisation includes varying the order and phrasing of questions to fit the flow of the interview conversation; asking probing follow-up questions that may not appear on the script; allowing an appearance of lapsing into informality or the sense that the interview has gone off-track; building trust and rapport by sharing the interviewer's personal experiences, or sharing knowledge of the topic and surrounding literature. McCracken argues that an interviewer's familiarity with the subject provides advantages in interpretation and response which outweigh the detriment of any preconceived understanding, allowing the provision of data that the interview subject can deny.³¹³ It also bears noting that I am a former journalist with nearly two decades' experience in interviewing, including several years working in the countries under examination here. (Specifics on interviews are available in Appendix. Named interview subjects available in Confidential Annex)

3.4 Expert Elicitation

Complementing the interview data are results from an extensive survey of experts done using the method of expert elicitation (EE), which has provided corroborative data that augments (or in Chapter 6, contests) results from interviews and other methods. EE emerged from decision theory in the 1950s as a methodology for producing policy-relevant judgments on topics where uncertainty creates barriers to planning and policymaking. It involves obtaining subjective expert judgments that combine facts and opinion into probabilistic assessments of the uncertain set of circumstances under study. These judgments are commonly leveraged to supplant missing data and forecast trends when important values are unavailable. A 2009 white paper from the US Environmental Protection Agency's Expert Elicitation Task Force offers formal protocols for eliciting experts' subjective judgments for use in policymaking. The EPA protocols, which include procedures for reducing biases that affect this methodology, were used to inform the design of this dissertation's two EE surveys, given their close links to policymaking.

EE methodology offers broad applicability across policymaking and research settings. The EPA protocols declare that EE can be used to address *any kind of uncertainty*, as long as questions and problem statements are clearly formulated and the participants are qualified experts whose knowledge can provide a credible basis for insights and judgments.³¹⁴ In this dissertation, EE is used to further

³¹³ McCracken 1988, 31; Arksey and Knight 1999, 39

³¹⁴ US Environmental Protection Agency 2009, 51

this dissertation's objective of determining *likelihood* of future subsidy reforms among a set of states, and to characterize the probable extent of those reforms.

Besides the EPA, EE is recognized as a powerful and legitimate method for policy purposes by, among others, the U.S. National Academy of Sciences, the White House Office of Management and Budget, and the U.S. Nuclear Regulatory Commission. The National Academy of Sciences states that "the rigorous use of expert elicitation for the analyses of risks is considered to be quality science," while the Nuclear Regulatory Commission recommends use of EE when "empirical data are not reasonably obtainable" and when "uncertainties are large and significant." Elsewhere, EE has been used by the European Union to inform policymaking, as well as by organizations such as the Intergovernmental Panel on Climate Change to quantify risk from potential climate change effects.³¹⁵

Among academic researchers, EE is commonly used in settings when forecasting or estimation forms part of the research design. Morgan et al. conducted elicitations among ecologists asked to describe effects of a doubling of global carbon emissions on forest environments.³¹⁶ Curtright et al. used EE to gain insights into future changes in pricing and efficiency of photovoltaic solar panels.³¹⁷ Hoffmann et al. elicited responses from food safety experts that sought to estimate distributions of illnesses within the United States that may have been caused by food-borne pathogens.³¹⁸ Less formal EE surveys have proven robust predictors of forthcoming central bank decisions on interest rates, or consensus views on expectations for economic growth.³¹⁹ In general, EE is appropriate in cases when superior information is too costly, unobservable – or as is the case with this dissertation – unavailable within the time frame of the research.³²⁰ The EE variation used here offers a meso-level approach between the formal institutional variety, which require a minimum of \$250,000 for paid experts and evaluation panels, and the less formal consensus surveys used in financial journalism.³²¹

Perhaps most importantly, EE presents a complementary and mutually reinforcing method to the other methodologies used in this thesis. It provides a structured way to survey a set of experts, which acts as a quantitative "robustness check" on qualitative interview data. Using EE allows the researcher to greatly expand the number of interviewees while constraining the richness of their responses. This process provides a way of gauging the applicability of data gathered from individual interviews. EE

³¹⁵ US Environmental Protection Agency 2009, 20

³¹⁶ Morgan, Pitelka, and Shevliakova 2001

³¹⁷ Curtright, Morgan, and Keith 2008

³¹⁸ Hoffmann et al. 2007

³¹⁹ Noel 2000 finds that articles by Bloomberg News citing "the median estimate of economists surveyed" tend to be unbiased, accurate predictors of future movements in macroeconomic variables.

³²⁰ US Environmental Protection Agency 2009, 6, 23.

³²¹ The results of this EE may be used as the basis for grant funding application to perform a "formal" EE using a panel of paid experts

also provides a useful benchmark for comparing expert views with those found within the academic literature, and those collected among the public, through survey methodology.

3.4.1 Alternate Methods to EE

Expert elicitation's flexibility, its broad acceptance in policy-oriented research, and its excellent fit with this research setting renders it the most appropriate method for quantifying uncertainty associated with my research questions. A number of possible alternate methods also exist. One is Scenario Analysis, which allows for similar aggregation of expert judgment in building alternative scenarios for a range of likely outcomes. Like EE, scenario analysis allows predictions of future conditions, typically as a range of possible outcomes, sometimes expressed as "worst-case" to "best-case" scenarios. However, scenario analysis appears ill-suited for the objective of determining *likelihood* of subsidy reforms among a set of states. Other methodologies for exploring uncertainty such as meta-analysis, which combines findings across contrasting studies, and Monte Carlo Analysis and Latin Hypercube sampling, associated with addressing variability in uncertainty, are inappropriate for this study. These require empirical data or prior studies representative of the value being estimated, which makes them unavailable for this research.

3.4.2 Elicitation Design

My expert elicitations were designed as structured stakeholder surveys that requested quantitative probabilistic judgments from Gulf experts about future energy prices, economic effects, and forecasts for reform. I administered the EEs as computer-based questionnaires, gathering individual responses from two groups using the Qualtrics survey platform.³²² The first EE involved 92 experts who provided responses between November 2011 and November 2012. The requirement for such a large number of experts stems from the objectives of the elicitation, which sought prognostications on policy in six separate countries, and thus required experts to select and comment on one or more individual states. A list of participants appears in the Annex. Just over 200 invitations were emailed from within the software to experts I identified based on the following criteria:

- Holders of positions in energy or electricity policymaking, regulation, or related research within the governments of the six Gulf monarchies
- Those with prominent positions in a GCC national oil company or international oil company with significant GCC operations, and personal knowledge of operations related to the survey
- Economic or consulting experts with experience in the energy sector of one or more GCC countries
- Academic, think-tank or NGO experts with published records of scholarly expertise and commentary on regional energy policy

³²² Qualtrics is free for use by students at Cambridge University's Judge Business School: <http://qualtrics.com/academic-solutions/judge-business-school-at-the-university-of-cambridge/>

- Journalists tasked with regular coverage of the Gulf energy sector.

In March 2012, I conducted a second expert elicitation among 35 members of the policymaking staff of UAE Prime Minister Sheikh Mohammed bin Rashid al-Maktoum. This survey was similar to the GCC-wide EE but contained additional questions tailored to UAE conditions. This EE coincided with a research presentation by the author to the policymaking group. Respondents received a request from their supervisor to take the survey before my lecture on March 5, 2012. In contrast with the first exercise, only a minority of respondents reported having direct involvement in energy policymaking. Responses from the second EE were useful in providing a benchmark for evaluating responses from the first EE, and where questions differed, the second EE provided additional detail on the UAE. See Appendices 3 and 4 for details and participants' names. Note that confidentiality restrictions prevent me from releasing names of participants in the second EE.

Job Type	Number
Bank economists and commodity analysts	6
- other economists	5
	1
Academic experts	0
Energy ministers	1
Electricity market regulators	3
National electric utility managers	4
	1
- other government officials	1
Independent power producer managers	4
International oil company representatives	4
National oil company representatives	7
Consultants	8
Think-tank analysts	5
NGO members	3
Journalists	8
	1
not stated	3
	9
Total	2

Response	% of total	Number of responses
No	68%	60
Yes	32%	28
<i>- of citizens, country of citizenship:</i>		
Bahrain	7%	2
Kuwait	18%	5
Oman	21%	6
Qatar	7%	2
Saudi Arabia	18%	5
UAE	29%	8

Country	Number	%
Bahrain	7	5%
Kuwait	21	15%
Oman	13	10%
Qatar	23	17%
Saudi Arabia	32	24%
UAE	39	29%
Total	135	100%

The first EE survey began with questions about the respondent's expertise, citizenship, and the GCC country in which he/she held most expertise. After selecting a single country, the respondent was offered an opportunity to select one or more remaining countries on which to respond. Twenty-four of the 92 respondents chose multiple countries. What followed was 17 questions about energy policy that

sought to tease out assessments of state-society relations and citizen “rights,” rationales for energy subsidies, assumptions regarding citizen understanding of energy issues, perceptions of economic harm posed by domestic energy consumption, and the likelihood of government reforms. The survey also asked experts to gauge citizen amenability to tariff hikes, future evolution of state benefits, and predictions for 2020 crude oil prices. This dissertation focuses on responses relating to domestic consumption of energy and the likelihood of subsidy reform, as well as perceptions of energy as a citizen entitlement. The second EE survey closely resembled the first, except that (given the respondents’ duties across several policy areas) it asked for respondents to provide their level of understanding and involvement in energy policymaking in the UAE. It also requested predictions on tariff increases at the emirate level, since the UAE has multiple utilities with differing retail prices.

3.4.3 Limitations of Expert Elicitation

EE methods differ to those in traditional opinion surveys in that data obtained is not intended to characterize a random or representative sample of a “population,” but rather to reflect the range of expert judgment. The experts surveyed may not even represent a random sampling within their own organizations, which, depending on size, might contain a wide range of views on these subjects. I selected subject-matter experts from multiple perspectives and backgrounds to gather a wide range of plausible opinions.

Responses from different background types are aggregated without controlling for job categories, due to the sample size. It should be stressed that the results presented were not obtained through traditional experimental means, and therefore cannot be assessed for accuracy. Rather, data should be considered a realistic representation of expert opinion. According to typical EE practice, these aggregated opinions are deployed as a substitute for missing or unavailable values under research conditions such as mine, characterized by an unavoidable level of uncertainty. It should be stressed that caution is required when interpreting results of any expert elicitation, including mine, given the potential for misusing results that can be misunderstood as a quantitative representation of a random sample of a population, when this is not the case. EE results have value because they allow an aggregate presentation of expert views on a handful of key variables and uncertainties, but cannot be interpreted in the manner of a public survey.

EE processes are subjected to various limitations, especially the cognitive heuristics that experts typically use when making judgments. These “educated guesses” are subject to biases, as described in the heuristics literature, notably Kahneman, Slovic, and Tversky, as well as by the EPA white paper, which outlines procedures to mitigate these biases.³²³ Perhaps the most common relates to the tendency for experts to make “overconfident” judgments which offer unrealistically narrow confidence intervals. The results below may be affected by overconfidence bias, which tends to be

³²³ US Environmental Protection Agency 2009; Kahneman, Slovic, and Tversky 1982

addressed to limited effect in survey environments by inserting explanations of the overconfidence phenomenon within the survey materials and exhorting participants to temper their responses. For several reasons, including clarity of questions and avoiding the overburdening of unpaid participants with material that could lead them to abandon the survey, I followed the EPA guidelines by addressing overconfidence in the post-survey phase, by grouping similar responses at varying levels of confidence in my contextual review of the results, and by using interview data to corroborate them.

Since expert elicitation by its nature deals with “experts” and not random members of the public, experts should be expected to accord topics in their area of expertise with more importance than the average person. And since some invited experts choose to respond and others do not, self-selection introduces the possibility of motivational bias, in which participants are motivated to respond due to strong feelings, typically about a controversial subject on which opinion is divided. In my EE, motivational effects were probably small, given the lack of controversy or expert division affecting the issue under study and the generalized wording of elicitation requests and questions. Still, I made efforts to reduce the possibility of selection and motivation effects by collecting a large sample (in comparison with typical EE panels), by respondents’ diversity in disciplines and perspectives, as well as by divulging few details or characterizations of the issues at study in my solicitations.³²⁴ These techniques are also effective in reducing selection biases inherent in non-randomized samples.³²⁵

EE can also be affected by “availability bias” in which infrequent events are assumed to occur with greater frequency because of the publicity they receive. This work does not correct for availability bias for a number of reasons: First, because corrective procedures require burdening of unpaid participants with onerous procedures for developing scenarios or listing pro and con reasons to support their choices, which would undermine the response rate;³²⁶ second, because the issue examined had not received a large amount of publicity and therefore was probably less susceptible to this bias; and third, since most participants were selected based on their knowledge of relevant statistical data rather than the issue’s limited emotional appeal.

Anchoring bias – in which an estimate made early in the survey can affect subsequent responses – was addressed in two ways, through providing “redundant information” or using very similar questions to validate responses, and, in one case, by first requesting extreme values (high and low), followed by a

³²⁴ Invitations asked participants for judgment on three issues: “*First*, whether energy policy reforms are necessary in the GCC; *Second*, whether reforms are possible, and, if so, how likely; and *Third*, the most likely shape of those reforms.” The survey purpose was described as seeking “to develop an understanding of the energy policy choices facing the six GCC countries in meeting growing domestic demand” to “derive an academically rigorous forecast of GCC energy policy.”

³²⁵ Hoek et al. 2009; other motivation effects were more difficult to mitigate, such as respondents’ self-selection, with decision-makers and more senior executives appearing less likely to respond to survey requests than lower-ranking personnel.

³²⁶ Dube-Rioux and Russo 1988

request for a median estimate. The EPA credits both techniques with reducing anchoring effects. Related “sequential” effects, which concern to a tendency to over-emphasize the importance of the first and last pieces of evidence in a sequence, were addressed, where possible, by randomizing response order.

Finally, perhaps the strongest indicator of validity and robustness of the outcomes of my expert elicitations is that they contained no surprises. Expert opinions on the likelihood of subsidy reform were corroborated by opinions gathered through interviews, as will be demonstrated in Chapter 5. Among countries regarded as most likely to reform, both methods identified Saudi Arabia and the UAE. Likewise, both methods deemed Kuwait and Qatar least likely. The case of Oman was slightly more complex, with interview results suggesting a stronger propensity for reform than those of the EE, however interviewees qualified their responses by saying reforms would be selective, an opportunity not afforded EE respondents. Validity of results for the UAE were bolstered by the use of a second EE, conducted among government policymakers. Results of this EE complemented and corresponded with interview data (as well as the Dubai case study findings), as well as with the results of the first EE. In summary, the complementarity of results among diverse methods, along with the appropriateness of the expert elicitation method within the research setting, provides a convincing argument in defense of the choice of methodologies as well as the robustness and applicability of results.

3.5 Public Survey

Complementing the first two methods is a public survey designed to capture citizen perceptions of entitlements under the autocratic social contracts in place in the Gulf, and their willingness to consider the loss of subsidies portrayed as rights of citizenship. Public opinion polling has long been a key component of politics in democracies, allowing researchers to measure the will of the people and deploy it in decision making. Widespread use of polling has deeply influenced democratic politics, since it has enabled evaluation of claims that political leaders are acting with the consent of the majority. Donsbach and Traugott argue that this aspect has exacerbated populism at the expense of principle.³²⁷ Public opinion surveys are also common in authoritarian societies, but usually within limits described by Horne:

- Those sponsored by the state and used for its own purposes
- Those conducted after liberalizations
- Those avoiding sensitive political questions

³²⁷ Donsbach and Traugott 2008, 1-7

Public opinion surveys tapping into political legitimacy issues that form the basis of this dissertation are less common in autocratic polities where the “will of the people” is often difficult to capture.³²⁸

More broadly, surveys can measure attitudes, beliefs (including predictions), preferences, and facts, including past behavior. They are designed to allow a researcher to take a sampling from a smaller population that can be generalized to a larger population. As such, Weisberg argues that surveys exhibit strong external validity because they can be used to generalize to a full population under real-world conditions. Surveys are useful in documenting changes over time in the rates of occurrence of these response types, as well as measuring differences between groups. These attributes make surveys an ideal and complementary method for this research, which seeks to measure attitudes and beliefs of citizens and, in one case, compare them with those of a different group. Survey results provide a robustness check on the rich data from individual interviews. And, since the questions forming the survey and expert elicitation were designed to reflect each other as closely as possible, the survey results provide a useful alternate perspective for triangulating societal reaction to subsidy reform, when assessed alongside aggregate output from the expert elicitation.

3.5.1 Rationale for a Public Survey

My public survey explores three themes: first, the rationale behind government energy subsidies; second, the willingness to relinquish those subsidies under multiple hypothetical scenarios; third, respondents’ preferred “future orientation” of government spending of resource benefits. I designed the survey to capture public perceptions about the potential fungibility of the energy portion of their welfare benefits and the importance of those benefits (i.e. cheap energy) to their support for the regime. By understanding what portion of the public feels “entitled” to cheap energy, one can gauge the accuracy of pronouncements in the literature (and less formal venues) that describe these benefits as rights. By understanding the public’s willingness to submit to energy subsidy reforms, one can gauge the level of public opposition to potential reform options that might be chosen by policymakers. I felt that public responses that were less than equivocal might illuminate flaws in the literature. I suspected that survey data might hint at reform opportunities running counter to the literature’s portrayal of subsidies as vital components of citizenship, and which constitute a citizen’s most important inducement to acquiescence to his government’s rule.

The polling firm YouGov conducted my survey online, translating it into Arabic and administering it to more than 1,500 members of its Middle East panel from Nov. 28 to Dec. 4, 2011. Just under half of the respondents were Gulf nationals, including a broad sampling of Saudi citizens by age, gender and socio-economic status. The samples from smaller Gulf monarchies were unfortunately too small for

³²⁸ Horne 2011; for more on autocracies and the lack of regime understanding of public opinion see also: Wintrobe 2001; Tullock 1987; Desai, Olofsgard, and Yousef 2009

statistical relevance by country, which led me to focus on the aggregate GCC. Responses from outside the six Gulf monarchies were excluded.

3.5.2 Survey Bias

Surveys also have their weaknesses. They are less effective in finding causation, which is better determined through experiments in which the researcher can manipulate variables. These provide greater internal validity, because design techniques can reduce extraneous influences. Surveys also aggregate individual opinions, which may not accurately portray public opinion, which tends also to be shaped as part of a group process. Focus groups may be better suited for these purposes.³²⁹

Weisberg describes several potential statistical biases that also affect surveys, ranging from respondent selection and sampling problems – errors in sampling, coverage and non-response – as well as non-sampling issues dealing with the accuracy of responses (measurement errors on behalf of respondent or surveyor), and administration problems such as post-survey errors and house effects. Errors are inevitable in surveys “as there is never a perfect wording for questions, never a perfect sample, and so on.”³³⁰ Further biases are mentioned alongside results in Chapter 6.

Most significant are biases affecting representativeness, such as those associated with online surveys, which may exclude older and less technologically sophisticated segments of society. YouGov warned me that, since its surveys are conducted online, and Internet penetration remained less than universal in parts of the Gulf and Middle East in 2011, its panel may not have been representative of the population as a whole. Results should be considered broadly illustrative of public opinion rather than statistically representative. This bias should decline over time as the Internet penetrates more deeply into these societies. However, my regression analyses of survey data were intended to mitigate this potential bias by testing for significant differences in response among demographic groups based on age, education level and income. In most cases, however, demographic variables explained no significant variation in relationship to the dependent variable.

And finally, there is potential for “fear bias” which can affect surveys in authoritarian states, especially those which delve into sensitive subjects, where respondents give insincere responses due to fear of government repression or retaliation.³³¹ Since my public survey measures opinions in six autocracies where governments are widely understood to be conducting electronic surveillance of communications unfettered by privacy laws, fear bias is worth considering. However, the topic of electricity subsidy – while it provides a window into regime support – is probably innocuous enough to allow genuine responses unbiased by fear. Further, public opinion on prices is regularly expressed in public debate and news media, and repression over speech issues in these states is relatively rare.

³²⁹ Weisberg 2008

³³⁰ Weisberg 2008, 225

³³¹ Horne 2011

3.6 Case studies

As described by Yin, a case study “is an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident.” Researchers deploy case studies to scrutinize the context and conditions surrounding a topic, doing so broadly and with ample detail, marshalling multiple sources of evidence. Case studies, like interviews, are useful in bolstering accompanying methodologies, especially quantitative techniques such as surveys that lack perspective and nuance.³³²

This dissertation provides one short descriptive case study of subsidy reform, the 2011 electricity and water price increase in Dubai, which offers insight and evidence that directly contravenes rentier theory’s prohibitions on subsidy reform. (A second, even shorter narrative also examines the 2010 energy subsidy reform in Iran, which involved replacing in-kind energy distribution with a cash benefit.) As such, the case study provides an additional perspective for triangulating among methods to reach this thesis’ final results.

The Dubai case study was chosen for several reasons. First, Dubai’s distributive social compact exemplifies the behavior of a Gulf rentier state where a centralized monarch retains near-total control of decision-making, including the retention of a relatively large degree of autonomy from citizen participation. Second, Dubai also exhibits many of the post-oil economic and legitimacy pressures that are likely to afflict other rentier states as they seek to extend their governance models beyond the plateau of oil exports, when commodity export rents are reduced. Third, Dubai is seen among Gulf ruling families a test-bed for policies and initiatives that, where successful, can be adopted elsewhere. These include state investment ventures, trade policies, business relations, as well as reforms of subsidies. Fourth, Dubai’s Supreme Council of Energy was willing to provide me with access to policymaking officials who explained the process of tariff reform and the political difficulties they faced. And finally, the Dubai case exemplifies the give-and-take of autocratic policymaking in which initiatives are launched in what appears an ad hoc fashion, without ample knowledge of public opinion, and reformulated once public reactions become clear.

* * *

Overall, the methodologies I have chosen for this dissertation triangulate with one another in a mutually reinforcing manner. The statistical data from the expert elicitation depict a heterogeneous region with varying levels of energy policy reform pressure and varying levels of political capital to pursue reform. Interviews flesh out this picture, offering descriptive detail and informing a narrative that dovetails with the elicitation’s portrayal of heterogeneity. Descriptive statistics on these countries’ energy sectors, population growth and energy dependence add a further layer of

³³² Yin 2009

understanding to the picture. The Dubai case study offers concrete, if awkward, evidence that subsidies on energy and water may not be considered rights of citizenship; neither on behalf of the regime which approved the 2011 tariff hike, nor that of citizens who may have protested an unpopular extraction from society, but who have otherwise complied. Interviews provide rich data which provide a rich explanatory context for the other methods. And the final layer of evidence comes in the form of a public survey, which provides another nuanced and at times puzzling portrait of citizen perceptions of subsidized energy, including a willingness to pay higher rates in the national interest. Compiled as a trilogy of complementary dissertation chapters, these methods and their integral findings comprise an empirically robust picture of a long-serving theoretical construct that, while retaining enduring truths, also contains weakening precepts that require revision.

Chapter 4: Stability versus Sustainability: Energy Policy in the Gulf Monarchies

4.1 Introduction

The hydrocarbon bounty held by the six Gulf Cooperation Council countries, Saudi Arabia, the United Arab Emirates, Kuwait, Qatar, Oman and Bahrain, represents one of the world's vital supplies of energy for the coming decades. Global dependence on these resources stems not just from the size of the reserves or the level of production, but from the small populations in these monarchies and their historically low levels of consumption. It is the GCC's large resource *per capita* that has allowed it to export most of its production and to become a dominant force in international markets.

This story is beginning to change. Rising populations and growing wealth have coupled with low domestic prices to threaten assumptions about the sustainability of GCC exports. At current rates of consumption growth, Saudi Arabia could see oil exports reduced by the end of the decade, much sooner than expected. Peak seasonal consumption in Kuwait and Oman is already reducing exports. Oman and Bahrain, the GCC states with the smallest endowments, are in depletion-led decline.³³³ This scenario presents a policy puzzle. Petroleum exports form the bedrock of the GCC political economies. Distribution of oil and gas revenues has cemented near-absolute monarchs in power long after the demise of this form of government elsewhere.³³⁴ Given the vital importance of these revenues, what factors lie behind government policies that encourage domestic consumption of chief exports? How have these policies shaped demand?

With the exception of gas-rich Qatar, these monarchies face an increasingly acute conflict between sustaining exports and maintaining subsidies on electricity, desalinated water and fuels. The era when primary energy was considered nearly free is being eclipsed by one where marginal increases in demand are met by higher-cost resources, either unconventional domestic energy or market-priced imports. For now, governments have absorbed the increased cost and insulated consumers from price signals that might otherwise moderate consumption. Since, as I demonstrate, subsidies account for

³³³ Those discussing these trends in Saudi Arabia include Stevens and Mitchell 2008; Bourland and Gamble 2011; Lahn and Stevens 2011; Tottie 2011; Gately, Al-Yousef, and Al-Sheikh 2012; Wood 2011 covers demand effects in Kuwait, while Oman's reduced natural gas exports have been documented by Darbouche 2013, 239.

³³⁴ A large body of political economy literature has made this case, under the rubric of "rentier state theory" and the "resource curse." Works include: Beblawi 1987; Luciani 1987; Anderson 1987; Crystal 1990; Gause III 1994; Gause III 2000; Chaudhry 1997; Ross 2001; B. Smith 2004; Herb 2005; Schlumberger 2006b; Schwarz 2008

between one-quarter and one-half of energy demand, this practice only intensifies the call on exportable resources.

The consumption dilemma, coming at a time when opportunity for reform has been constrained by pan-Arab uprisings, presents difficult questions for these regimes. Hydrocarbons help ruling families buy political support, through in-kind domestic distribution; and they provide regimes with economic viability, through export revenues, some of which are also distributed. For the system to continue functioning, resource revenues from the international side of the equation must not be displaced by resource demand from the domestic side.

The choice for regimes is one of short-term political stability versus longer term economic sustainability. As populations rise and energy production reaches a plateau, domestic consumption will gradually displace exports, as has happened in other oil exporting states. Politically difficult reforms that moderate consumption can therefore extend the longevity of exports, and perhaps, the regimes themselves.

This quandary is illustrated in Section 4.2 by describing the state of primary energy consumption in the Gulf producer countries and the influence subsidized resource distribution. Section 4.3 examines subsidies' contribution to demand in electricity markets and the mounting cost of keeping pace. Section 4.4 looks at the equally beleaguered market for natural gas, where fixed prices have exacerbated demand and undercut incentives to increase supply, as the Gulf has transformed into an importing region. The discussion and chapter conclusion examine the implications of shrinking exports and rising fiscal burdens that are symptomatic of maturing resource exporters.

4.2 GCC Energy Consumption Dynamics

In the past four decades, energy demand in the Gulf Arab countries has undergone a dramatic transformation. At the start of the 1970s, these territories were poor and underdeveloped, with tiny populations emerging from centuries of isolation. Energy consumption in Arabia was less than one percent of global demand. Forty years later, the Gulf monarchies, with just 0.5% of the world's population, consume 5% of its oil. Primary energy consumption in the past decade has grown more than twice as fast as the world average of 2.5% per year. The Gulf's 2001 consumption of 220 million tons of oil equivalent nearly doubled by 2010 and is expected to nearly double again by 2020. Among major oil exporters, only Angola, Algeria and Iraq maintained similar growth. (Fig. 4.1)

Energy demand in the Gulf has escaped notice until recently because of its large reserves, with oil reserves-to-production ratios of 63 years in Saudi Arabia, 79 years in the UAE, 89 years in Kuwait;

and, for Qatari gas, more than 100 years.³³⁵ However, with oil production reaching or nearing a plateau, rising domestic consumption will begin to displace exports, regardless of the reserve base, unless production is also increased. Nearly a quarter of GCC oil production is now diverted to domestic use. At the time of the 1973 oil spike, that figure was around 4%.

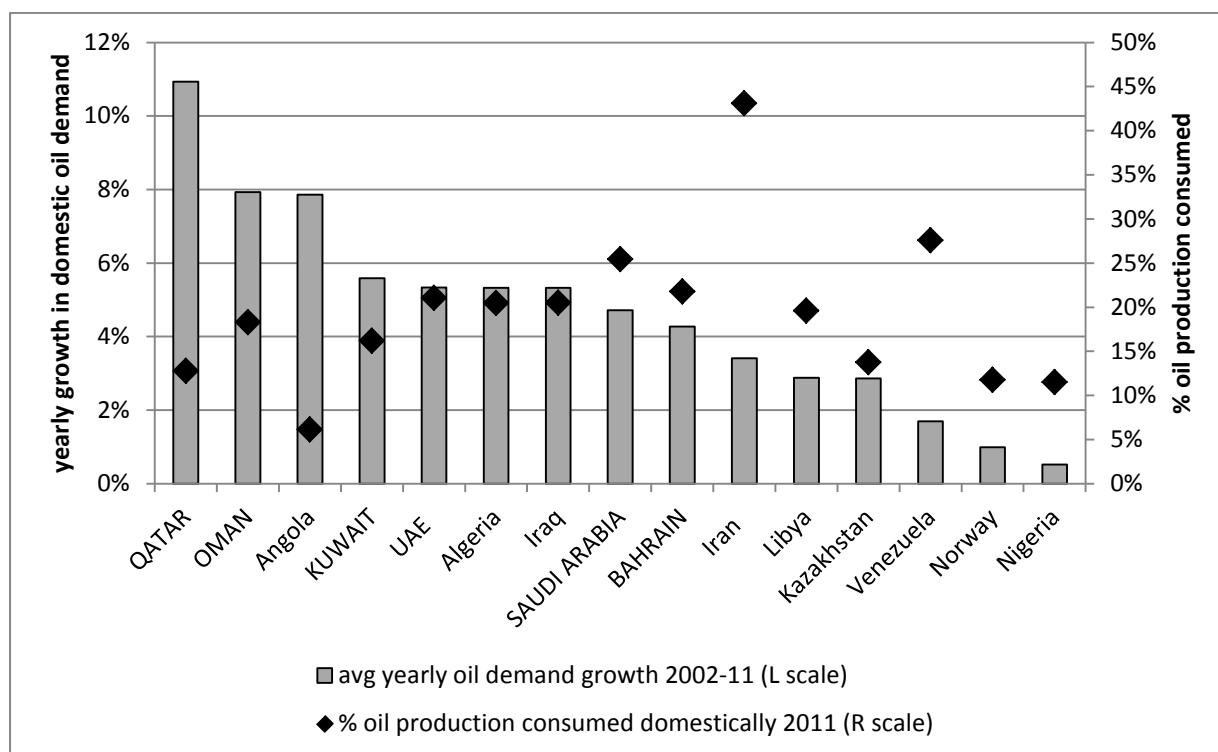


Figure 4.1: Domestic consumption of potential oil exports: Avg. yearly growth in oil consumption, with production consumed domestically in 2011 (Source: BP, IEA 2013. Note: Libya figures omit 2011)

A remarkable run of rising consumption in Saudi Arabia pushed the kingdom past Brazil and Germany to become the world No. 6 oil consumer in 2009, despite its comparatively small population, economy, and industrial base. (Table 4.1) In 2011, the kingdom’s domestic oil consumption represented lost revenues of more than \$80bn, or 13% of GDP, given the average price of Saudi Arabian light crude that year of \$108/bbl.³³⁶

³³⁵ BP 2013

³³⁶ This calculation ignores varying prices for grades of crude and market effects of an additional 2.86m b/d of oil.

Table 4.1: Saudi oil consumption in perspective

	Oil consumed 2011 (m b/d)	GDP 2011 US\$bn	Population (2011)	Oil consumption per capita
Saudi Arabia	2.86	\$578 bn	28 million	37.2 bbl/yr
Brazil	2.65	\$2,493 bn	195 million	5 bbl/yr
Germany	2.36	\$3,577 bn	82 million	10.5 bbl/yr

Sources: IMF, BP 2012

The GCC also represents a major repository of natural gas, but, in contrast with oil, most production is consumed domestically. Only Qatar is a major exporter. The remaining five countries produced 206 billion cubic meters (bcm) in 2012 and consumed nearly all of it, 201 bcm. Overall the GCC held more than a fifth of global reserves, but represented only 6% of global gas demand, which foreshadows difficulties in production, trade and pricing.³³⁷ The UAE and Kuwait have become net gas importers since 2008. (Fig. 4.2)

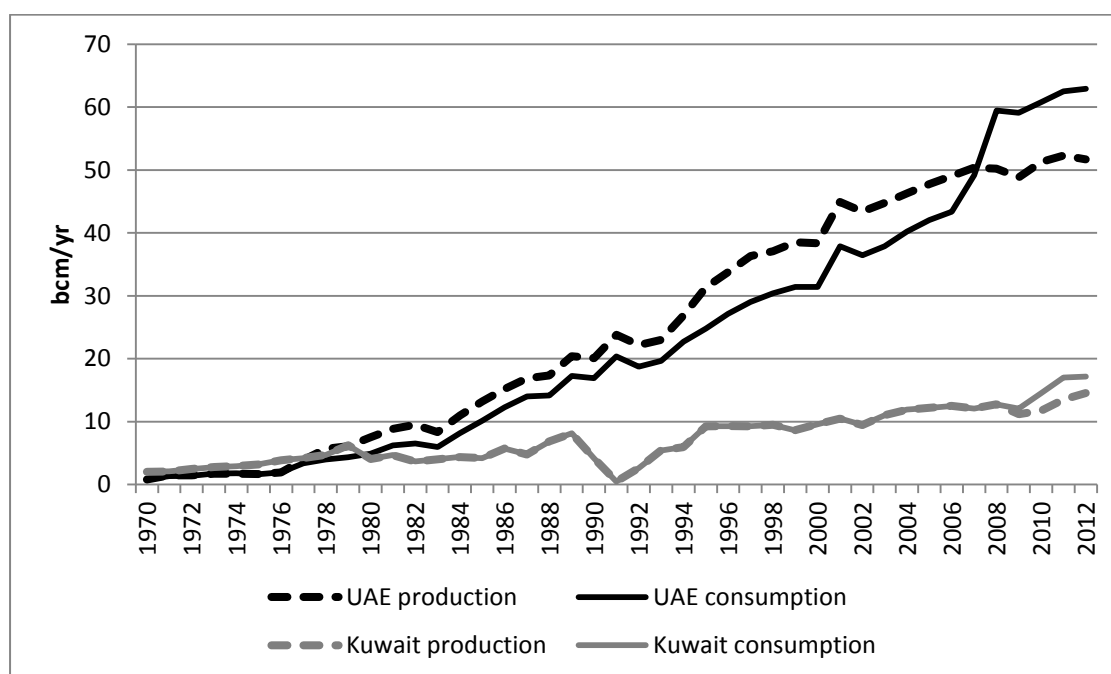


Figure 4.2: Gas consumption surpasses production in UAE and Kuwait (Source: BP 2013)

4.2.1 Consequences of Energy Mispricing

Energy is a key input for industrial development. Most countries increase efficiency as they develop, producing more output from the same input of energy. In so doing, they reduce the overall energy intensity of their national economies, in terms of primary energy consumption per unit of GDP. But in

³³⁷ BP 2013; International Energy Agency 2012a

most of the GCC, energy demand is rising *alongside* energy intensity.³³⁸ In effect, these countries are moving in the opposite direction from most of the rest of the world, growing less economically productive in energy terms. (Fig. 4.3)

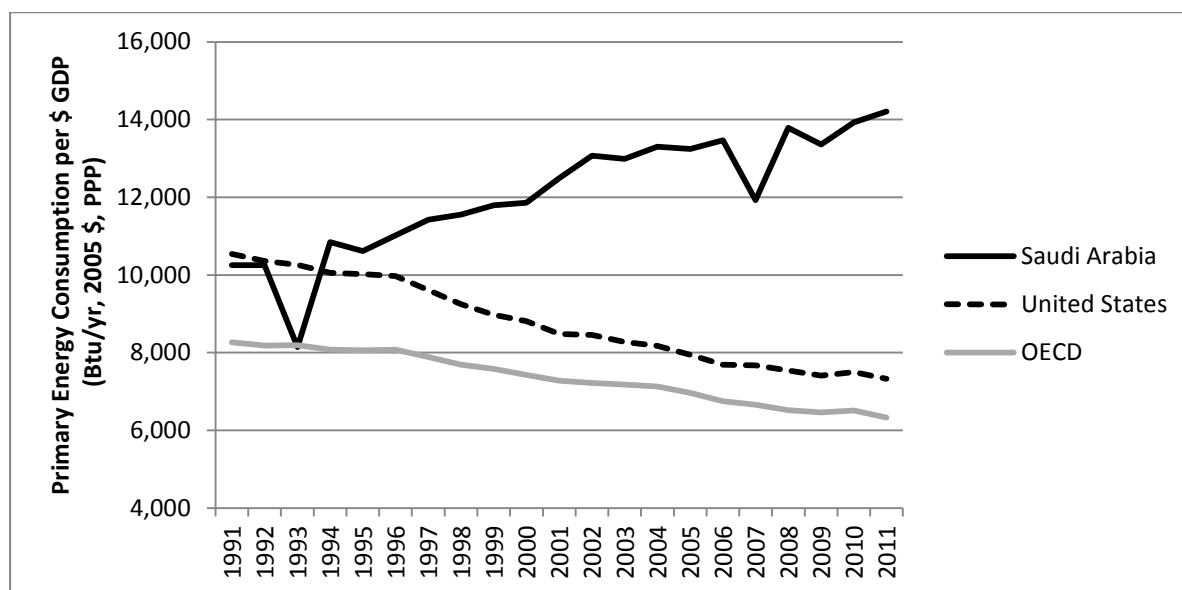


Figure 4.3: Saudi energy intensity measured against U.S. and OECD, 1991-2011. (Source: EIA 2013)

Oil exporting countries face depletion at varying time horizons, based on the level of production relative to the size of their resources, and the cost of production relative to the commodity's price. As production reaches a plateau, exports typically drop as domestic consumption rises. Unless an increase in the commodity price makes up for exports foregone, the producer experiences a decline in export revenues as resources sent abroad are gradually displaced by domestic consumption. This trajectory suggests that deriving maximum benefit from natural resources requires careful consideration of domestic use.

Intensity of domestic consumption is a key determinant of the longevity of a country's status as an oil exporter, as Lahn and Stevens have shown.³³⁹ As domestic consumption outstripped production in China and the United States, for example, these former oil exporters became net importers. Their diversified economies were able to absorb the loss. Oil and gas exporters Malaysia and Indonesia are reaching this stage, and both have significantly diversified their economies for the transition.

How do energy prices figure in this debate? Low pricing encourages consumption at rates above those warranted by the opportunity cost of these fuels on global markets. Low prices also distort energy

³³⁸ Energy intensity of GDP is an imperfect measure in the GCC, since GDP figures are influenced by oil prices as well as economic productivity, while intensity figures also reflect feedstocks used in industry. See Lahn and Preston 2013.

³³⁹ Lahn and Stevens 2011

allocation preferences while undercutting upstream investment and efficiency incentives. Each of these factors has contributed to ongoing shortages of natural gas.³⁴⁰ But the lack of constraints on consumption in the GCC is at odds with its near-total dependence on export revenues. Oil and gas exports typically provide 40% of collective GDP and 80% of government revenues. Such one-sided dependence confers a high value on energy resources that is not reflected in prices.

As covered in the literature review, converting depletable resource stocks into cash represents a transfer of one type of asset to another. Authors such as Stauffer, Mitchell, and Heal maintain that these revenues should not be considered income.³⁴¹ Sustainable depletion requires conversion of below-ground assets into new forms of above-ground wealth. Heal and Stauffer argue that oil revenues should not even be reflected in GDP figures, since revenues stem from “asset disposal” rather than earnings. Heal contends that a country becomes poorer by spending resource income for any purpose other than capital investment.

By this reckoning, the GCC countries are poorer for not deploying the full investment value of their depleting resource. Much of the Gulf’s consumption does not cover cost, let alone create above-ground wealth. Domestic sales of potential oil and gas exports are usually done near the cost of production, rather than at global market prices. Instead of providing income, local consumption thus serves to *reduce* the state’s revenue, either real or potential. Rents are foregone in the failure to sell energy at market prices (an implicit subsidy), and further costs are accrued by below-cost sales of refined fuel and electricity (an explicit subsidy).

Hartley and Medlock have demonstrated the economic underperformance of state-owned oil companies, finding that national oil companies’ social welfare mandates leaves them less revenue-efficient than their shareholder-owned counterparts.³⁴² In the Gulf region, well-documented distributive political structures lay behind this underperformance. Rent distribution was a tool of political control even before the onset of oil or independent states in the Gulf, as Foley and Davidson have shown.³⁴³ The arrival of oil revenues into this framework magnified the political clout of ruling sheikhs, helping them maintain power long after the sweeping aside of counterparts whose resource endowments relative to population did not provide them the same co-optive power.³⁴⁴ In particular, however, it is the practice of *in-kind distribution* of energy commodities (as distinct from rent distribution) that encumbers these regimes with structural encouragement of resource demand.

³⁴⁰ Razavi 2009; Darbouche and Fattouh 2011

³⁴¹ Stauffer, Thomas 1987; J. V. Mitchell 2006; Heal 2007

³⁴² Hartley and Medlock III 2013

³⁴³ Foley 2010; Davidson 2005. Among the examples Foley documents are the al-Saud’s distribution of revenues from Hajj fees.

³⁴⁴ Egypt’s monarchy was overthrown in 1952, Iraq’s in 1958, Yemen’s in 1962, Libya’s in 1969 and Iran’s in 1979.

4.3 Electricity Policy: Generation, Fuels and Prices

The arrival of electricity in the Arabian Peninsula is a relatively recent development, coming within the lifetimes of many residents. Much of the region was un-electrified as late as 1960. Electrification in Oman did not begin in earnest until the 1970s. Since then, growth in power generation has been dramatic, especially in the richer states of Kuwait, Qatar and the UAE. These states now consume more electricity per-capita than the United States. Power generation growth averaged 7% per year between 2000 and 2010, slightly faster than average GDP growth of 6.5%. In 2011, power generation consumed about a third of all GCC gas production. Gas, in turn, accounted for 60% of total generation, versus 40% for liquid fuels.³⁴⁵ (Figs. 4.4 and 4.5)

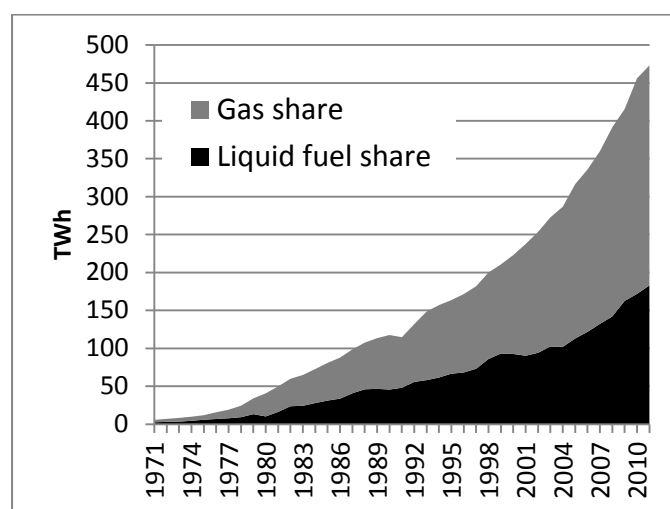
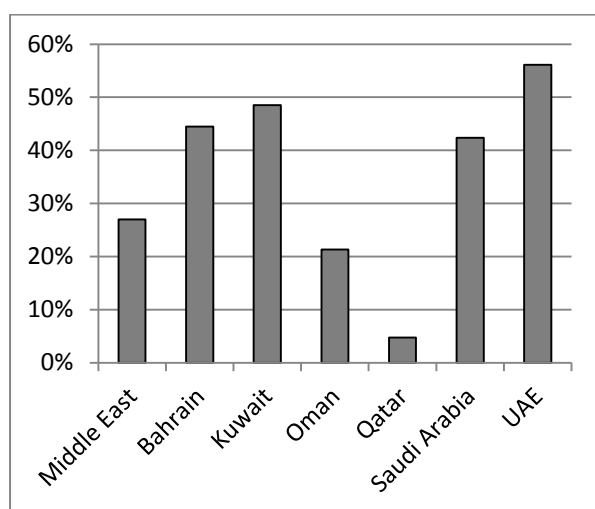


Figure 4.4: Gas consumed in power sector 2011 as a proportion of domestic gas production

(Source: IEA 2013)

Figure 4.5: Aggregated total GCC electricity generation by feedstock, 1971-2011 (Source: IEA 2013)

In all but Qatar, growth in electricity demand has outstripped domestic supply of natural gas, the region's chief generating feedstock. This shortage heralds an important shift in the Gulf power generation paradigm. In the past, governments had to cope with the cost of building power plants, while feedstock came from cheap and plentiful domestic sources. Now, regimes must cope with an array of new costs: market-priced imported fuels, expensive production of unconventional gas³⁴⁶ or the opportunity cost of burning crude oil and other liquids. The rising costs of electricity generation are not, for the most part, offset by rising end-user prices.

³⁴⁵ 55% of Saudi power was derived from liquid fuel-based generation, as was 71% in Kuwait and 18% in Oman, where (as in Saudi Arabia) diesel generation provides electricity in areas beyond transmission grids: International Energy Agency 2012a

³⁴⁶ Unconventional gas developments such as the Shah project in Abu Dhabi, Block 61 in Oman, and others under consideration in Kuwait and Saudi Arabia entail much higher lifting costs.

4.3.1 Electricity Demand

Energy demand is a function of several factors, among them income, population, technology, climate and price. Each of these factors has contributed to the composition of GCC energy demand. Populations have quintupled over four decades, as a result of high birthrates and large-scale immigration. (Table 4.2) Combined population in the six states rose from 8.2m in 1971 to 44.8m in 2011, an annual growth rate of 4.3% – nearly triple the global average – albeit slower than growth rates in energy consumption and power generation reported above. At the same time, rising individual wealth has also increased demand for energy, with per capita GDP growing by an average of 2.2% per year since 1981, and 4.3% since 2000.³⁴⁷ (Table 4.3) The effects of the hot and humid climate in the Gulf play a role, especially in the high rates of utilization of cooling technology. The GCC industrial structure also contributes, given the profusion of energy-intensive processes in petrochemicals, fertilizer and aluminum and within the oil and gas sectors.

Table 4.2: GCC population growth since 1971

	1971 pop.	2011 pop.	Growth multiple 1971-2011	Yearly growth rate
Bahrain	220,000	1.3m	6	4.5%
Kuwait	810,000	2.8m	3.5	3.1%
Oman	758,000	2.8m	3.8	3.3%
Qatar	118,000	1.9m	15.8	7.2%
Saudi Arabia	6m	28.1m	4.7	3.9%
UAE	273,000	7.9m	29	8.8%
GCC	8.2m	44.8m	5	4.3%
World	3.8bn	7bn	1.9	1.5%

Source: World Development Indicators, World Bank 2013

Table 4.3: Growth in GDP per capita and oil demand since 1971

	GDP per cap 1971 (curr US\$)	GDP per cap 2011 (curr US\$)	Yearly growth rate	Oil demand 1971 (k b/d)	Oil demand 2010	Yearly growth rate
Bahrain	\$8,584*	\$18,184	2.5%	15	50	3.1%
Kuwait	\$4,784	\$62,664	6.6%	70	366	4.3%
Oman	\$397	\$25,221	10.9%	25	141	4.5%
Qatar	\$3,280	\$92,501	8.7%	2	192	12.4%
Saudi Arabia	\$1,127	\$20,540	7.5%	307	2,687	5.7%
UAE	\$27,590**	\$45,653	1.4%	3	620	14.6%

Source: World Bank, IEA 2013 (*1980, **1975)

Since this chapter examines the effects of policy on energy demand, the contribution of low fixed prices becomes significant. Price is a key component in demand for energy as well as in the choices of

³⁴⁷ Per capita GDP growth is PPP and averages all six GCC growth rates since 1981 on an unweighted basis; source: International Monetary Fund 2012

energy-consuming equipment and its operating efficiency, and the rate of utilization of that equipment. Thus, the region's low prevailing prices relative to income offer little incentive for conservation, for investments into more efficient technology, or for reducing rates of utilization. When prices are as low as those in the Gulf, it can be economically rational for people to maintain high rates of consumption using inefficient technology, rather than investing in more efficient replacements. Pricing has thus contributed to path dependence on high consumption, encouraging development of energy intensive infrastructure and habits, while locking-in traditional energy sources and blocking transitions to low-carbon and non-fossil generation. Subsidies encourage energy intensive behavior in other ways, including by encouraging long-term investments by firms which seek to maximize their capture of subsidy components of profits (a form of rent-seeking) by investing in technology that is more energy intensive than would otherwise be warranted. These effects tend to be perpetuated because firms cannot unwind these investment decisions without eroding profits. Rather than retool, firms tend to lobby to retain their benefits. This typical behavior pattern has led subsidies to be described as asymmetric because introduction is easy but removal is not.³⁴⁸

Today's electricity prices have their roots in low valuations of natural gas, which stem from an era when associated gas was considered a nuisance and often flared off, rather than put to productive use. Marcel describes how Kuwait's 1975 nationalization of the Kuwait Oil Co., then held by BP and Gulf Oil, was driven in part by flaring.³⁴⁹ Newly nationalized Gulf NOCs soon diverted associated gas to the power sector.³⁵⁰ Given the near-zero domestic value of the gas, electricity tariffs needed only cover costs of infrastructure, operation and maintenance.³⁵¹ "Stranded" gas was thus used to develop these lightly populated states, providing improvements in lifestyle while shoring up the political legitimacy of ruling families.³⁵² Once fixed, electricity tariffs that might have covered costs in the 1970s or '80s have stagnated, or been reduced. Kuwait's price of 2 fils (0.7 U.S. cents) per kilowatt-hour has been fixed since 1966. Residential tariffs in Saudi Arabia have been reduced six times since 1950. (Fig. 4.6) By the mid-2000s, these (by then) subsidized prices were seen as a convenient way to distribute oil rents.

³⁴⁸ Arias and van Beers 2010

³⁴⁹ Marcel 2006

³⁵⁰ *Aramco World (magazine)* 1982

³⁵¹ Scott 2010

³⁵² There is debate about whether electricity provision was an explicit quid pro quo for citizen political support, or whether its subsidization owes itself to an unintentional failure to index tariffs to inflation.

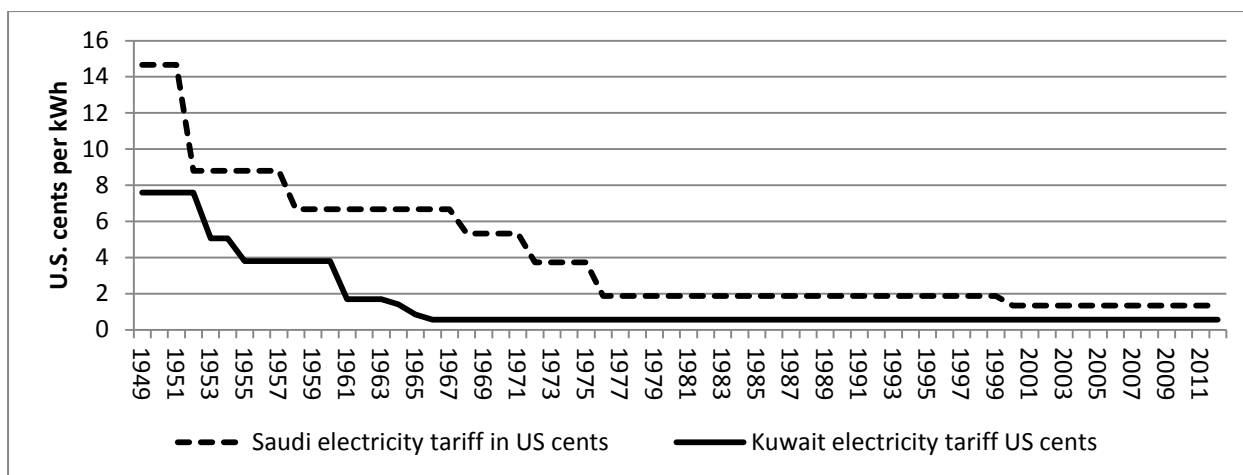


Figure 4.6: Historical electricity prices in Kuwait and Jeddah 1950-2012: Price per kWh in U.S.

cents at 2012 exchange rates (Kuwait source: al-Qudsi and al-Shatti, 1989, and Kuwait Ministry of Electricity and Water; Saudi source: Electricity Cogeneration and Regulatory Authority of Saudi Arabia, 2012)

What share of GCC energy demand is attributable to low prices? While a detailed decomposition of demand lies beyond the scope of this chapter, calculations based on plausible estimates of price elasticity suggest that low prices contribute significantly to demand, and that reforms would provide substantial savings.

Despite relatively low estimates of price elasticity of demand³⁵³ that circulate in literature on the Gulf, the increase in price required to cover the full cost of various energy products is so large that corresponding reductions in demand become significant. In their examination of subsidy effects on GCC energy consumption, Rodriguez, Charap and Ribeiro da Silva use the region's very low gasoline prices as a proxy for underpriced energy in general.³⁵⁴ Table 4.5 shows the percentage by which 2010 energy prices in four GCC countries would need to rise to cover the opportunity cost implied by international market prices. Rodriguez et. al calculate reductions to demand in oil-exporting countries using two long-run price elasticities, -0.3 and -0.5, based on averages of previous estimates. Here, I provide initial calculations using the plausible middle range figure of -0.4, while acknowledging the difficulty in estimating consumption behavior in the Gulf, given the lack of empirical evidence from price increases in the region, as well as the large variation in long-run price elasticity estimates in the literature. These estimates range from -0.07 at the low end³⁵⁵ to -0.86 at the upper end.³⁵⁶

³⁵³ Many scholars predict that energy demand in the Gulf (and elsewhere) is not very sensitive to increases in price; i.e. a \$1 increase in price would have a smaller corresponding effect on demand. A price elasticity of -1 implies a one-to-one relationship between price and demand; price elasticity of -0.3 implies a 1-to-0.3 relationship and an elasticity of -0.5 implies a demand response half as large as the price increase.

³⁵⁴ Rodriguez, Charap, and da Silva 2012

³⁵⁵ IMF World Economic Outlook, April 2011, cited in Rodriguez, Charap, and da Silva 2012, p. 23.

³⁵⁶ Dahl and Sterner 1991

Others examining energy demand in the Gulf have found it to be price inelastic, albeit within a broad range. As shown in Table 4.4, Eltony and al-Mutairi found long-run gasoline and overall energy demand in Kuwait relatively inelastic, ranging from -0.23 and -0.46.³⁵⁷ Narayan and Smyth found very little price elasticity in oil demand in the six GCC states, with estimates from -0.01 in Kuwait to -0.07 in Saudi Arabia.³⁵⁸ In Dubai, a government examination of a 15% increase in electricity prices in 2011 found a small, albeit temporary, decrease in demand.³⁵⁹ Wade, in the 2003 National Energy Modeling System estimates, obtained long-run price elasticities of -0.49 pertaining to buildings in the U.S. residential sector and -0.45 in the U.S. commercial sector.³⁶⁰ These were based on a doubling of the electricity price. In general, energy demand is thought to be quite insensitive to price increases in the short run, since energy has few substitutes and rates of consumption are linked to existing infrastructure, which itself is based on past prices. In the longer run, demand is assumed to be more elastic, since consumers and product developers will have had time to respond to higher prices with greater efficiency.

Table 4.4: Price elasticity estimates for the Gulf countries

Authors	Sample	Product	Method	Long-term price elasticity
Eltony and Al-Mutairi	Kuwait 1970-89	Gasoline	Co-integration and error correction	-0.46
Al-Mutairi and Eltony	Kuwait 1965-89	Energy	Co-integration and error correction	-0.23 to -0.43
Narayan and Smyth	6 GCC (among 12 Mideast countries)	Oil	panel unit root and co-integration	-0.01 to -0.07
Rodriguez et. al	9 energy-exporting countries	Gasoline	OLS regression	-0.3 to -0.5

Here, I use a simplification of the demand equation from Rodriguez et. al:

$$q_{i,t} = \alpha \gamma_t A_i y_{i,t}^\delta p_{i,t}^\beta \quad (1)$$

In this equation, $q_{i,t}$ denotes energy demand of country i at time t , α denotes a constant, γ_t denotes technology, A_i denotes country-specific factors such as weather, $y_{i,t}$ denotes the real income of country i at time t , $p_{i,t}$ denotes the real price of energy, δ is the income elasticity of energy demand, and β is the (negative) price elasticity of energy demand.³⁶¹

³⁵⁷ Al-Mutairi and Eltony 1995; Eltony and Al-Mutairi 1995

³⁵⁸ Narayan and Smyth 2007

³⁵⁹ Dubai energy sector officials interviewed by the author estimated an average 3% decline per user in 2011, which implies a short-run price elasticity of -0.2. Data and full details were unavailable. Note that price elasticity calculations in Dubai would be hampered by factors including wide price differences between citizens (just 5% of the population) and majority expatriates, who exhibit high levels of transience.

³⁶⁰ Wade 2003

³⁶¹ Rodriguez, Charap, and da Silva 2012, 24.

In the case of Kuwait, where the IMF has determined energy prices would need to rise by 183% to account for the opportunity cost of foregone revenue, the demand adjustment is calculated below. Conforming to the equation above, elasticity is derived by: $\frac{q_1}{q_0} = \left(\frac{p_1}{p_0}\right)^\beta$, where β is the price elasticity, in this case -0.4. Given the required 183% increase in gasoline prices, $\frac{p_1}{p_0} = 2.83$, which, raised to power of -0.4 equals 0.66; which means $\frac{q_1}{q_0} = 0.66$. It thus follows that a 183% increase in price leads to a *long-run* drop in demand of $100*(1-0.66)$, or 34%. Note that the large increases in energy price required to reach international levels requires use of this non-linear function, rather than the simpler linear price elasticity function.

How would such a price hike play out on long-run energy consumption in Kuwait? Looking ahead, one projection of GCC electricity demand forecasts 5% average growth over each of the 14 years between 2011 and 2025.³⁶² At that rate Kuwait's power demand would double from 43 to 86 TWh. By increasing prices to opportunity cost levels, Kuwait's projected 2025 demand of 86 TWh would be reduced by a third, to 57 TWh. The portion of 2025 power demand that is attributed to subsidy is therefore 29 TWh. Converted to barrels of oil equivalent using BP's conversion rate of 1 TWh = 610,948 boe, a 29 TWh reduction represents a savings of 17.9m boe, roughly equivalent to three weeks of Kuwaiti crude exports.³⁶³ For the UAE, where fuel and some electricity prices are closer to international parity, the effects of subsidy removal are less dramatic. The UAE's 2011 consumption of 80 TWh would be expected to reach 140 TWh, even when allowing for a 12% reduction in demand implied by a 38% increase in power prices. See Table 4.5 for results of further calculations.

Table 4.5: Power demand and energy savings in 2025 in business-as-usual case (BAU) and after rationalizing electricity prices

	2011 power demand (TWh)	2025 power demand BAU (TWh)	Price increase to displace subsidy	Drop in demand at -0.4 price elasticity	2025 Power demand with no subsidy (TWh)	Savings in TWh in 2025	Savings in BOE terms (m/b/year)
Kuwait	43	86	183%	-34%	57	29	17.7
Qatar	28	55	242%	-39%	34	21	12.8
Saudi Arabia	220	436	306%	-43%	249	187	114.2
UAE	80	158	38%	-12%	139	19	11.6

The estimates above depict long-run reductions in demand ranging from 12% in the UAE to 43% in Saudi Arabia that would result from a hypothetical rationalization of electricity prices. The savings calculated above are indeed significant, but were calculated using the IMF's method which simplifies

³⁶² Lahn, Stevens, and Preston 2013, 41.

³⁶³ Export figures from Joint Organizations Data Initiative (JODI) oil database 2013.

the task by using gasoline prices as a proxy for energy prices in general. However, Kuwait's electricity pricing is distorted by a much larger subsidy relative to that which reduces prices of its gasoline. The electric power subsidy is equivalent to 95% of the cost of generation, transmission and distribution.³⁶⁴ A price increase of 1829% would be required for a full rationalization of electricity prices. Using the same formula, such an increase implies a *doubling* of the long-run decrease in demand, which reaches 69%.

Table 4.6 shows percentage reductions in long-run demand from price increases on various energy products at three plausible levels of price elasticity (results conforming to the above -0.4 elasticity in bold), using the same adapted IMF demand formula. Significant decreases are depicted in all examples, ranging from a 20% reduction in electricity consumption by expatriates in Abu Dhabi or of gasoline in Oman, at the most inelastic representation of demand; to drops of 60% and 77% in power consumption in Abu Dhabi and Kuwait, at the highest estimate of price elasticity. Short-run demand effects would be smaller. It is clear that, regardless of whether or not one regards such increases as a possibility, price exerts strong encouragement over energy demand in the Gulf monarchies.

Table 4.6 Product	Price (US\$)	Unsubsidized price (US\$)	% increase to displace subsidy	% decrease in long-run demand at - 0.3	% decrease in long-run demand at - 0.4	% decrease in long-run demand at-0.5
Kuwait: electricity	0.007	0.135	1829	-59	-69	-77
Kuwait: gasoline	0.23	0.65	183	-27	-34	-41
Saudi Arabia: gasoline	0.16	0.65	306	-34	-43	-50
Abu Dhabi: electricity (expats)	0.041	0.089	117	-20	-26	-31
Abu Dhabi: electricity (citizens)	0.014	0.089	536	-43	-52	-60
Oman: electricity	0.026	0.1	285	-33	-42	-49
Oman: gasoline	0.31	0.65	110	-20	-26	-31

Source: Current prices and estimates of unsubsidized prices compiled by author. Price elasticity estimates are based on literature review compiled by Rodriguez et al. (2012). Demand effect calculations are based on energy demand formula in Rodriguez et al. (2012), which uses a non-linear function that reflects effects of large price increases.

³⁶⁴ In 2011, it cost the government 13.5 US cents per kilowatt hour to provide electricity it sold for 0.7 US cents, according to data provided to the author by the Kuwait Ministry of Electricity and Water.

Moving to a less hypothetical example, how much electricity consumption is explained by price when comparing subsidized and unsubsidized markets that exhibit otherwise similar characteristics? In other words, what happens to consumption when controlling for income and climate? The UAE emirate of Abu Dhabi and the US state of Arizona exhibit many similarities, including a hot climate (average temperature 27 degrees centigrade in Abu Dhabi and 24 degrees in Phoenix), and high incomes (2007 GDP per capita \$76,000 in Abu Dhabi and \$42,000 in Arizona). But electricity prices are very different. Arizonans paid an unsubsidized average tariff of 9.7 cents per kilowatt hour (kWh), while Abu Dhabi nationals pay just 1.4 cents and expatriate residents pay 4.1 cents. As Table 4.7 shows, the two markets also exhibit major differences in household electricity consumption, with Arizonans consuming just a fifth as much electricity as Abu Dhabi nationals and just under half as much as expatriates in the emirate.

Table 4.7	Avg. consumption (kWh/yr)	Tariff per kWh	Avg. yearly bill	Az. demand as a factor of Abu Dhabi
Abu Dhabi nationals	71,000 (2006)	1.4 US cents	\$967	20%
Abu Dhabi expatriates	26,500 (2006)	4 US cents	\$1,082	53%
Arizona residents	14,000 (2009)	9.7 US cents*	\$1,600	-

Note: consumption is per household; * = average tariff
Source: Abu Dhabi Regulation and Supervision Bureau; US Energy Information Administration

Using the same price elasticity formula, would equalized prices lead Abu Dhabi's consumption to resemble that in unsubsidized Arizona? For Abu Dhabi nationals, raising prices to the level of Arizona implies a drop from 71,000 kWh/year to 40,000 kWh/y at a price elasticity of -0.3 and to 27,000 kWh/y at a price elasticity of -0.5. These revised consumption figures, while remaining substantially larger than per capita consumption in Arizona, suggest a large and plausible role for price in contributing to demand. The calculation does not control for other demand contributors, such as the role of higher average temperatures and incomes in Abu Dhabi, the common inefficiencies of building envelopes and appliances in Abu Dhabi, and the characteristically larger size of Emirati households.³⁶⁵ For Abu Dhabi expatriates (with typically smaller families and homes), consumption adjusts even closer to that of Arizona. Using the price elasticities above, consumption drops to 20,400 kWh/y and 17,200 kWh/y, just 45% and 23% above that of Arizona.³⁶⁶

³⁶⁵ Abu Dhabi households tend to be larger than those in the West, given larger typical family size as well as the likelihood that extended families are also accommodated, along with domestic staff, such as maids and gardeners.

³⁶⁶ Arizona consumption comes from US Energy Information Administration. (Dec. 6, 2011) Table 5A. Residential average monthly bill by Census Division, and State 2011. [Accessed Apr. 12, 2012: <http://www.eia.gov/tools/faqs/faq.cfm?id=97&t=3>]

This calculation is not meant to serve as an econometric model that disaggregates and accounts for all components of demand – a task that is outside the scope of this dissertation – but rather as a second, less hypothetical method of revealing the role of price in energy demand in the Gulf. Taken together, these two sets of estimates show that subsidized prices in the Gulf account for a significant share of energy consumption, which I estimate at *between one quarter and one half of total demand* for electricity and other forms of energy. As mentioned, there is very little empirical data on behavioral responses to energy price increases in the Gulf monarchies, in part because there have been few such increases. Hence the estimates above can be said to provide basic insight into the relative share of GCC energy demand that can be attributed to subsidy, as distinct from the other factors driving demand, and to a hypothetical response by consumers to rationalized prices.³⁶⁷

4.3.2 Policy Approaches to Electricity Demand

A sudden 18-fold increase in electricity prices might offer a useful hypothetical exercise, but it is unlikely, by itself, to provide a viable policy choice to the region's governments. As depicted in the literature, energy subsidies and other welfare benefits are understood to substitute for citizens' lack of political participation. Taking them away constitutes a reneging on the implied social contract in these countries, with potential consequences for political stability. A more measured policy might opt for targeted subsidies designed to protect low-income and vulnerable groups, while allowing prices to rise for those deemed more able to pay. And, if policymakers believe that citizens are entitled to a given *level* of welfare benefits, they may wish to structure reforms so that overall consumer welfare is not lost when energy subsidies are removed. In such a case, they may seek to replace energy subsidies with a cash transfer or an alternate benefit holding an approximately equal value, minus the deadweight loss that accrues from inefficient allocation.

There is some precedent for such a policy. In 2010, Iran became the first country in the world to replace energy subsidies with a universal cash transfer program that distributed payments averaging \$40 per month to nearly all households.³⁶⁸ Direct payment subsidy is a more efficient and equitable redistribution mechanism because increased energy prices encourage consumers to reduce consumption, which, as in the Iranian case, allows households to use part of their compensation to buy preferred goods and services. Distributing cash rather than in-kind energy also improves social equity since subsidy accrues disproportionately to wealthy households which have more means to consume. Iran's reform achieved a positive assessment from the IMF for reducing demand while halving the world's largest energy subsidy burden, valued at around \$100 billion or a quarter of 2010 GDP. And,

³⁶⁷ A more thorough examination of price increases would also examine income elasticity, which tends to decline as income rises.

³⁶⁸ Tabatabai 2011

perhaps of equal significance, a large segment of the Iranian public supported the reform.³⁶⁹ (Discussed further in Chapter 6)

Policymakers in the Gulf have devised various means and proposals to increase energy prices. None (that this author has seen) follow the Iranian path of maintaining consumer welfare through rebating the cash value of the subsidy. A few regimes have managed to target electricity and water subsidies toward the influential citizen residential sector, while tariff increases have been levied on those holding relatively low levels of political influence. Rising prices have been imposed on industrial and commercial customers, and, in Qatar and the UAE, expatriate residents. Low tariffs for citizens are deemed a crucial endowment within the paternalistic social contract between ruling sheikhs and their subjects. Expatriate residents and foreign investors are more likely to see low pricing as a windfall. In the UAE, non-citizen power prices have been raised to at least triple the level of citizens. In Qatar, citizens continued to receive free electricity, while foreign residents are charged 2.5 U.S. cents per kilowatt-hour. Fig. 4.7 illustrates sector pricing in the Gulf, which runs contrary to that in unsubsidized markets like the United States, where lowest rates tend to be reserved for industrial consumers.

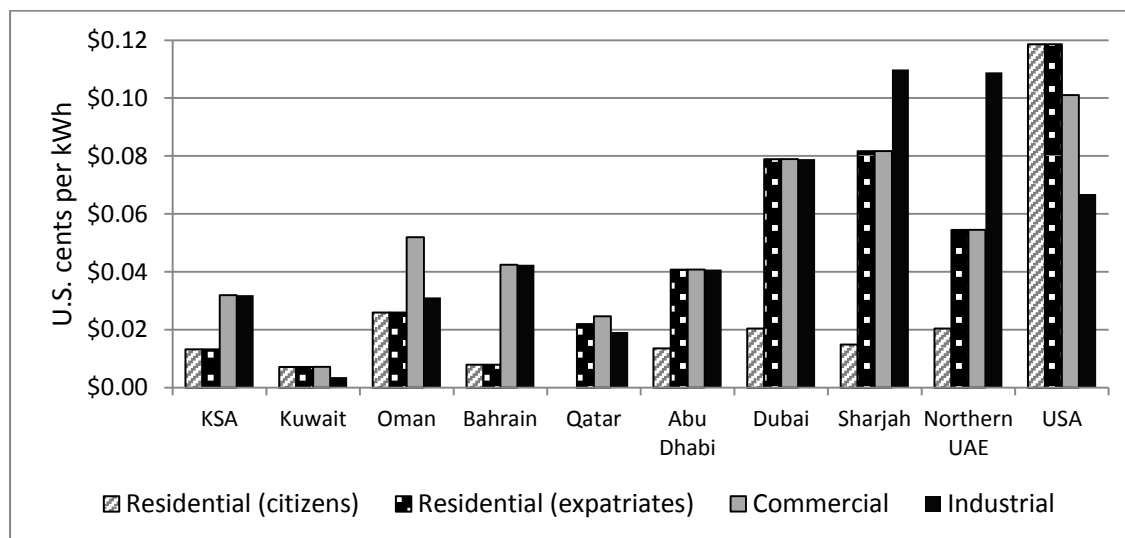


Figure 4.7: Retail electricity prices for an initial 2,000 kWh in comparison across sectors in the six GCC countries and the United States. Note that four utilities operate in the UAE. (Source: Author's compilation from national utilities, interviews and media sources; All GCC prices are fixed by the state. Those in Dubai include additional fluctuating surcharges for LNG, which have not been included. U.S. figures are 2012 averages from U.S. Energy Information Administration, 2012.)

More recently, the Saudi Electricity & Co-Generation Regulatory Authority (ECRA) has initiated efforts to target its electricity and water subsidy toward low-income households. ECRA tried and

³⁶⁹ Guillaume, Zytek, and Farzin 2011

failed to raise residential rates in 1999 when a public outcry forced it to back down. In 2012 ECRA arranged for the Ministry of Social Affairs to pay “reasonable” residential consumption of low-income Saudis, in hopes that the king and his advisers will agree to higher rates on remaining households once ECRA can show that poor and vulnerable customers have been protected.³⁷⁰

4.3.3 Electricity Subsidy and the Residential Sector

One of the consequences of policies that reserve the cheapest electricity for residential customers, as opposed to typically larger consumers in the commercial and industrial sectors, has been the residential sector’s rise to dominance. In all but Qatar the residential sector is the largest consumer of electric power, most of which is used in cooling. In Kuwait, Saudi Arabia, Oman and Bahrain, it represents more than 50% of national power consumption.³⁷¹ Residential consumption poses three problems for governments. First, most electricity is sold at a loss, so its provision is a drag on the economy. Second, this demand produces an additional opportunity cost by diverting exportable hydrocarbons into the domestic economy, where they are provided at low fixed prices. Third, as mentioned, residential demand is difficult to reform because of the implied risk to political stability.

The difficulty in targeting residential demand is apparent in Oman’s 2009 proposal for cost-reflective tariffs, which calls for prices for commercial and industrial customers to rise to cost-reflective levels.³⁷² The intent is to reduce Oman’s recent 10% yearly increases in electricity demand, which claim an ever-larger share of the sultanate’s budget and gas resources. However, the proposal, which would not affect residential consumers, remained on hold at the time of writing. The country’s electricity regulator said the Arab Spring uprisings, which included virulent demonstrations in Oman, increased government sensitivity to potentially unpopular measures.³⁷³ Among the nine tariff-setting entities in the GCC, only Dubai has raised prices on citizens’ residential consumption in the last decade. (Covered in Chapter 5)

In summary, 40 years of rising electricity consumption has been driven by extraordinary growth in population and individual wealth in the Gulf monarchies. These structural demand factors have been exacerbated by subsidies based in distributive patrimonial politics, to which I attribute between a quarter and a half of GCC electricity demand. Regimes have failed to expose consumers to price signals that might reduce consumption in line with rising government costs. In turn, their subsidies have become the world’s largest, on a per capita basis. (Fig. 4.8)

³⁷⁰ Al-Shehri 2012

³⁷¹ International Energy Agency 2012a; In the UAE, homes were responsible for 43%, the largest sector overall.

³⁷² “Public Consultation on Proposals for Cost Reflective Tariffs for Commercial and Industrial Consumers of Electricity” 2009

³⁷³ Cunneen 2011

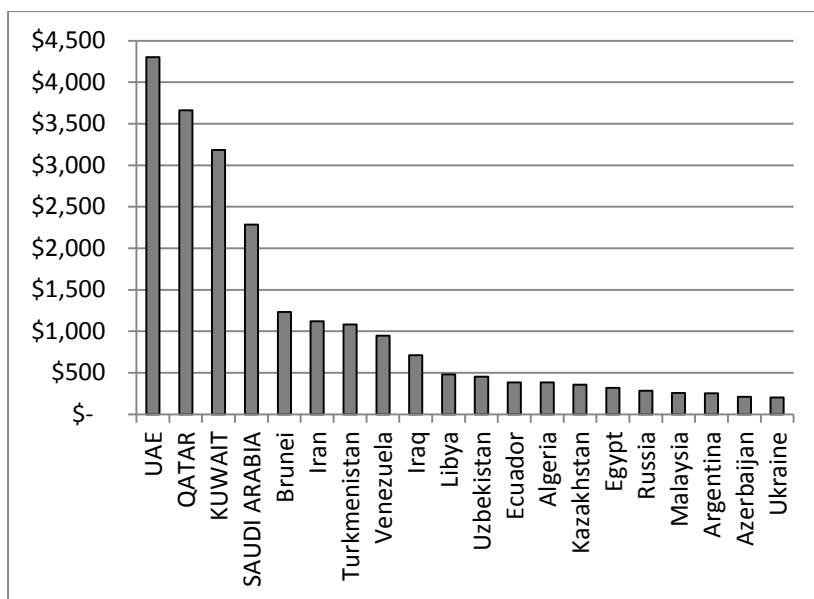


Figure 4.8: Per capita fossil fuel subsidy in 2001 US\$, country rankings (Source: IEA 2012)

4.4 Natural Gas: Price, Production and Shortfalls

As mentioned, natural gas feedstock accounts for the largest share of GCC power generation. If the Gulf comprises one of the most gas-rich regions on earth (Table 4.8) why would five monarchies find themselves in short supply? In similar fashion to the electricity sector, underpricing is driving demand. But in the gas sector, underpricing is also stifling production. Partly as a result, the GCC is being transformed into an importing region.

Most current GCC gas production stems from low-cost associated gas yielded in tandem with oil. By contrast, non-associated reserves in the five gas-short monarchies tend toward the geologically difficult: deep rock-bound “tight” gas, as well as sulfuric “sour” gas. Production costs run between \$3 and \$9 per million Btu (MMBtu).³⁷⁴ Such costs render upstream investment commercially unviable in countries with bulk gas prices capped under \$2. And, since most production is sold in-country, the typical incentive for foreign investment – a profitable netback – is eliminated.³⁷⁵

³⁷⁴ Gulf-based IOC executive, interview with author on condition of anonymity, Muscat, Nov. 15, 2011.

³⁷⁵ Mabro and Razavi argue that Mideast gas exports are also driven by subsidies, since low domestic prices incentivize firms to reap higher export returns, even when those gains are outweighed by the economic benefits of using gas domestically. See Mabro 2006; Razavi 2009.

Table 4.8: Natural gas reserves of the Gulf and Arabian Peninsula

	Size (Tcm)	Share of world total
Bahrain	0.2	0.1%
Iran	33.6	18%
Iraq	3.6	1.9%
Kuwait	1.8	1%
Oman	0.9	0.5%
Qatar	25.1	13.4%
Saudi Arabia	8.2	4.4%
UAE	6.1	3.3%
Yemen	0.5	0.3%
GCC total	42.3	22.6%
Region total	80	42.7%
World total	187.3	100%

Source: BP 2013

4.4.1 Gas Trading in the Gulf

Unmet demand suggests that pipeline imports from gas-rich neighbors, especially Qatar and Iran, would be attractive. But the region’s only cross-border conduit is the Dolphin Pipeline, endowed with a nameplate capacity of 33 bcm/year, but which maintains an operational capacity of just 20 bcm/year. In 2011, it operated at about two-thirds nameplate capacity, carrying 17 bcm from Qatar to Abu Dhabi and Dubai, and a further 2 bcm to Oman. The pipeline could be filled to capacity if equipped with additional compression, but political differences over pricing have undermined Qatari willingness to earmark

additional gas for the pipeline.³⁷⁶

There is nothing in the way of a gas market pricing mechanism in the Gulf region, such as an index based on trade at a hub. Prices vary widely. Dolphin-delivered gas rises in price slightly each year, with UAE prices around \$1.50 per MMBtu in 2012. That is considered a significant underpricing, and has pushed Qatar to seek oil-linked prices and markets outside the Gulf. Qatar’s neighbors have been unwilling to pay more than what they consider a reasonable markup on production costs below \$1/MMBtu. But Qatari officials who value gas by the far higher netbacks from customers in Asia and Europe, view regional requests for “discounted” gas as unrealistic. Other pipeline proposals have failed. (Table 4.9) Recent sales provide further information on the value of gas in Persian Gulf. A so-called “interruptible supply” of Qatari gas sold to Abu Dhabi via the spare capacity in the Dolphin Pipeline is priced near \$5, and resold in the UAE for \$7 to \$10.³⁷⁷ Kuwait and the UAE also have resorted to LNG imports, with Kuwait reportedly paying above \$15.³⁷⁸

³⁷⁶ A \$250m contract to maximize the pipeline’s capacity by adding three compressors was awarded in November 2012, but did not include mention of availability of additional gas. See: Watts, Mark. “Dolphin Energy awards Qatar gas contract to Larsen & Toubro.” *MEED*, Nov. 13, 2012. See also: World Bank 2013, p. xvi and 44.

³⁷⁷ Gulf-based IOC executive, interview with author on condition of anonymity, Doha, Nov. 29, 2011.

³⁷⁸ Kuwait LNG import price is from *Petroleum Economist* 78, issue 9 (2011), <http://www.petroleum-economist.com/Article/2912531/Kuwaits-growing-need-for-LNG-imports.html>.

Table 4.9: GCC gas pipeline proposals that failed

Project	Year launched	Gas source	Importing countries	Reason for failure	Source
GCC gas grid	1988	Qatar	KSA, Kuwait, Bahrain, UAE	Political/territorial disputes	Dargin 2008
Crescent Petroleum pipeline	2001	Iran	UAE (Sharjah)	Pricing disagreement. Contract nullified by Iran after pipeline built	Jafar 2012; Carlisle 2010; Adibi, Fesheraki 2011
Dolphin Pipeline extension to Kuwait	2005	Qatar	Kuwait	Saudi refusal to grant access to territorial waters	Dargin 2008

4.4.2 Increasing Reliance, Increasing Cost

Despite these difficulties, the U.S. Energy Information Administration (EIA) projects that gas consumption in the Middle East’s generating sector will grow by nearly 150% by 2035.³⁷⁹ Drivers include rising population and energy intensity, industrialization, and gas-for-oil substitution to maximize exports. The marginal cost of additional gas to meet these needs will be far higher than that of domestic associated gas. For example, Abu Dhabi projects a widening deficit in gas feedstock until 2017, when the first of its four nuclear power plants is expected to begin producing power. The Abu Dhabi leadership opted to import LNG to bridge this deficit. The price differential is roughly sevenfold. Current supply costs roughly \$1.50/MMBtu. LNG imports will be priced above \$10.³⁸⁰

In Oman, rising domestic demand and depleting conventional gas reserves have forced reductions in LNG exports. Unconventional reserves are under development, but lifting costs could run beyond \$8/MMBtu. In Saudi Arabia, a \$9bn gas investment campaign aims to slow the growth of crude oil and diesel in the power sector by substituting with gas. Saudi Aramco hopes to increase gas output by 50% above 2011 production of 280MMcm/day,³⁸¹ but, like Oman, most of its non-associated reserves consist of difficult formations.

4.4.3 The Gulf as an Importing Region

Despite the discomfort of paying world market prices for a commodity recently considered “free,” the GCC is becoming a gas importing region. The EIA projects that the “Arabian producers” (UAE, Kuwait, Bahrain, Oman and Yemen) will require 40 bcm in yearly imports by 2025 and double that in 2035. (Fig. 4.9) The EIA expects that Saudi Arabia will remain self-sufficient. However, a senior Saudi energy official told this author that gas imports for the power sector were under consideration.³⁸²

³⁷⁹ U.S. Energy Information Administration. (September 2011). International Energy Outlook 2011. Chapter 5: Electricity. Figure 83. Middle East net electricity generation by fuel, 2008-2035.

³⁸⁰ Abu Dhabi energy sector official, author interview on condition of anonymity, March 12, 2012.

³⁸¹ Lamotte 2012

³⁸² Saudi energy official, Ministry of Petroleum and Minerals, author interview in Riyadh, Oct. 15, 2012, on condition of anonymity.

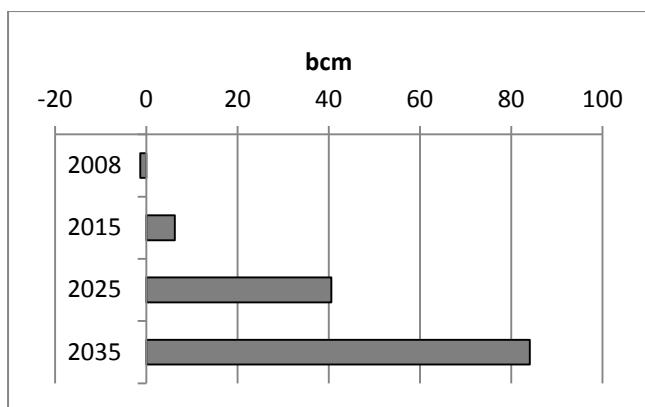


Figure 4.9: Projected gas imports of Arabian producer countries (Source: EIA, International Energy Outlook 2011)

From which countries will these imports be sourced? Inexpensive supply from the largest resource holders in the region, Qatar and Iran, appears unlikely. If Qatar’s moratorium on further North Field production is lifted after 2015, Qatari policymakers have signaled that the country will market any increased production on a commercial basis.³⁸³ Imports from Iran have been thwarted by price and political disputes, as well as by Iran’s prioritizing of reinjection.³⁸⁴ Iraq also appears a doubtful source. It also requires gas for reinjection, power generation and industry. The most likely destinations for any Iraqi exports are said to be Turkey and Europe.³⁸⁵ Barring major discoveries, it appears that the limits to the GCC’s inexpensive gas supply have taken shape. In all but Qatar, marginal increases in gas demand will be met by higher-cost sources, mainly non-associated and unconventional gas, or market-priced imports. Policymakers have sought other avenues of redress from their gas challenge, as evidenced by investments into nuclear and renewable generation. These technologies are likely to provide only marginal relief.

4.5. Conclusions

Rising domestic consumption is a familiar menace to oil-dominated economies. Venezuela, Iran and Indonesia have experienced similar quandaries. These were addressed in Iran and Indonesia by subsidy reductions and in Venezuela by increasing government debt. Rarely a straightforward process, the subsidy challenge in the Middle East has been magnified by the pan-Arab uprisings. The overthrow of neighboring autocrats has infused caution into Gulf regimes, which responded by increasing social spending and withdrawing subsidy reforms. As will be shown in Chapter 5, this

³⁸³ Author interviews with IOC executives and government consultants in Qatar, Spring 2012.

³⁸⁴ Adibi and Fesheraki 2011; Wietfield 2011

³⁸⁵ Yacoub and Rutledge 2011

author's 2012 survey of UAE policymakers found a deep reluctance to raise electricity and water prices, and a heightened sensitivity to citizen opinion.³⁸⁶

Despite the difficulty in reforming energy policy, alternatives appear worse. It is hard to overstate the importance to the Gulf monarchies of preserving hydrocarbon export revenues. Despite modest success with economic diversification, energy exports still comprise the largest share of GDP and government budgets. These earnings provide the hard currency required to maintain imports, to meet social welfare outlays, to develop infrastructure that can drive industrial growth and diversification, and to create jobs for burgeoning workforces.

The Gulf energy conundrum can be read in two ways. On the one hand, it provides an impetus for these historically durable monarchies to renegotiate socio-economic relations between government and citizen, and to begin the inevitable journey toward more efficient and diversified economies. In other hydrocarbon exporters, such as Indonesia, Malaysia and Mexico, political liberalization has been part of this journey. On the other hand, this conundrum could lead to crisis responses that damage state-society relations, if unsustainable welfare schemes are not reframed on agreeable terms.³⁸⁷

Academic works that examine this issue are split on the likelihood of continued stability. On the pessimistic side are arguments like Davidson's, that shrinking resource rents per capita are undercutting the ruling families' levers of power as globalized media tools undermine their controls on political discourse.³⁸⁸ More optimistic voices such as Lahn and Stevens maintain that deficits in the non-hydrocarbon fiscal and current accounts are being addressed through industrial diversification that will supplant depleting hydrocarbon sectors. They argue that energy consumption will be addressed through upgrades in efficiency and largely without antagonizing citizens.³⁸⁹ Others, including the policymakers and experts in Saudi Arabia, the UAE and Oman surveyed for Chapter 5, believe that energy prices can and will eventually be raised, even on the sensitive residential sector. The optimistic view is bolstered by the historical resilience of the GCC monarchies, which managed to survive both the Arab Spring uprisings and the 1980s-'90s oil bust. It bears recalling that in Saudi Arabia, oil revenues plummeted from \$120bn to \$17bn over the four years to 1985, while GDP per

³⁸⁶ Fifteen of 25 policymakers polled (60%) said "events of the Arab Spring" had made the UAE government "less willing to raise water and electricity prices." Twenty-one of 26 respondents (81%) said the UAE government was either "very sensitive" or "extremely sensitive" to citizen opinion on tariff increases. Anonymous online survey of 36 UAE government policymaking employees conducted by the author between Feb. 22 and March 5, 2012.

³⁸⁷ Coates Ulrichsen 2011

³⁸⁸ Davidson 2012

³⁸⁹ Lahn and Stevens 2011

capita fell from its 1980 peak of \$19,000 to reach \$6,900 in 1996. Then, too, scholars predicted the fall of the sheikhs³⁹⁰ but none of the six Gulf ruling families was toppled.

Assessments of the well-being of the Gulf monarchies tend to revolve around global oil prices, and it has been the rising oil price that has enabled recent increases in social welfare, rather than a rise in productivity. However, assuming steady global demand, the crisis covered here is playing out independently of oil prices. That is not to say a falling oil price would be irrelevant, but that a rising price can only temporarily hide the growth of domestic consumption.³⁹¹ Ruling sheikhs face a new and distinct challenge. Besides the more widely discussed brushes with globalization, internal opposition, and external market forces, regimes must address domestic consumption of their chief exports, including the subsidies that contribute to demand.

The Gulf monarchies, like exporters before them, have encountered the need to prepare their political economies for the inevitable decline of oil exports. The policies behind their quandary – and the pressures to overcome it – are internal. Regimes have not been galvanized to seek energy efficiency by an economic shock or international outcry. Rather, energy policy has drifted along on formulae set in the 1970s until becoming apparent that exports are at risk. The Arab Spring uprisings add contradictory pressure to increase or prolong subsidies, deepening the medium-term resource predicament in the name of short-term political expediency.

Further, it appears that any international outcry will be muted. The Gulf energy crunch coincides with a global boom in unconventional energy. Whether one looks at the shale oil and gas production in the United States; the huge finds off Brazil, East Africa, and the Levant; or the ramping up of LNG exports from Russia and Australia, the world appears less alarmed by the potential for reduced Mideast supply than might have been the case. In fact, cheaper outside gas supply could help these “Arabian producers” transition to “Arabian importers.”

This chapter has outlined factors driving Gulf monarchies to encourage local consumption of export commodities, and the resulting changes to energy balances and electricity models. I have presented a picture of regional energy supply and demand to advance the argument that maintaining in-kind resource distribution entails rising *direct costs* in the form of subsidies, rising *opportunity cost* in the form of lost export earnings, premature *displacement* of exports, and premature resource *depletion*, due to uneconomic demand. Reforms can therefore extend the monarchies’ status as exporters, bring them higher value from natural resources, and assist with maintenance of prudent fiscal balances. Distributional politics has long been understood as a key element in the Gulf’s vaunted political stability, and in-kind resource distribution has been an important component of that model. But this

³⁹⁰ Sick 1998, 211; Hunter 1986; Roberts 1987; Al-Ebraheem 1996; Al Rumaihi 1996

³⁹¹ For a projection on oil prices required to accommodate future Saudi consumption, see: Bourland and Gamble 2011

practice, however effective over the past 40 years, now comprises a structural encumbrance that threatens the GCC's economic and political models.

Fast-rising demand for electricity is shifting the region to a higher-cost model of provision that poses an economic drag on the state, since the largest source of demand – the residential sector – is not linked to productive activity. The shortage of natural gas that affects five GCC states is ultimately due to pricing disincentives on production and the distributional imperatives of the social contract that bind the regime to low energy prices.

The political-stability-versus-economic-sustainability puzzle illustrated here suggests a response. Gulf ruling families will be forced to protect their oil revenues, their key stability resource, before preserving energy subsidies, which are a legacy of surplus production. Whether regimes can meet their medium-term imperative without triggering their short-term fear – a popular uprising – remains to be seen. But the future of monarchies that depend so heavily on exports of hydrocarbons cannot be protected unless their leaders find ways to maintain them.

Chapter 5: Revolution and the Rentier State: Theory of Stability to Theory of Crisis?

5.1 Introduction

For at least forty years, the Gulf monarchies have engaged in implicit distributive social contracts with their citizenry which include generous energy subsidies. Social contracts in these six Gulf countries have been key factors in maintaining political stability. But these social contracts are based on an unsustainable practice: Encouraging domestic demand for their chief export commodities. Decades of fast growing demand now threaten resource exports in five of these monarchies. Thus, a variable once associated with the longevity of these monarchies – the *in-kind domestic distribution of energy* – now threatens their survival. This chapter disaggregates regimes' energy rent distribution practices to isolate and examine the viability of energy subsidies. It argues that theories of politics of rentier states must acknowledge the contradictory nature of subsidized energy distribution and concede the possibility of its reform, through the social contract. The chapter presents evidence that reforms have taken place, and offers results from a large survey of experts on GCC energy and finances predicting that further reforms are likely. These reforms, which run contrary to the implications of rentier theory, are possible because a plausible alternative scenario is worse. If the Gulf monarchies are unable to arrest growth in domestic demand for their chief export commodities, a subsequent drop in exports and earnings could force changes in the character of governance, if not in the regimes themselves.

The Gulf monarchies are exemplars of the oil-exporting *rentier* state that prevails in the wider Middle East and North Africa and among mineral export-dominated economies more generally.³⁹² Since the onset of large-scale exports in the 1960s, and especially since the oil crisis of 1973, their regimes have followed a well-documented distributive script that cultivates political legitimacy for monarchs by granting citizens a lengthening menu of welfare and employment benefits.³⁹³ The means for this exchange is described in the political economy literature as a social contract, through which the political support of the public is procured in exchange for shares of resource rents. These rents, which flow directly to ruling families in payment for the state's hydrocarbon exports, form the revenue source for 80% of aggregate government budgets. Resource rents underwrite citizen welfare benefits including state jobs, housing and other subsidies.

³⁹² By Gulf monarchies, I refer to the six Gulf Cooperation Council or GCC states: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

³⁹³ Mahdavy 1970; Beblawi and Luciani 1987; Anderson 1987; Crystal 1990; Gause III 1994. Note that distributive structures were in place before oil, but the discovery of oil and subsequent flow of rents energized this system and shifted political power to ruling families which received and distributed those rents. See Anderson 1986; Crystal 1990; Foley 2010.

This distributive social contract has long been an important factor maintaining political stability within the rentier Gulf monarchies.³⁹⁴ But the strategy that helped these regimes survive and societies prosper includes the counterproductive encouragement of demand for domestic energy, a practice that appears unmaintainable in the long term. Of the six Gulf monarchies only Qatar remains comfortable in its ability to meet both its international export commitments and foreseeable domestic demand. In the other five, the rentier recipe for stability has become a script for economic decline and, perhaps, public disaffection.

This chapter argues that consumer subsidies on energy, which have been aggregated within the rentier literature among the broader distribution of resource rents, carry different properties and stronger implications for political structures, and warrant separate treatment. If this special group of rent-distributing states is unable to reduce growth in domestic demand for export commodities, exports may be displaced. Thus the subsidy burden poses a more damaging encumbrance on the state than do fiscal burdens, since subsidies affect the vital flow of revenues that support the rentier system. A sustained drop in exports would probably reduce the amount of export rents available to the government, as demonstrated in the thesis introduction.

If the loss in hydrocarbon rents was not replaced by an alternate source, as in Dubai, a scenario could emerge that led to regimes making cutbacks in distribution, which, according to theory at least, would force changes in the character of governance. From benevolent³⁹⁵ autocracies that wield mild repression³⁹⁶ to restrain those unwilling to relinquish political rights for economic security, these regimes may increase repression as they become less able to comply with expectations for continued rises in benefits. Or, as theory would also seem to prescribe, some regimes may compensate by creating openings for political participation, as a replacement for benefits withdrawn from the social contract. Either way, the character of near-absolute monarchical institutions that have used generous subsidy regimes to suppress dissent may face challenges from reductions in revenues from resource exports and subsequent declines in distribution of benefits.³⁹⁷

On the other hand, Gulf regimes may be able to arrest or at least ease the trend toward consuming ever-greater amounts of their chief exports, thereby preserving their export-oriented political economies for a few more decades. One route to this goal is by removing distribution of hydrocarbons from their social contracts by reforming subsidies on fuels, desalinated water and electricity.³⁹⁸

³⁹⁴ B. Smith 2004; Ross 2001. In their analysis of Arab Spring effects, Yom and Gause found hydrocarbon rents a key factor in preserving stability; Yom and Gause III 2012, 83–4.

³⁹⁵ With a caveat for the recent state repression seen in Bahrain

³⁹⁶ Luciani 1987, 76

³⁹⁷ Desai, Olofsgard, and Yousef 2009

³⁹⁸ A third “perpetual growth” route may also be possible. This entails shifting domestic consumption to an alternate energy source while diversifying the economy beyond hydrocarbon exports. This is a stated goal of all six countries, but progress has been spotty. It is not examined in depth here because this route does not

Simply put, the mispricing of key export resources to buy domestic popularity cannot be sustained if the supply of that resource rises less quickly than demand. Indeed, the post-oil sheikhdom of Dubai has already reduced subsidies on fuel, water and electricity without noticeable alteration in the character of its governance, or the granting of a quid pro quo increase in political participation or alternate social contract benefit. Dubai's practices thus appear as a violation of the social contract, at least in the fashion that this state-society relationship is typically framed in the rentier literature. As this chapter will show, other tariff-setting entities³⁹⁹ in the Gulf may enact similar reforms. By following this route, these states will also appear to be infringing upon social contracts by reducing or ending long-time entitlements.

The problem of energy subsidies and reform thus poses a challenge not just to the hydrocarbon-export economic models of these states but to the rentier scholarship itself. The literature emphasizes the stability gained by resource distribution rather than its dangers; it implies that regimes cannot legitimately reform this contradiction by retracting citizen welfare benefits. History has, for the most part, backed up these premises. Previous attempts to raise electricity prices on the citizen residential sector, the most politically sensitive of the tariff groups, have failed or been reversed.⁴⁰⁰ However, as these states continue to undergo far-reaching changes in population and development, some of the once-robust tenets of rentier theory have weakened. My argument holds that it is not theory that has proven wrong per se, but that theory has failed to anticipate fast-changing circumstances on the ground, and that these circumstances are providing a stress-test that theory may not withstand.

5.2 Structural Encumbrances of the Rentier State

As shown in the literature review, the subsidies-as-birthright formulation has been and remains a fundamental tenet of rentier theory that is incorporated within the foundation of the literature's arguments and narratives. This chapter diverges from the rentier literature's key tenets in three important ways. First, I hypothesize that rentier systems are encumbered with a structural contradiction: encouraging domestic consumption of the state's chief export commodity and only real source of earnings. Rentier scholarship is in basic agreement that distributional practices are linked with political stability, even though the fiscal viability of these policies has been called into question. By contrast, I argue that, while resource distribution may continue to bring stability in the short term, if maintained in the long run it will accomplish the opposite.

challenge theory. In reality, some combination of demand-oriented and supply-oriented "diversification" reform is most likely.

³⁹⁹ There are nine electricity tariff-setting bodies in the GCC. The federal UAE has four: One each in Dubai, Abu Dhabi, Sharjah and the Northern Emirates. The other five GCC states have one each.

⁴⁰⁰ Saudi Arabia imposed electricity tariff increases in 1985 and 1999 that were quickly reversed.

Second, while generally agreeing with other scholars regarding rising fiscal pressure from monarchies' continued expansion of welfare benefits, I argue that the *domestic distribution of natural resources* comprises a fundamentally different encumbrance on the state. This burden manifests itself not in terms of *cost* or fiscal pressure, but on the *revenue* side of the balance sheet, where national incomes are tallied. Whereas for fiscal burdens, often associated with reduced oil prices, the state possesses temporary policy options such as deficit spending and debt issuance. I argue that the potential loss of export revenue affects the state in a different way and, I believe, poses grounds for more concern than does the increasing fiscal costs of rent distribution. I therefore disaggregate the regime's distributive outlays into two categories: rents, and in-kind energy resources. The former includes rent-funded employment and welfare benefits such as housing, education and subsidized food staples. I focus on the latter category, which includes subsidies on electricity, fuel and water. Section 5.3 examines these subsidies within the context of theoretical prohibitions on their reform, showing evidence of initial reforms that run contrary to theory, and Section 5.4 provides results from a survey of experts which reveal an expectation that some countries will reform, which challenges the theoretical depiction of subsidies.

Third, this chapter's results reveal deep heterogeneity among states treated as a regional aggregate and expected to behave in similar fashion, especially in the literature's early phase. Even the richest rentiers maintain differing energy policies, resources per capita, and levels of regime autonomy. As the findings will show, one of the six monarchies, Qatar, is less affected by the same resource concerns that afflict the others, due to the size and variety of its hydrocarbon reserves relative to population.

A fourth dimension may also require consideration in the literature: a potential endgame for the rentier state that cannot maintain the social contract. Modernization theorists such as Deutsch and Huntington saw structural political change as an inescapable process for the modernizing monarch who built institutions that would eventually bring democratic opening.⁴⁰¹ The rentier literature, which has mainly concerned itself with identifying factors contributing to the *longevity* of monarchy, tends to overlook pathways for political restructuring⁴⁰² although Luciani touches upon it in his seminal work⁴⁰³ and articles emerging during the oil bust of the 1980s and 1990s suggested that the prolonged decline in aggregate rents was imposing pressure for increases in pluralism.⁴⁰⁴ While most of the Gulf monarchies will probably take steps to reduce domestic energy consumption or otherwise seek to diversify sources of rent or domestic energy, the results below suggest that one or more regimes may not. State revenues may eventually fall short of social contract requirements, reprising pressures last

⁴⁰¹ Huntington 1968; Deutsch 1961

⁴⁰² With recent exceptions, including Davidson 2012; Coates Ulrichsen 2011; Tetreault 2012.

⁴⁰³ Luciani (1987, 82) describes the rentier state as a "passing phenomenon" since the economic foundation of the state consists of a depletable asset.

⁴⁰⁴ Luciani 1988; Anderson 1992

experienced during the oil bust, leading to altered governance strategies, perhaps even unrest or regime change. While I do not examine the likelihood of this eventuality, I acknowledge the deficiency in the literature and suggest it as a path for future scholarship.

Finally, it bears noting that relations between rulers and ruled are far more complex than portrayed here. Ruling families in the Gulf monarchies possess numerous intertwining strands of legitimacy that extend beyond the simple distribution of state benefits that are the focus of this chapter. Legitimacy resources also include, for example, families' centuries-long history of rule, their country's achievements in human and physical development, including living standards and political stability; their personal charisma; their ability to deal effectively with the outside world; and, especially in Saudi Arabia, their role as protector of holy sites and of Islam more generally.⁴⁰⁵ Beyond these, they retain shared experience that has helped them survive through decades of low oil prices, insurgency and other challenges to their rule.⁴⁰⁶

5.2.1 Disaggregating Distributive Practices

Central to this thesis is the distinction of energy-distributive practices from those of rent distribution. Governments have, over the years, fostered energy-intensive domestic economies and lifestyles by making available abundant supplies of domestic oil and natural gas. Low prices of these resources were determined by the low costs of production, a sense of collective ownership, and the view that supply was so large that domestic demand would not affect exports. Energy distribution availed the same political structures used to dispense economic rents, and the distribution of cheap (or free) electricity, desalinated water and fuel produced the same sense of citizen entitlement to these benefits. Among regimes, energy distribution appears also to have produced the same expectations for political quiescence of recipients.

However, there are important distinctions between distribution of *rents* and that of in-kind *resources*. Distribution of energy resources is a less flexible practice than distribution of energy rents. Whereas rents can be generated from myriad non-hydrocarbon sources, as Gray and Davidson have shown to be the case with Dubai,⁴⁰⁷ national oil and gas resources are finite. Rates of extraction are subject to technical and economic limits. Resources are large in four of the six GCC states, but production has reached or is nearing a plateau. Increasing oil production capacity in these countries requires major new investment, which, in most of the GCC, must be borne domestically because of prohibitions on foreign concessions. It thus follows that, unless current rates of domestic consumption growth are checked, domestic demand will displace resources available for export, and exports will fall.⁴⁰⁸ Instead of providing income, local consumption serves to *reduce* the national income, either real or

⁴⁰⁵ Nonneman 2005, 320

⁴⁰⁶ Yom 2013

⁴⁰⁷ M. Gray 2011b; Davidson 2005

⁴⁰⁸ Bourland and Gamble 2011; Tottie 2011; Lahn and Stevens 2011; Lewis and Hsueh 2012; Rehman 2012

potential. Rents are foregone in the failure to sell energy at market prices, which constitutes an opportunity cost or implicit subsidy,⁴⁰⁹ and costs are incurred by below-cost sales of refined fuel and electricity, which require explicit subsidies. Domestic distribution of exportable resources therefore comprises depreciation of natural capital. It reduces the state's ability to reinvest in the sector – given that resources are sold below market price – and gives rise to depletion of an exhaustible resource without the capture of its full value. These natural resources are “too cheap for the good of future generations,” to borrow from Hotelling's still relevant 1931 argument, and “in consequence of their excessive cheapness they being produced and consumed wastefully.”⁴¹⁰ By comparison, other forms of rent distribution appear as government spending.

How should theory address these effects? I argue that rentier politics in the Gulf monarchies is encumbered with a structural contradiction, in a similar manner to the “perverse expenditure mechanisms” described by Beblawi and Luciani, and the similar language employed by Farsoun. But the classic theorists, writing during the long oil bust period of the 1980s and '90s, saw the unsustainability of the social contract in fiscal terms that were associated with international oil prices and revenues that were insufficient to meet budget requirements. They argued that growth in social spending would outpace export revenues, which did happen, forcing Saudi Arabia and other GCC states into deficit spending and borrowing.⁴¹¹

But the sustained rise in oil prices that started in 2002 and which remained at historic highs at the time of writing (notwithstanding a short-lived plunge in 2008) erased those deficits and pushed the Gulf monarchies into fiscal surplus, easing the risk of financial crisis and allowing the monarchies to reinvigorate and expand their clientelist commitments. This improvement in fiscal health, and the policy maneuvering that allowed regimes to maintain social contracts during the stagnant decades, exemplifies the problems with previous theoretical declarations of unsustainability. Fiscal recovery also obscures the challenge of domestic resource consumption, which has risen steadily through decades of bust and boom.⁴¹² Thus, while some rentier theorists argued that *fiscal* constraints were the chief limiting factor facing distributive practices, I argue that, ultimately, *resource* constraints comprise a more fundamental hindrance on state capacity to maintain distributive social contracts, since they pose a structural limitation within the national economy that allows fewer avenues for redress. Unlike fiscal constraints, resource constraints cannot be assuaged by rising oil prices, at least not beyond the short term, as demonstrated by the example of Indonesia in the thesis introduction.

⁴⁰⁹ Darbouche and Fattouh 2011, 18

⁴¹⁰ Hotelling 1931

⁴¹¹ Chaudhry 1997, 34-5, 274-5; Crystal 1990, 191-2; Luciani 1988; Anderson 1992. For a detailed discussion of Saudi deficit spending and borrowing, see Cordesman 2003, 383-415.

⁴¹² Gately, al-Yousef, and al-Sheikh 2013 have shown that oil consumption has grown faster than economic growth in all OPEC countries since 1971 except those that have undergone disruptions (Iraq, Kuwait) or stagnant or uneven economic growth (Nigeria, Libya).

Economic diversification such as that which has come alongside reduced fossil fuel exports from Indonesia, Mexico and Malaysia is one avenue for respite from the loss of exports. But the present record of GCC diversification includes many schemes focused on energy-intensive sectors which have increased resource demand. Another avenue is diversifying supply, by expanding domestic production of oil substitutes such as natural gas and nuclear and renewable electricity generation. Saudi Arabia and Kuwait, the countries generating largest shares of electricity with liquid feedstock, stand to benefit most from substitution. A third avenue is to reduce domestic demand. As this chapter will show, fledgling efforts at managing demand have met with little success outside Dubai.

By exchanging in-kind energy for political support, ruling families have fostered political dependence on the same commodity on which they depend for economic sustenance. Tétreault identified this problem by arguing that domestic stability “increasingly means preserving domestic access to fuels whose sale abroad is the foundation of the edifice of state and society.”⁴¹³ Growth in domestic demand for oil, doubling nearly every decade on average, competes with and displaces exports, which account for virtually all foreign currency earnings. As shown in the thesis introduction, a series of analyses⁴¹⁴ have projected dates as early as 2030 for the end of Saudi Arabia’s crude oil exports, amid further signs of pressure on exports.⁴¹⁵ The contradiction inherent in this competition for natural resources has been noted by scholars in *ad hoc* terms, but it has not been framed within the theoretical context of distributive politics. This oversight may stem from an inability to imagine how decades of growth would transform energy demand in the region, a predicament that would have appeared far-fetched during theory formulation in the 1970s and 1980s. Simply put, the converging trends of rapidly rising domestic consumption and essentially stable production mean that the countries will face an increasingly sharp conflict between sustaining export earnings and low domestic prices. Theoretical prohibitions on reforming welfare benefits will be stress-tested. I argue that theories of politics of these states must acknowledge this contradiction and concede the possibility of its reform, through the social contract.

Scholarly documentation of fundamental characteristics of rentier systems should be amended to document this self-consuming feature: **The domestic distribution of primary exports that is characteristic of the rentier state comprises an encumbrance on its economy, which, in the longer term, becomes a potentially destabilizing factor within the governance structure.** This characteristic, which I propose as a theoretical tenet, does not challenge or undermine the validity of rentier theory, which retains considerable power in its explanation of regime durability, behavior and

⁴¹³ Tétreault 2012

⁴¹⁴ Bourland and Gamble 2011; Tottie 2011; Lahn and Stevens 2011; Lewis and Hsueh 2012; Rehman 2012

⁴¹⁵ These include Saudi Arabia’s summer imports of heavy fuel oil and diesel feedstock for power generation; Kuwait’s curtailed summer exports of crude oil and imports of liquefied natural gas (LNG); The UAE’s increasing dependence on imports of natural gas, and its emergency diversion of gas from reinjection in maintaining oil reservoir pressure; and Oman’s underutilization of its LNG export facilities.

relations with society. Rather, it points to a weakness in the literature's previous theoretical prohibitions on subsidy reform.

This statement does not imply that domestic consumption poses the *sole* threat to GCC exports and revenue. Cyclical reductions in energy prices remain a pervasive danger to revenues. Exports can be threatened by numerous factors including reduced external demand, whether due to increasing self-sufficiency in former export markets such as North America, future climate-based policies, or unforeseen advances in technology. It also bears mention that any reduction in GCC oil exports – outside of those caused by receding external demand – could have the perverse effect of *raising* market prices and export revenues. Thus, given the right market conditions, a loss of exports from Saudi Arabia or another key supplier that coincided with an environment of strong oil demand could wind up augmenting revenues, at least temporarily.

The rest of this chapter examines the data and findings in the context of the rentier literature. Section 5.3 outlines the research context and methodology. Section 5.4 presents results that differentiate monarchies' means to afford their social contracts, and supplies evidence for reforms running contrary to theory. The final section weighs the options for monarchical longevity in the context of maturing resource-exporting states.

5.3 Trends and Research Design

The phenomenon of rising energy consumption in the Gulf producer countries has been well documented. As mentioned, previous analysis has shown that if policies are not adjusted spare production capacity will be lost and exports may decline. Over the past decade, oil consumption in the six GCC states has grown by a yearly average of 6.5%. In Saudi Arabia the percentage of oil production consumed domestically has risen from 5% in the 1970s to near 25% in 2009. Table 5.1 offers a simple insight into these trends, without purporting to offer any predictions. It extrapolates the number of years, at recent rates of growth, to reach 50% and 100% domestic consumption of oil production, with production, demand and other factors held constant. For instance, at current rates of consumption growth, Saudi Arabia, Oman, Bahrain, and Qatar consume 50% of 2009 oil production within a decade, and 100% before 2040.

Table 5.1: Oil consumption in the Gulf monarchies

	2009 oil produced (MMt)	2009 oil consumed (MMt)	% of oil production consumed in 2009	Average % growth/year 2000-09	Years to reach 50% of 2009 production, at current rates (year)	Years to reach 100% of 2009 production, at current rates
Bahrain	9.5	2.2	23%	5.1%	15 (2024)	29 (2038)
Kuwait	119.0	19.7	17%	4.6%	24 (2033)	40 (2049)
Oman	43.0	6.7	16%	8.3%	15 (2024)	23 (2032)
Qatar	58.0	6.5	11%	11.5%	14 (2023)	20 (2029)
KSA	457.0	107.2	23%	5.4%	14 (2023)	28 (2037)
UAE	126.0	27.8	21%	4.2%	20 (2029)	37 (2046)

Source: IEA Oil Information 2012, BP Statistical Review 2012; author's calculations

In contrast with oil, natural gas in five of the six the Gulf monarchies is mainly a domestic resource used in power generation, desalination and industry. Qatar, the world's third-largest exporter in 2010, is the major exception. Oman exports roughly half of its production.⁴¹⁶

Table 5.2: Natural gas consumption in the Gulf monarchies, 2011 (bcm/yr)

	Gas production	Gas consumption	net exports (imports)
Bahrain	9.9	9.9	0
Kuwait	13.8	16.5	(3.6)
Oman	30.8	15.0	15.0
Qatar	151.4	32.4*	119.0
KSA	92.2	92.2	0
UAE	51.8	62.0	(10.2)

*includes feedstock for export-oriented industry.
Source: IEA Natural Gas Information 2012

Saudi Arabia, like the rest of the GCC and most exporters of crude oil, is forgoing future exports by burning crude oil at home. But Saudi Arabia's increasing domestic demand also threatens an important aspect of its identity that has broader implications for global oil markets: its spare production capacity. It is difficult to overstate the consequences for the kingdom of the loss of its spare capacity. Saudi Arabia's flexibility in production and export capacity allows it to influence market prices, offset disruptions in production elsewhere, and command the strategic interest of the West. A capacity loss would reduce these advantages and diminish the kingdom's stature among exporters and as a prominent participant in multilateral organizations such as the IMF, WTO and World Bank. Energy dependent countries would also suffer, with markets probably growing more volatile. Even the *perception* of a threat to Saudi spare capacity could affect markets, economies, and the kingdom's role in international affairs.

⁴¹⁶ Energy statistics: BP 2012; International Energy Agency 2012b

5.3.1 Research Design

Given the stakes involved, I sought to gauge and compare the relative threats to individual GCC economies from domestic consumption, and prospects for reform, in three ways: first, through numerous interviews; second, via the complementary method of an expert elicitation survey, which acts as a bootstrapping “robustness check” on qualitative interview data; and third, by means of a case study of reform in Dubai. Using these methods I gathered input from policymakers and experts in Gulf politics and energy, ranging from academics with understanding of rentier theory to energy sector officials with knowledge of resource constraints. Interviewees included senior policymakers in all GCC countries but Bahrain. These data-gathering techniques focused on trends in domestic energy demand as well as the policies being developed to avert reductions to energy exports, including reforms of subsidies. The interview data were used primarily to add context to results from the expert elicitation surveys.

As mentioned in Chapter 3, expert elicitation (EE) is a common method for gathering subjective expert judgments that combine facts and opinion into probabilistic assessments of uncertain circumstances under study. These judgments are typically used in research contexts like this one, filling a need to forecast trends when important values are unavailable. For this chapter, experts were asked questions about *likelihood* of future subsidy reforms among a set of states, and to characterize the probable extent of those reforms. My expert elicitations were designed as structured stakeholder surveys that requested quantitative probabilistic judgments about future energy prices, economic effects, and forecasts for reform. The first EE involved 92 experts who provided responses between November 2011 and November 2012. In March 2012, I conducted a second expert elicitation among 35 members of the policymaking staff of UAE Prime Minister and Dubai ruler Sheikh Mohammed bin Rashid al-Maktoum. (See Chapter 3 for full details)

5.4 Results

How do individual states approach the “structural encumbrances” of rentierist energy distribution described in section 5.2? Will regimes target demand (and contravene theory) by raising prices on subsidized electricity? Or will they act as theory prescribes, by avoiding the retraction of subsidies and perhaps finding a more deferential approach? Regional experts broadly interpret current energy distribution practices as unsound. The results below show that subsidy policies are likely to be reformed in *some* of the rentier monarchies of the Gulf, which supports the argument above that theory should disaggregate the allocative stream to differentiate among fiscal and in-kind benefits, and allow for the reform of the latter. The Dubai case study below finds that this process has already started, with price reforms breaching the literature’s framing of the social contract.

5.4.1 Government Priority and Threat Perception

The expert elicitation first sought to measure the relative importance of the resource consumption issue to GCC governments by asking respondents to “classify the issue of domestic energy consumption (oil, natural gas and electricity)” in their chosen country or countries, while taking into consideration the other issues facing the government. Responses ranged on a 5-point Likert scale from “The government’s No. 1 priority (1)” to “Not a concern (5).”

Responses showed that concern is lowest for Qatar, where just six of 21 (29%) of respondents placed energy consumption within the government’s top three priorities. The remaining GCC states polled higher levels of policy priority. Over half of respondents (10 of 19 respondents or 53%) placed energy consumption among the top three priorities in Kuwait. The score for Saudi Arabia was 14 of 29 or 48%; and for the UAE 14 of 37 or 38%, and 44% for UAE government policymakers. (Fig. 5.1) Oman and Bahrain are omitted from this analysis, given the small number of responses.⁴¹⁷ One would expect importance to vary on governments’ policy agendas regardless of the severity of the issue, depending on whether a country had more immediate alternate policy worries, such as political stability.

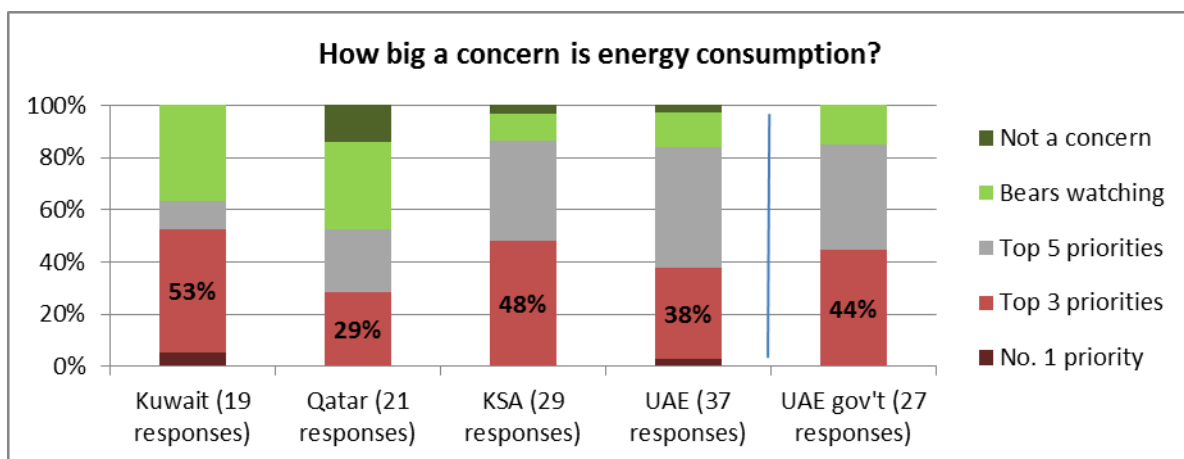


Figure 5.1: EE responses on energy consumption as a government priority (percentages represent respondents who listed energy reform within top three priorities)

I also sought to gauge whether respondents perceived growing domestic resource consumption as an “economic threat” to the country concerned. This question was meant to capture a respondent’s overall positive or negative characterization of energy consumption in a country prior to giving them specific information that could influence those perceptions. For this reason the question did not specify what constituted a threat, nor did it supply information about the size of consumption, or use

⁴¹⁷ Bahrain has been omitted from this analysis given its small resource base, the small sample of EE respondents, and domestic circumstances that overshadow energy policy such as political unrest and the military and economic intervention of neighboring states. Oman has also been dropped from some analyses because of small sample size.

language implying it was a problem. Since low-priced energy is typically understood as an *advantageous* input for economic growth (witness the current perception of inexpensive shale gas in the United States) a perceived “threat” response would indicate an atypical perception of energy’s role in the economy.

Responses, arrayed on a 7-point scale, reveal a sharp divide among the countries. (Fig. 5.2) Saudi Arabia elicited the strongest agreement that consumption posed an economic threat, with 24 of 29 respondents (83%) choosing either “agree” or “strongly agree” among the seven possible choices. UAE policymakers in the second EE displayed similar agreement, with 21 of 27 (78%) agreeing or strongly agreeing. Respondents found consumption less urgent in Kuwait (58%) and the UAE (51%) although in both cases, when “somewhat agree” responses were added in, negative perceptions surpassed 80%. For Qatar, only 3 of 21 respondents (14%) agreed or strongly agreed with the same statement.

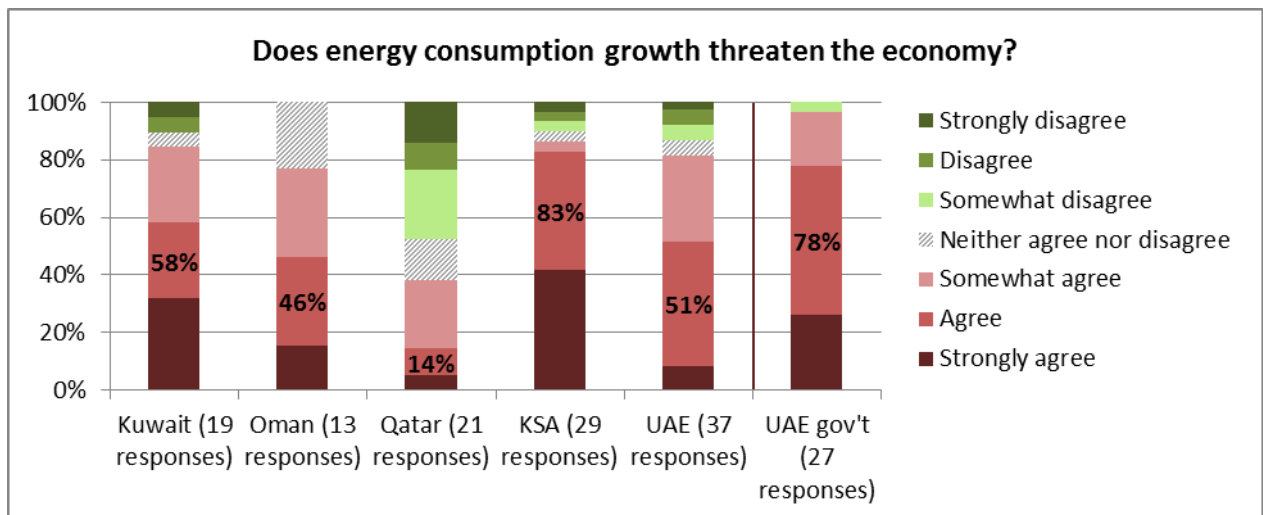


Figure 5.2: EE responses on perception of economic threat (percentages represent combined “agree” and “strongly agree” responses)

These results show that, in all but Qatar, domestic energy consumption appears to be perceived as an economic threat and a government policy priority. Agreement with the “threat” perception was particularly strong for Saudi Arabia and among UAE policymakers. These results correlate with interviews, descriptive statistical sources, and public statements of Gulf policymakers illustrating the growing share of natural resource production that is consumed in their domestic economies. If such perceptions are as widespread among elites as these results suggest, one would expect to find support for policies aimed at reducing demand, including through domestic prices. A year after the EE was carried out, one participant, Oman’s Minister of Oil and Gas Mohammed bin Hamad al-Rumhy, publicly characterized energy consumption as a threat. “We are wasting too much energy in the region

and the barrels that we are consuming are becoming a *threat* now, for our region particularly... I think we have a serious problem," he said.⁴¹⁸

5.4.2 Likelihood of Reforms

Gulf regimes are preparing a range of energy policy initiatives meant to reduce demand for exportable commodities, as well as increase supply of replacement commodities and technologies. These reforms should be viewed as attempts to sustain hydrocarbon export-led economies and dependent political institutions.⁴¹⁹ On the supply side, governments are pursuing new sources of natural gas as a replacement for oil and other liquid fuels in the domestic market. This is evidenced by surging gas exploration and production in Saudi Arabia, Oman and the UAE, including capital-intensive investments in unconventional gas. In power generation, supply-side efforts include diversification into nuclear power and renewables. The most advanced of these investments lie in Abu Dhabi. On the demand side, initiatives aim at reducing consumption through “green” building codes that mandate energy-efficient design and materials; appliance standards that effectively ban inefficient air conditioners and other electric appliances; public “mainstreaming” campaigns that seek voluntary reductions in electricity and water usage; and – those of most interest to this chapter – increases in prices of electricity.

It is in electricity pricing, with its flexibility in rates among customer groups, where rentier state theory has proven itself particularly robust in predicting government behavior. Policymakers in eight of the GCC’s nine tariff-setting entities have spared *citizen* customers in the residential sector from paying higher rates for electricity and water, ostensibly to avoid violating social contract stipulations. In Saudi Arabia, Qatar, and the UAE, governments have raised electricity prices for commercial and industrial users. In Qatar and the UAE, where separate rates for expatriate residents have been created, prices have also been raised. As will be discussed below, only the UAE emirate of Dubai has raised electricity prices in citizen homes.

Politicized tariff behavior in electricity markets is not unique to monarchies or even state-run electricity markets. Brown and Mobarak show how democratization in poor countries tends to be accompanied by an increased supply of electricity to residential customers relative to that of the industrial sector, as political structures tilt away from concentrated interests and toward individuals.⁴²⁰ However, in the rentier-autocratic Gulf, the residential sector is already unrivaled. Rentier theory holds that supply of (cheap) electricity is the product not of an increase in democracy, but

⁴¹⁸ Fineren 2013, emphasis added

⁴¹⁹ Note that regimes are also working to augment depleting natural resources by diversifying into sectors that can provide alternate sources of rent, while maintaining job guarantees for citizens. Dubai has been particularly successful in this regard. See Gray 2011.

⁴²⁰ Brown and Mobarak 2009

compensation for the lack of it, although quasi-democratic Kuwait offers a confounding counter-example.

5.4.3 Evidence of Reform: Dubai

Dubai, a nearly depleted oil producer that forms one of seven subnational states within the UAE, began confronting its citizens' rising energy demand in 2009, during a period of financial crisis. The global financial meltdown that started in 2008 affected all the GCC states, but none as deeply as Dubai. There, the crisis triggered a crash in the real estate market and a painful economic recession. Government-linked businesses halted much of their activity and declared their inability to meet terms on more than \$100 billion in short-term debt. The emirate required economic assistance from neighboring Abu Dhabi and was forced to renegotiate repayment terms on most of its debt to avoid default. The Dubai government also imposed restrictions on spending in an effort to stabilize the city's finances. In this context, the government decided to address the rising cost of distributing subsidized electricity and water to the heretofore untouchable citizen-residential sector.⁴²¹

Rising utility expenses were exacerbated since 2008 by Dubai's importing of liquefied natural gas (LNG) at market prices which were several times higher than unit prices on the limited supply of gas provided by Abu Dhabi. While the Dubai Electricity and Water Authority (DEWA) had been able to raise rates in 2008 to cost-reflective levels on commercial, industrial and foreign residential customers, a large share of electricity and water was also flowing to the heavily subsidized citizen residential sector, where prices had not been touched. At least two-thirds of the costs of citizen consumption was paid by direct subsidy from the Dubai Department of Finance, the same office charged with overseeing the city's financial obligations, including the debt restructuring. Subsidies were thus encouraging higher consumption and increasing government costs, all the while insulating citizen consumers of electricity and water from the austerity measures that were otherwise being imposed across the board. Policymakers interviewed in the emirate said that higher prices for citizens had been discussed but never implemented in prior years.

After the crash, Dubai ruler Sheikh Mohammed installed a known spending hawk, Mohammed al-Shaibani, as the head of the ruler's *diwan*, and gave him firm support for necessary austerity measures. Al-Shaibani, with the ruler's support, ousted several members of the ruler's old guard who were associated with the previous era of overspending. With al-Shaibani in charge of the *diwan*, there was a mandate for reform along with a personality minded to pursue it. Dubai's financial predicament – exacerbated by the exponential increase in marginal cost of natural gas feedstock – provided the impetus to impose new prices.

⁴²¹ This material and much of this section is based on multiple interviews with Dubai government officials in the energy sector and municipal government who spoke on condition of anonymity, 2011-13.

Sheikh Mohammed agreed with al-Shaibani that citizens needed signals to change their consumption behavior, and that signals were most convincingly conveyed by raising prices. Despite widespread perceptions of citizen entitlement to these subsidies, the ruler gave personal permission for a 30% increase in electricity prices. Half of that increase would be imposed through a 15% increase in electricity consumption tariffs on all customer classes, including citizens. The other half would take the form of a surcharge added to bills that would cover imports of LNG when costs rose beyond a baseline which was set at 2010 levels. The ruler also agreed to impose the first-ever limits on citizens' receipt of free municipal water, which had to be desalinated at high cost in the same gas-fired co-generation plants that produce electricity.⁴²²

Imposing these measures was left to the Dubai Supreme Council of Energy, a high-level body created in June 2009 that was given broad powers to create policy and regulate the electricity and water sector. The DSCE's aim was to increase efficiency in a city in which infrastructure and habits had been shaped by the prior availability of plentiful cheap energy. The council's director was Nejjib Zaafrani, a former Shell executive and board member on Abu Dhabi's state-owned oil and gas firms. Zaafrani declared that Dubai, as a net importer of energy, would seek to reduce projected electricity demand in 2030 by 30%. This, he said, would reduce 4 gigawatts from forecast requirements in generating capacity, allowing Dubai to forgo construction of several power plants.⁴²³ Raising tariffs would be the most challenging aspect of a program that also included efficiency standards on buildings and appliances. Zaafrani warned that efficiency programs would not function unless subsidies were cut.

Dubai's tariff increase went into effect on January 1, 2011. There had been a few cursory news announcements of the price increases, which tended to downplay the magnitude of the changes. There was little public debate and appears to have been very little consultation within the government about the increase.⁴²⁴ The measure came as a surprise to many utility customers, including business owners, and even to staff within the Dubai Executive Council, the body normally tasked with evaluating and implementing policy proposals.⁴²⁵

The DEWA increase initially raised few serious objections among the majority expatriate community, given that it took effect during the winter season when electricity consumption is at its lowest. However, during the peak summer season, invoices combined the seasonal increase in consumption

⁴²² Author interviews with Dubai government officials in the energy sector and municipal government who spoke on condition of anonymity, 2011-13.

⁴²³ Nejjib Zaafrani, CEO, Dubai Supreme Council of Energy, speech at the Dubai Global Energy Forum, 18 April 2011, Dubai; as quoted by author.

⁴²⁴ A Dubai government interviewee told the author in 2012 that the government discussed the impending increases in a closed-door session with leaders of prominent families.

⁴²⁵ Author interviews with Dubai government officials in the energy sector and municipal government who spoke on condition of anonymity, 2011-13.

with higher tariffs and the new surcharge for imports of LNG. With the surcharge, expatriates began to pay rates that were roughly quadruple those of citizens. (See Appendix 5 for detail) A story in Dubai's *Gulf News* was flooded with more than 200 comments from foreign residents shocked by the increases. "I can attest to the tremendous and horrifying increase in my DEWA bill as I kept copies of the bills," one respondent wrote, offering comparisons of summer 2010 and 2011 invoices in UAE dirhams which showed increases of 70% or more, for example from AED530.70 (\$144.50) in July 2010 to AED900.85 (\$245.26) in July 2011. However, expatriate complaints elicited little official sympathy, with DEWA executives advising customers to "stop wastage of precious resources."⁴²⁶

Rising prices created a more worrying stir within the ranks of citizens, many of whom were also unaware of the government's plans. Dubai nationals commonly own businesses, and many merchants complained of simultaneous increases in business and living costs. Angry citizens brought their invoices to the DEWA headquarters building and demanded to see the person in charge of billing, also an Emirati citizen who, by tradition, is expected to meet with citizens and propose a solution to any impasse. One government official said:

"The uproar came as a surprise. The government didn't realize that people would complain so much. They didn't have a plan for managing this. (Citizens) were coming to the head of the DEWA billing department and complaining. For some of these people it was the first time they had ever looked at their electricity bills."⁴²⁷

Other citizens went to tribal leaders, who, in turn, approached the ruler, Sheikh Mohammed, to pass along word of the discontent.

"People went to the sheikh and complained. There were a lot of articles in the press," a second Dubai official said. "After a few days the sheikh ordered the increased prices to be waived for certain segments. People were coming to the government asking for increased social benefits to pay their bills because they couldn't afford the new rates."⁴²⁸

Even more citizen outrage greeted the imposition of water tariffs, the first time a charge had been imposed on Emirati nationals since the municipal water system was built in 1968. Securing water for the population has been a longstanding duty of the ruling sheikh, an important indicator of stature in the pre-oil era.⁴²⁹ However, the introduction of desalination allowed consumption to grow unfettered by the limits of a small underground aquifer. Since water was given away, consumers failed to gain an

⁴²⁶ Comment No. 31 in Bitar 2011b

⁴²⁷ Author telephone interview with UAE government official on condition of anonymity, Oct. 29, 2013.

⁴²⁸ Author interview with member of UAE government on condition of anonymity, Dubai, April 8, 2012.

⁴²⁹ In discussing this point during a Nov. 11, 2010 interview with David Scott, executive director, Economic and Energy Affairs Unit, Abu Dhabi Executive Affairs Authority, Scott noted that tribal sheikhs required others to participate in guarding water sources and it was thus more of a community task than simply a source of patronage.

understanding of the high cost of production. Waste was rampant. “Forty years ago drinkable water was hard to access. The leadership of this country offered people water for free. That’s very honorable,” Zaafrani said in an interview with the author. “But that was 40 years ago. It’s a different world today.”

Angry citizens complained to the Arabic press and radio talk shows, and launched a spate of illegal well-drilling.⁴³⁰ The revised tariff structure gave citizens a free allotment of 10,000 gallons per month before imposing a modest (by unsubsidized market standards) rising tariff for additional use. Expatriates, who were not receiving a free allotment, also received a price increase.

Prominent Emirati nationals made their way to Zaafrani. “The ones who made much more noise after we made the increase were UAE nationals,” he said. “For UAE nationals, water is not free anymore. Human beings do not want to be told to pay more. People came to me and said, ‘We are being penalized!’ I said, ‘No, we’re trying to save energy and raise awareness.’”

In what appears an untimely coincidence, the tariff increase was imposed as the Arab Spring uprisings unfolded in Tunisia and Egypt, and by February in neighboring Bahrain and Oman.⁴³¹ My survey with UAE policymakers determined that these uprisings put the government on the defensive, by increasing sensitivity to citizen opinion on the subsidy reform.⁴³² As opposition grew to the price increases, the Dubai ruling family made three separate retractions of parts of the 2011 tariff reform, all of which affected only the citizen residential sector. Government officials interviewed portrayed these retractions as ad-hoc decisions made without consulting or involving usual government policymaking channels. First, the ruler quietly rolled back electricity prices for low-income households receiving social benefits to previous levels.⁴³³ Second, one of the ruler’s sons announced that the government would pay LNG surcharges on behalf of citizens.⁴³⁴ And in October, the Dubai

⁴³⁰ Newspaper websites allowing reader comments on stories about the price increases included some purporting to be from citizens. Most lamented rising prices and an insufficient quota of free water, as well as higher prices for citizens in Dubai than for those in other emirates. See, for example, <http://www.emaratalyoun.com/business/local/2010-12-09-1.326917>, and <http://www.alwasluae.com/vb/showthread.php?t=154768>, and <http://www.emaratalyoun.com/local-section/hotline/2011-10-04-1.427746>.

⁴³¹ The most vehement protests, clashes and government crackdowns in Bahrain, and to a lesser extent, Oman, took place between February and June 2011.

⁴³² Author results from expert elicitation with UAE policymakers, March 2012. Fifteen of 25 respondents said the Arab Spring events made the government “less willing” to raise utility rates; 21 of 26 respondents said the government was either “very sensitive” or “extremely sensitive” to citizen opinion on subsidies.

⁴³³ Author interview with member of UAE government on condition of anonymity, Dubai, April 8, 2012. Also detail from policymaking focus group held at UAE Prime Minister’s Office, March 5, 2012.

⁴³⁴ Dubai electricity sector official, interviewed by author on condition of anonymity, Jan. 9, 2013. See also: Bitar 2011a

ruler relented on the increase in water prices and announced a doubling of the free water quota for citizen households to 20,000 gallons per month.⁴³⁵

“This is what happens when you announce the policy with no proper analysis or consultation,” a government policymaking official said. New prices remained in effect for less politically sensitive sectors such as commercial, industrial and expatriate-residential.

Raising prices reveals one side of the issue. Collecting payment is another matter. DEWA has touted a record of effective bill collection, which is uncharacteristic in the region. DEWA gives its customers just 47 days to pay before facing disconnection. This approach does not apply to citizens or “certain designated institutions” which are presumably linked to the ruling family and prominent tribes. A 2013 financial risk prospectus accompanying the issue of a Dubai sukuk noted that “UAE nationals are required to pay their own electricity bills.” But that, when it comes to water, “While the government encourages UAE nationals to pay their own invoices, the Government issues credit notes to cover any unpaid residential water invoices of UAE nationals.”⁴³⁶ Two years after imposing a charge for water, the government’s representatives put in writing that citizen payments for water were considered voluntary.

5.4.3.1 Discussion

These policy retreats reveal the resilience of social contract provisions enshrined in rentier theory. In Dubai, even during a financial crisis that should have provided cover for reform, the regime could not hold the line on increased utility rates for citizens. The loss of benefits – considered entitlements by many – triggered a rash of complaints, but did not appear to inspire demands for democratic representation, as predicted by theory’s taxation-representation link. A UAE-wide petition calling for increased political participation did in fact emerge shortly after the price increase, but was unrelated to Dubai’s tariff measure.⁴³⁷ One petition-signer told this author that the issues of subsidy reform and political participation were not linked in the direct manner described in the rentier literature; energy subsidies were a vestige of the UAE’s emergence from poverty a generation ago and were now more detrimental than helpful, given citizens’ high average personal incomes.⁴³⁸

Development of political participation, enshrined in the UAE constitution, has lagged modernization in the economic and social spheres. Participation needed to be addressed – in the manner described by

⁴³⁵ The Media Office for HH Sheikh Mohammed bin Rashid al-Maktoum, 2011. Note that some citizen families never received an increase at all. Some of these were headed by current or retired members of the security services, or important tribal or ruling family members, whom continued to receive free or discounted electricity due to favored relations with the ruling family.

⁴³⁶ Dubai Electricity and Water Authority 2013, 81-82, 91.

⁴³⁷ The Dubai benefit reform came just three months prior to a petition for increased democratic representation that emerged in 2011. That petition, signed by 132 prominent Emiratis, circulated prior to the tariff hike. Several signers of that petition were jailed. See: Coates Ulrichsen 2012

⁴³⁸ Author interview with Abdulkhaleq Abdulla, UAE political scientist, Dubai, Jan. 31 2012.

modernization theory – because it was required by a more sophisticated populace, which, as Lerner wrote in 1958, could now visualize itself in a new role.⁴³⁹ As for the retraction of welfare benefits, Peterson argues that when citizens feel that the ruling family has broken the social contract, they tend to express discontent through a “time-tested mechanism of feedback and response.” In the case of Dubai, the mechanism appears to have functioned properly. When this acceptable form of criticism fails, Peterson argues that citizens may transition to visible forms of discontent – such as Oman’s riots and sit-ins of 2011 – to push regimes to restore the social contract.⁴⁴⁰

As mentioned in the literature review, government subsidies create groups of beneficiaries which can confront political leadership when their interests are jeopardized. Welfare societies thus maintain a constant *potential* for mobilization, which raises the stakes of reform.⁴⁴¹ The difficulty of benefit reform is exacerbated in centralized state power structures which concentrate both authority and accountability. Retrenchment by a centralized autocracy such as Dubai’s exposes the regime to the full force of public reaction. In Dubai, prominent citizens directly petitioned the ruler for relief. Pierson and others argue that welfare reforms are thus best pursued when centralized regimes are either secure enough to absorb the political consequences, or when a budgetary crisis or external pressure sheltered leadership from blame.⁴⁴² In Dubai’s case, the 2008 financial crisis offered a helpful shield that allowed the reform to be launched, but the outbreak of the Arab Spring, including uprisings in neighboring monarchies, reduced the regime’s sense of security and changed its calculations.

However, the fact remains that Dubai’s 15% increase in electricity tariffs stayed in place for the majority of citizens, and citizens were now – in principle – expected to pay *something* for excessive water consumption. As of mid-2013, DEWA remained the sole GCC utility to have raised citizen electricity and water rates. By the end of 2011, the increase in electricity and water prices is said to have reduced power consumption by an average of 3% per account and water consumption by an average of 7.2%. The tariff hike saved Dubai the equivalent of around six shipments of LNG that year, worth some \$300 million at prevailing prices.⁴⁴³ Dubai’s electricity tariff increase breached an important barrier; that of the rentier theory claim that subsidies – once extended – are understood by citizens as rights that cannot be retracted. Whether or not Dubai citizens felt entitled to their subsidies on power and water, a portion of that entitlement was taken away. Only indigent citizens on income support avoided increased electricity rates, which amounts to a targeting of the subsidy toward the poor. Even this result represents a theoretical breach of sorts. As mentioned in the literature review,

⁴³⁹ Lerner 1958, 44–75

⁴⁴⁰ Peterson 2012, 20-21.

⁴⁴¹ Pierson 1996

⁴⁴² Pierson 1996; Arnold 1992; Patashnik 2003; Hertog 2010a, 223–245

⁴⁴³ Author interviews with energy policy officials in Dubai government, 2012 and 2013.

rentier states are supposed to be unable to retract subsidy entitlements *or even restrict their delivery to the poor*.⁴⁴⁴ For households and citizen-owned businesses which lost benefits, the regime offered no replacement (as Iran did, discussed in Chapter 6) nor any increase in political participation, as prescribed by classic rentier theory. Citizens protested the reform but the regime was never endangered. Public acquiescence to the rule of the al-Maktoum ruling family appears intact.

In many quarters, the tariff reform passed without notice. Some observers expected a stronger public reaction. In an interview in 2010, prior to the increase, one of the UAE government officials quoted above had been skeptical that the Dubai government would risk angering citizens by reducing their subsidies on power and water. When reminded of this skepticism, the official acknowledged being surprised by the evidence showing that most citizens were willing to relinquish what had been considered a “right.”

The partial success of Dubai’s benefit reform suggests that the UAE, and particularly Dubai, may assume the role of testing ground for regional subsidy reforms, given the polity’s public support and decision-making autonomy, the concurrent energy shortages and rising consumption trends, and the added pressure of substantial sovereign debt. In fact, another tariff increase for UAE citizens was the top recommendation emerging from an internal government energy workshop in April 2012. A policymaking official in attendance blamed the Dubai government’s 2011 climbdowns on lack of preparation:

"We made a mess of it last time. The number one thing we learned from the last tariff increase was the importance of involving the public in the decision. People need to know where their energy comes from, how much it costs, and what they can do about it. If you educate and include them far in advance, then any changes necessary should be easier to accept, because they will be more informed and more willing to compromise."⁴⁴⁵

Outside of Dubai, price increases that would challenge social contract outlays have been minimal, pointing up the predictive resilience of the theory and the difficulties for policymakers in being seen to renege on social contract terms.

5.4.4 Prospects for Reform

5.4.4.1 Saudi Arabia

Nearly simultaneously with Dubai’s 2010 subsidy reform, energy officials in Saudi Arabia announced that an electricity tariff increase was under consideration. With natural gas in short supply, the kingdom had generated half its electricity that year by burning oil and diesel fuel. The prospect of

⁴⁴⁴ Beblawi and Luciani 1987, 16

⁴⁴⁵ UAE energy policymaker, interview with author on condition of anonymity, April 22, 2012.

another doubling of power demand over the coming decade led Saudi electricity regulator, Abdullah al-Shehri, to declare that electricity consumers required price signals to help them adopt efficiency measures.⁴⁴⁶ Al-Shehri was able to impose higher tariffs on commercial and industrial users, but did not win support from the Saudi Council of Ministers for a residential increase. His agency, the Electricity & Co-Generation Regulatory Authority (ECRA), had been forced by political outcry in 1999 to retract its previous attempt to raise rates for large residential consumers.⁴⁴⁷

Al-Shehri believes his next attempt will succeed. In 2012 ECRA prepared the ground for a tariff increase on the residential sector, the largest overall sector in all the Gulf monarchies but Qatar. The authority arranged for the Ministry of Social Affairs to pay “reasonable” residential consumption of low-income Saudis, in hopes that the Saudi king and his advisers will agree to higher rates on remaining customers.⁴⁴⁸ Saudi subsidy reform has been aided by high-profile warnings from oil minister Ali al-Naimi and deputy oil minister Prince Abdul-Aziz bin Salman that the kingdom’s oil exports were threatened by growing domestic demand. Al-Naimi called for “a highly efficient rationalization program with the participation of the public and private sectors and all citizens in order to reduce consumption.”⁴⁴⁹

The cautious nature of subsidy reform in Saudi Arabia is reflected in recent rentier scholarship, which has emphasized not the autonomy of the state vis-à-vis its citizens, as early theorists held, but the opposite: The increasingly deferential treatment by a state that is wary of antagonizing citizens who possess new communication tools aiding mobilization. Gray describes a “responsive but undemocratic state,” which employs consultative mechanisms to respond to concerns of citizens impacted by policy.⁴⁵⁰ This responsiveness is aimed at maintaining the political status quo by alleviating pluralist pressure. One Saudi energy official interviewed for this research said that policymakers needed to first convince the *public* that prices need to rise, rather than the king and Council of Ministers. He said that convincing the Saudi public to turn against its own interest requires a well-crafted campaign that highlights waste and the regressive nature of subsidies, which proportionally benefit the rich.⁴⁵¹

Another delaying factor appeared to be the caution injected into policymaking by the Arab Spring. Majid al-Moneef, a key energy policymaker and member of the Saudi Shura Council, said the Arab uprisings would not derail reforms. “The impact of the Arab Spring ... concerns the timing. It could

⁴⁴⁶ Abdullah M. al-Shehri, governor, Electricity & Co-Generation Regulatory Authority of Saudi Arabia, Dubai Global Energy Forum, 18 April 2011, Dubai; as quoted by author.

⁴⁴⁷ Author interview with Abdullah M. al-Shehri, governor of Electricity & Co-Generation Regulatory Authority of Saudi Arabia, Dhahran, Oct. 21, 2012. A previous residential electricity tariff increase, imposed amid the oil bust in 1985, was retracted after just a few months by Saudi Arabia’s King Fahd.

⁴⁴⁸ *ibid*, al-Shehri interview.

⁴⁴⁹ See, for example: Dourian 2012; Said 2012b; Said 2012a. Note that Ahmed al-Khateeb, CEO of a Riyadh investment bank, called for elimination of all energy subsidies for all but the poor: Arab News 2013

⁴⁵⁰ M. Gray 2011b

⁴⁵¹ Saudi energy sector official, author interview on condition of anonymity, Khobar, Oct. 19, 2012.

delay reforms or make compensation schemes a bit different. But it will not, I don't think, take price out of the agenda of economic reform in the region."⁴⁵²

5.4.4.2 Kuwait

Kuwait is also under pressure to reform energy pricing. Rising demand for electricity has diverted ever-larger amounts of crude oil into the power sector, and has led the country to begin importing LNG at world market prices. However, Kuwait's polity combines an unstable mix of autocratic and democratic institutions that impose an obstacle for reform. Scholars have shown that autocracies with high degrees of political participation are among the least stable polity types.⁴⁵³ A tariff increase in Kuwait would first have to be approved by the Emir and his cabinet, and then face the unlikely prospect of passage in Kuwait's populist parliament, members of which tend to see themselves as advocates of *increasing* government welfare outlays.⁴⁵⁴ Residential electricity prices in Kuwait are thus among the cheapest in the world, just 2 Kuwaiti fils, or about 0.7 US cents per kWh, which amounted to about 5% of the government's cost in providing power in 2011.⁴⁵⁵ (See Fig. 5.3)

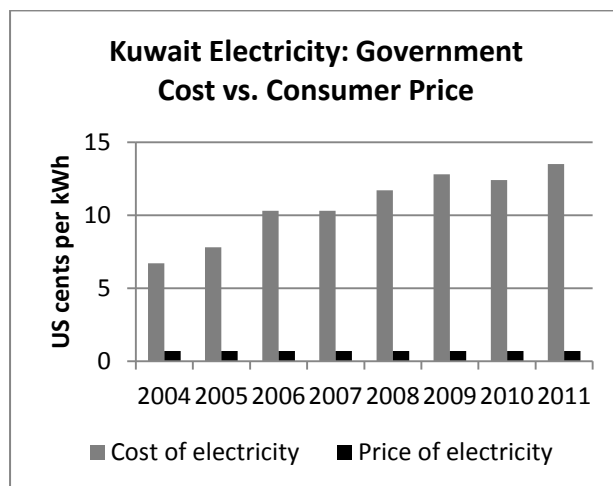


Figure 5.3: Cost-price differential (Source: Kuwait Ministry of Electricity and Water)

5.4.4.3 Qatar

The only Gulf monarchy with cheaper electricity than Kuwait is Qatar, where it is free, for citizens. Tariffs are also unlikely to rise in Qatar, but for different reasons. The tiny monarchy sits atop the world's largest unassociated gas field. Only 7% of gas produced is consumed in the power sector. Eighty percent is exported.⁴⁵⁶ With an absolute monarch dependent on citizen support, Qatar appears comfortable paying for citizens' unlimited residential consumption. A manager within the electricity

⁴⁵² Author interview with Majid al-Moneef, member, Shura Council of Saudi Arabia, Oct. 17, 2012, Riyadh.

⁴⁵³ Eckstein 1973; Gurr 1970; Gates et al. 2006

⁴⁵⁴ For more on Kuwaiti populism, see Hertog 2010b.

⁴⁵⁵ Electricity tariff and cost details from Kuwait Ministry of Electricity and Water, in data received and interviews conducted during visits in March 2012.

⁴⁵⁶ International Energy Agency 2012a

sector said he was leaving his job after failing to raise prices. “My role when I came here seven years ago was to introduce cost-reflective tariffs. I’ve been incredibly unsuccessful,” he said. “The locals have this right to free power and water. For the foreseeable future it won’t change.”⁴⁵⁷

5.4.4.4 Oman

Oman was the last of the Gulf monarchies to be electrified, beginning after the current ruler, Sultan Qaboos bin Said, overthrew his anti-development father in 1970. Since then, growth has been rapid, with output increasing by an average of 7% per year for the past decade. Per capita energy consumption remains the lowest in the GCC, but energy intensity is rising across all customer categories. Oman’s electricity regulator has warned that low tariffs are enabling an energy-inefficient building boom. The fear is that a dangerous path-dependency on high consumption is being created at a time when feedstock costs are rising dramatically, as oil and gas production shifts from the sultanate’s depleting conventional reserves to its more difficult deposits of unconventional gas.⁴⁵⁸

Significant political barriers confront any welfare reform agenda. In 2011, Omanis surprised the world – and Middle East scholars⁴⁵⁹ – by joining the Arab Spring. After Bahrain, Oman was the Gulf monarchy that produced the most virulent uprising.⁴⁶⁰ Sultan Qaboos responded by calling in the army, while quickly creating jobs, increasing employment benefits and firing several members of his cabinet. In the power sector, the regulator delayed plans to impose cost-reflective tariffs on commercial and industrial users, even though the increase would not have affected the residential sector. However, senior energy policy officials said that Oman’s residential tariffs were not sacrosanct. “It’s being discussed,” said Zaid al-Siyabi, who heads exploration and production at Oman’s Ministry of Oil and Gas. “For higher consumption, maybe the subsidies will disappear.”⁴⁶¹ And, as mentioned, in 2013, Oman’s oil and gas minister Mohammed bin Hamad al-Rumhy made an unusually strong public exhortation for higher energy prices in the GCC.

5.4.4.5 UAE

The UAE, the largest net importer of energy in the Gulf, has launched the deepest reforms. Dubai, as shown, has used price to target demand. Abu Dhabi’s policy focuses on increasing and diversifying electricity supply, by increasing production of unassociated gas as well as investing in nuclear and

⁴⁵⁷ Government official in Qatar electricity sector, one of two co-interviewed by author on condition of anonymity in Doha, April 4, 2012.

⁴⁵⁸ Author interview with John Cunneen, executive director, Authority for Electricity Regulation, Oman; Muscat, Nov. 15, 2011.

⁴⁵⁹ Author interviews, Oman. See also: Worrall 2012; Abdulla 2012. For a broader explanation of scholarly surprise at the Arab uprisings, see Gause III 2011a.

⁴⁶⁰ Other protest demands included jobs, marriage subsidies, increased freedoms of expression and of the press. Protesters demanded an end to government corruption while expressing support for Sultan Qaboos. See, for example: Fuller 2011

⁴⁶¹ Author interview with Zaid al-Siyabi, director-general for oil and gas exploration and production, Oman Ministry of Oil and Gas, Muscat, Nov. 13, 2011.

renewable generation.⁴⁶² The UAE's two remaining utilities, in Sharjah and the Northern Emirates, have raised prices on foreign residents and industrial and commercial customers. In interviews prior to the Arab Spring, senior Abu Dhabi energy policy officials predicted that tariff increases would be needed to reduce peak electricity demand growth that had reached 16% per year. Previously protected UAE nationals would not be exempt from increases.⁴⁶³ One of the officials said:

“The government accepts that the rate should be hiked and that consumers should have the right pricing signals to help them with their behavior. There is no sense in the government that asking Emiratis to pay for electricity and water is *verboden*; just the opposite. I get the sense that they believe that individuals should pay, and more importantly that they should get the right signals, whether expatriates or nationals, that they should be more efficient in their consumption. There aren't really strong political barriers. There is some resistance.”⁴⁶⁴

The official took issue with the view that citizen “rights” to cheap electricity were enshrined in a state-society social contract.

“I think it is more accurate to describe it as, this is how things always have been done. The precedent is that I'm changing electricity and water prices, rather than any kind of formal social contract that says ‘These products should be free to the population.’ When Sheikh Zayed first set electricity and water prices, those weren't heavily subsidized. There was no sense that people should be getting a free ride. ... [W]hat you see is an inattention to pricing ... rather than a political commitment to free electricity.”

However, at the time of writing in 2013 no residential tariff hike had been imposed in Abu Dhabi. Prices remained at 1989 levels of 5 fils (1.4 US cents) per kWh for citizens and 15 fils (4 cents) for expatriates.

5.4.5 Projections from EE Results: Residential Tariffs

The case narratives above reveal strong potential for subsidy reform in Saudi Arabia and the UAE – including evidence of citizen subsidy retraction in Dubai – and pro-reform messages in Oman. The narratives find weakest reform potential in Kuwait and Qatar. The expert elicitation results above showed that energy consumption is considered a “threat” and a major policy priority in some GCC states, especially Saudi Arabia, UAE and Kuwait.

⁴⁶² For further details on Abu Dhabi's power sector and gas shortage, see Krane 2012.

⁴⁶³ Author interviews with Nick Carter, director general, Regulation and Supervision Bureau, Abu Dhabi. Abu Dhabi, Nov. 9, 2010; and David Scott, executive director, Economic and Energy Affairs Unit, Abu Dhabi Executive Affairs Authority, (telephone interview) Nov. 11, 2010.

⁴⁶⁴ Author interview with David Scott, executive director, Economic and Energy Affairs Unit, Abu Dhabi Executive Affairs Authority, Nov. 11, 2010.

The next cluster of EE results, presented below, examines likelihood of tariff reform by 2020, under four scenarios. First, the expert survey asked whether domestic consumption would cause GCC governments to raise *residential* (or where tariffs were split, *citizen residential*) prices by 2020. As discussed, low citizen residential tariffs are important social contract provisions. Raising these prices would violate existing ruling bargains and contravene rentier state theory. Second, it asked whether *commercial* and/or *industrial* tariffs would be raised. Third and more broadly, the survey asked whether electricity subsidies would be reduced. And fourth, experts were asked to provide estimates of base tariffs in 2020. These estimates allow for a quantification of respondents' conceptualization of pricing changes (See Annex 1 for results). For the first three questions, seven response choices were arrayed on a 7-point Likert scale ranging from virtually certain (greater than 95% probability) to exceptionally unlikely (5% or lower).

EE responses from the residential tariffs question correlate strongly with interview data above that depict Saudi Arabia and the UAE as most likely reformers. In Saudi Arabia, only four of 27 respondents (15%) thought it was *unlikely* (at any level) that the government would raise tariffs on residential customers by 2020. In the UAE, six of 35 respondents (16%) thought it *unlikely* that citizens would receive residential tariff increases. Among UAE government policymakers, only 12% (3 of 26) said a tariff increase was unlikely. This score may be unsurprising since these policymakers would have had knowledge of the 2011 tariff increase in Dubai and the ensuing debates. (Fig. 5.4)

Residential subsidies appear more likely to remain intact in Qatar, Kuwait and Oman. In Qatar, 13 of 21 respondents (61%) and in Kuwait, 9 of 18 respondents (50%) thought reforms were unlikely. Both of these figures support interview assessments in the country cases above. In Oman, where I received only 11 EE responses, there appeared to be disagreement with interviewee optimism about prospects for reform, with six of 11 (55%) saying a residential tariff hike was "unlikely." However, it should be noted that Oman interview subjects said that any price increases would only target excessive consumption, leaving tariffs for the majority of consumers unchanged.

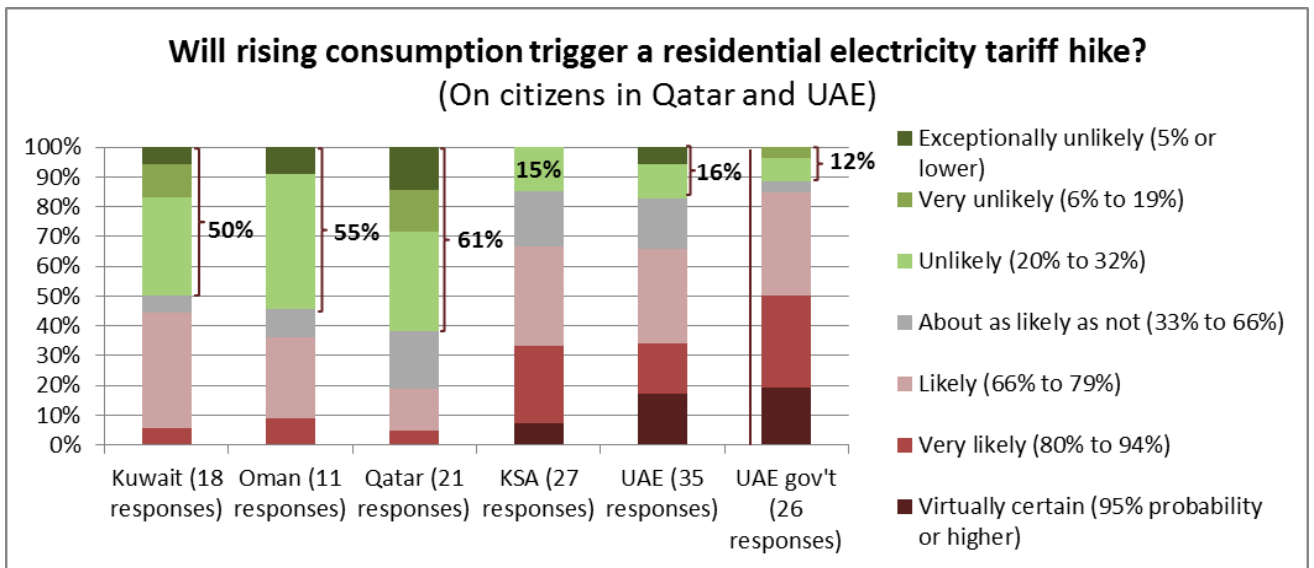


Figure 5.4: EE responses on probability of increased electricity rates

The separate UAE expert elicitation added further questions differentiating the likelihood of residential rate hikes in Abu Dhabi, Dubai and Sharjah and the Northern Emirates (the last two aggregated in the question). The responses show a strong consensus that UAE citizens in Dubai, and in Sharjah and the Northern Emirates would receive a price increase (only 12%, in each said it was unlikely). In Abu Dhabi there was more uncertainty, with responses nearly evenly divided between likely and unlikely. (Fig. 5.5 and Table 5.3)

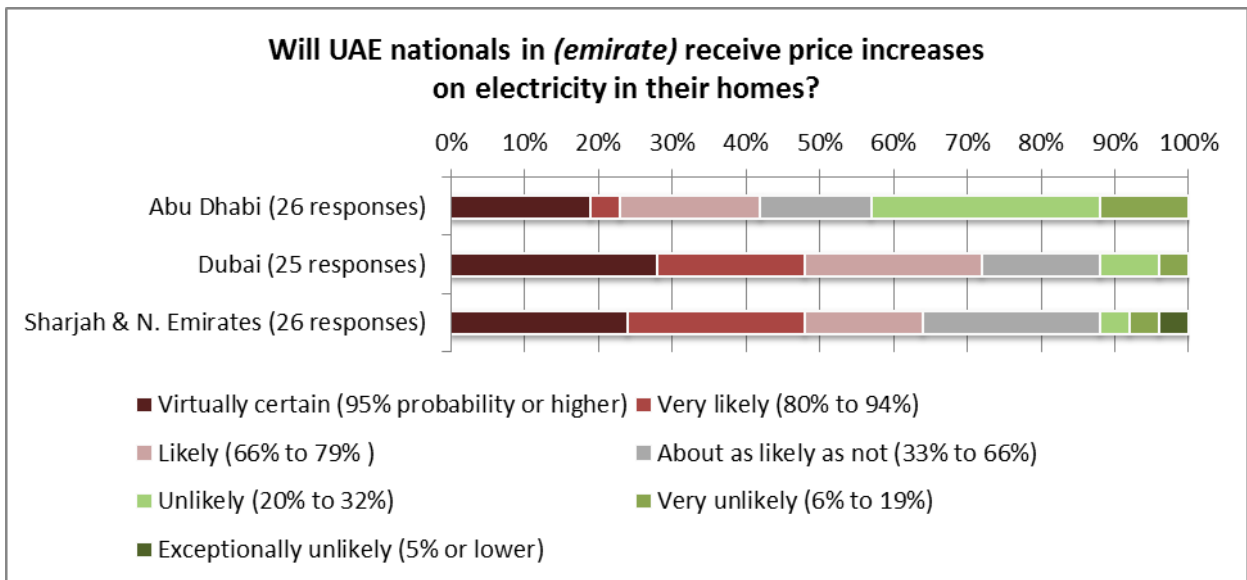


Figure 5.5: UAE EE results on likelihood of increased prices at emirate level

Emirate	Mean response (where 1=virtually certain and 7=exceptionally unlikely)	Std. deviation
Abu Dhabi	3.69	1.69
Dubai	2.68	1.46
Sharjah and N. Emirates	2.88	1.64

5.4.5.1 Projections from EE Results: Commercial and Industrial Tariffs

Rentier scholars argue that citizen benefits must be protected because of benefits' role in generating legitimacy for ruling families. Theory makes no such claims about subsidies enjoyed by commercial entities. Does that mean companies make softer targets for reform? Yes. Expert respondents accorded higher probability to increased commercial and industrial electricity prices, perhaps given the relative lack of political clout of these customers. Again, Saudi Arabia and the UAE appeared the likeliest reformers (neither received an "unlikely" response), probably given the history of non-residential price increases in both. Oman and even Qatar were also deemed as likely reformers, moreso than Kuwait, perhaps because of an understanding of the reform barrier represented by the Kuwaiti parliament on the one hand, and the lack of such a barrier elsewhere.

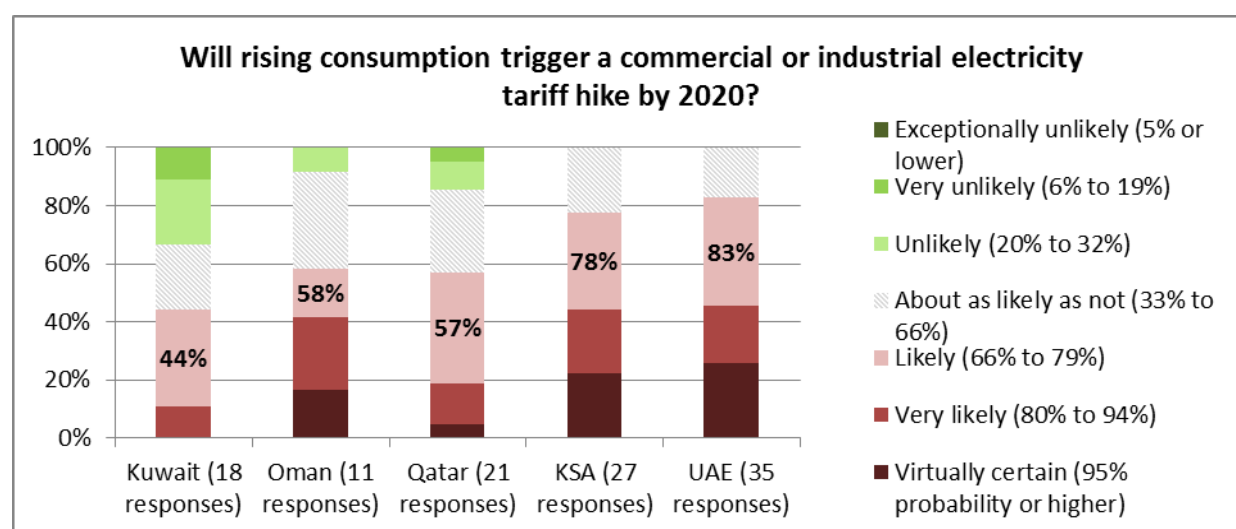


Figure 5.6: EE predictions on commercial/industrial tariffs (percentage figures represent combined "likely," "very likely," and "virtually certain" responses)

5.4.5.2 Projections from EE Results: Electricity Subsidies

Finally, I asked respondents to gauge the likelihood by 2020 of reductions in residential electricity subsidies (explicitly on *citizens* in countries with split tariffs). This question is nearly identical to the above query on residential prices and it returned a nearly identical response. The use of redundant survey questions, as mentioned in Chapter 3, provides an indication of the validity of previous results and mitigates anchoring bias. Once again the results show a bifurcation among countries that were

assessed as likely to reduce residential electricity subsidies – the UAE (66% likely) and Saudi Arabia (68% likely) – and those on the other side of the divide, Kuwait (42% likely), Oman (36% likely) and Qatar (26% likely). (Fig. 5.7)

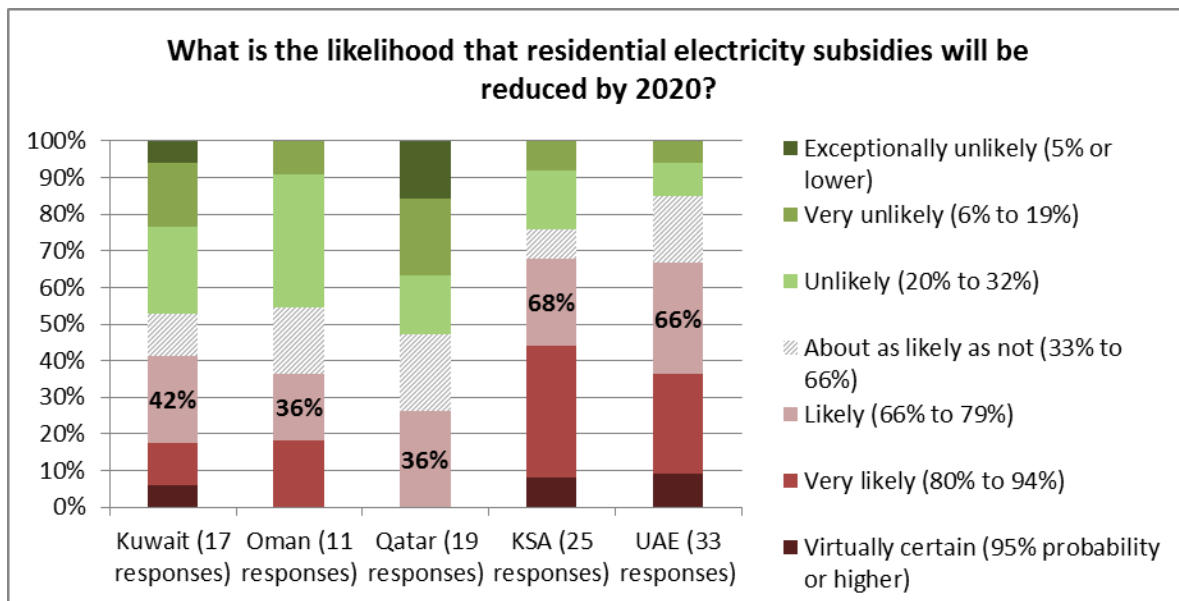


Figure 5.7: EE predictions on electricity subsidies (percentage figures represent combined “likely,” “very likely,” and “virtually certain” responses)

5.4.5.3 Discussion

The aggregated probabilistic judgments above are significant for two reasons. The first relates to the undesirable growth in domestic consumption of export commodities. Since electric power in the Gulf is generated by exportable fossil fuels, and reducing demand is likely to ease pressure on exports, price reforms would show evidence that Gulf regimes were likely to take the political risk required to extend the lives of export-oriented political economies. The second reason relates to the portrayal of subsidies in the literature. Since electricity subsidies are considered an integral component within the state-society social contract, and reforming them (in theory) represents a reneging on the government side of the bargain, the probability of rising prices foreshadows an impending challenge to this hypothesis.

Regional experts broadly interpret current energy distribution practices as unsound. Results illustrate a consensus that these policies are most likely to be reformed in Saudi Arabia and the UAE. Dubai’s government has already breached the literature’s framing of the social contract, and the results above show that further such breaches are likely. As the theoretical heartland of rentier state theory, any outcome that undercuts validity in the GCC ought to call into question overall robustness of this theory, as currently framed. However, it bears noting that the theoretical infringements outlined above

all relate to the government’s second distributional stream, the flow of in-kind energy resources to citizens. Distributional flows from the fiscal channel, which redistributes export revenues in the form of services and financial benefits, have not been subject to the same concern or pressure. In fact, fiscal distribution increased dramatically upon the onset of pan-Arab uprisings. What do experts foresee in regards to the *overall* value of benefit distribution?

5.4.6 EE Results: Distribution of Future Resource Benefits

Beyond the narrow area of electricity prices and prospects for reform, I sought a way of gauging opinion on the long-term viability of social contracts. EE respondents were asked to characterize the evolution of state benefit distribution over the next two decades. Given the plateauing production of oil and gas, the increasing domestic demand for those resources, and the shrinking size of per capita resource endowments due to population growth, would the state retain the wherewithal to meet its obligations (i.e. would benefits “grow larger” or “remain the same”)? Or would welfare outlays become fiscally unsupportable (i.e. “grow smaller”)? These questions were asked as a way of illuminating the fiscal pressure on regimes that has been described elsewhere in the literature, and the environment for recalibrating the state’s rent allotments.

Responses reveal broad uncertainty about the future direction of the rentier welfare state. Distributions were nearly even in Kuwait and the UAE in the general EE. The strongest trend obtained in Qatar, where unsurprisingly, not a single respondent said benefits would grow smaller. Two-thirds said they would increase. The UAE government EE produced the most pessimistic result, with half of the policymakers polled (10 of 20 responses) predicting benefit reductions, which contrasts with the broader UAE result.

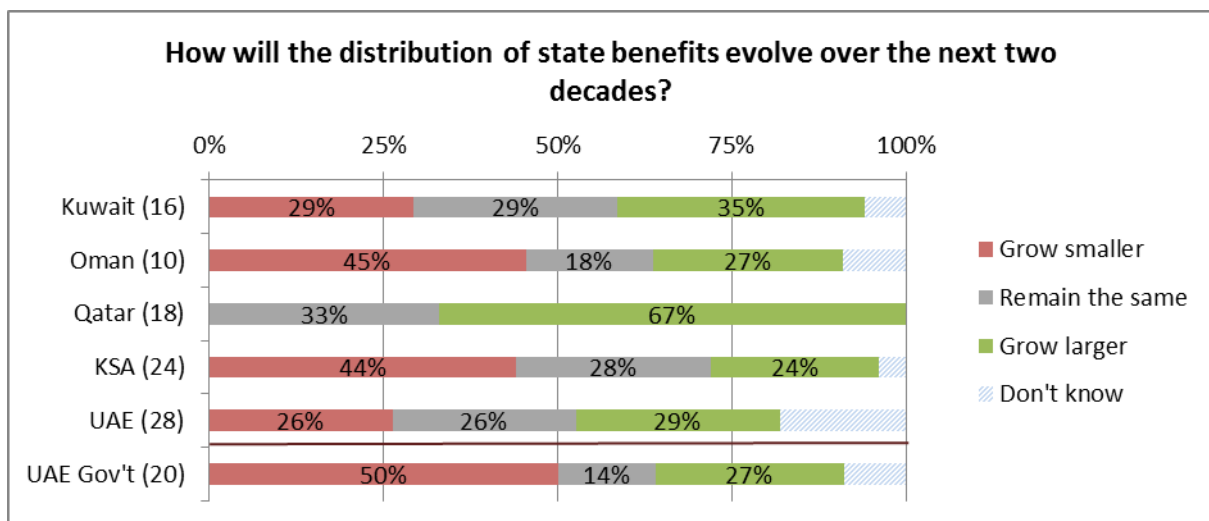


Figure 1: EE predictions on direction of future benefits

What is suggested by the ample showing of the “remain the same” and “grow larger” categories, especially for the UAE and Saudi Arabia, is that many respondents who foresaw electricity price increases do not believe that a loss of electricity benefit heralds an overall reduction in state benefits, but rather that the menu will be rearranged. “Either you will find a way to pay people money, or you keep the subsidies,” said Stéphane Michel, who heads the Qatar office of Total, the French energy firm. “There is no way the government will decrease the amount of money that is given to the population. No way. It will be political suicide.”⁴⁶⁵ Framed in terms of this chapter’s disaggregated distributional paradigm, many respondents who predicted that regimes would move to constrain flows of in-kind energy resources also believed that these reductions would be offset by increased distribution through the fiscal channel. However, a substantial number of EE respondents on Saudi Arabia and Oman, as well as among UAE policymakers, believed that the aggregate level of government benefits is unsustainable and will be reduced.

5.4.7 Robustness of EE Results

Expert elicitation as a methodology is well suited to the uncertainty that characterizes this research. Distributive governance structures erected in the early days of the oil boom are undergoing stress tests, with domestic consumption beginning to conflict with exports. Determining probable state responses, which, for the most part, have not been launched, involves making a judgment under conditions of uncertainty, the very purpose for which EE was designed. My elicitation follows established practice by using clearly formulated questions and statements characterizing the problem, offering responses based on gradations of certainty, and presenting those formulations to a panel that pooled experts and policymakers whose knowledge and experience qualifies them to provide credible insights. Their aggregated judgments compliment the interviews, case study and descriptive statistics also deployed in this chapter. The combination of these methods provides a robust triangulation approach for examining the subsidy issue and differentiating among the Gulf monarchies and their probable responses. Each methodology provides complementary data. Interviews add richness and nuance to the less detailed findings of the EE. The case study offers thick description of a relevant reform that has already occurred. Descriptive statistics describe the energy trends that illustrate the intensity of the reform context.

5.6 Conclusion

The data presented above suggest a convergence of expert understanding that some of the Gulf monarchies will act to reduce current trajectories in domestic resource consumption by raising prices. The results also illustrate the limitations of two theoretical constructs at the heart of rentier theory, whereby regimes exchange “rent” for political quiescence, and that, once extended, these

⁴⁶⁵ Author interview with Stéphane Michel, managing director, Total E&P Qatar. Doha, Nov. 29, 2011.

distributional flows become considered rights of citizenship. These constructs can be strengthened if revised in a way that allows for the state's "rent" flows to be disaggregated into two streams: one for fiscal allotments based on oil exports at market prices, and another for in-kind resources. The in-kind resource distribution channel must be managed so that it does not interfere with the more significant fiscal distribution stream, since financial benefits depend on maintaining resource exports sufficient to fund state budgets – at least until alternate economic sectors can assume that role. This chapter does not challenge the literature's framing of the first stream as a crucial component of regime legitimacy and political stability. It does, however, argue that the literature's framing of energy *subsidies* – described here as the second distributional stream – is undergoing a stress test. Policymakers and experts have altered their views on energy distribution, regarding it as a threat rather than a stability enhancement: "We are wasting too much energy in the region and *the barrels that we are consuming are becoming a threat now*, for our region particularly," Oman's minister of oil and gas, Mohammed al-Rumhy, said publicly in 2013. "What is really *destroying* us right now is subsidies." (emphasis added) This chapter argues that this altered perception has not yet been adopted by the academic literature. Rentier approaches must be revised; first, to accommodate this change in perception of subsidies, and second, to adapt to the possibility that these subsidy entitlements may be revoked, as demonstrated by Dubai, or replaced, as Iran has done. (Described in the following chapter)

Continuing growth in population and wealth in the Gulf monarchies implies further increases in domestic energy demand. In such an environment, the region's subsidized energy prices are likely to represent an increasingly important and accessible target for demand-side management. However, it bears recognizing that other means – ranging from fuel and technology substitution to energy efficiency standards – remain companion pieces of holistic energy policy. Despite this assessment, only two of the six monarchies – the UAE and Saudi Arabia – can be said to be preparing the groundwork for reforms of residential electricity subsidies that comprise part of the state-society social bargain. Oman also appears likely to reform some prices, but recent treatment in the media suggests that residential electricity rates are not among those targeted in the near term.⁴⁶⁶ Kuwait emerged as less likely to pursue reforms, despite a widely recognized need to reduce domestic consumption. In a class by itself was Qatar, which exhibited neither need to reduce energy use nor to cut back on benefits.⁴⁶⁷

Other exporters have managed to dismantle domestic energy subsidies that were either interfering with exports or threatening to do so. Indonesia and Mexico are examples of depleting exporters winding up energy largesse from a previous era. In their cases, subsidy reforms were accompanied by

⁴⁶⁶ James, A. E. "Gradual subsidy cut to strengthen Oman's fiscal position: IMF." *Times of Oman*. (Feb. 2, 2014) [<http://www.timesofoman.com/News/Article-29203.aspx>]

⁴⁶⁷ Bahrain has been dropped from this analysis given its small resource base, the small sample of EE respondents, and domestic circumstances that overshadow energy policy such as political unrest and the military and economic intervention of neighboring states.

increases in political participation. More germane to the Gulf monarchies are the 2010 reforms in Iran – itself a former monarchy – that slashed energy subsidies and recast them as cash transfers to families.⁴⁶⁸

Subsidy reform may offer relief to rentier regimes, but it is a problematic outcome for rentier state theory. In the EE, 80% of experts agreed that citizens consider subsidies as “rights of citizenship,” backing up the claims in the literature.⁴⁶⁹ This consensus sets up a knotty construct. If energy subsidies are “rights,” how is it possible to reform them? Ultimately, one would want to systematically examine *citizen* concepts of social contracts in Gulf monarchies, and consider their perceptions of higher prices. This is the task of the following chapter. Here, I argue simply that Dubai’s reform casts doubt on the universality of subsidy rights, as do the predictions for price increases outlined above.

Outside the literature, interviews found an alternate interpretation of subsidies in which low prices are considered an outdated holdover from the post-1973 welfare state. Ruling sheikhs who deployed windfall rents to improve living standards never meant to create entitlements.⁴⁷⁰ Even in the UAE, where the government has phased in subsidy reductions on diesel fuel and gasoline, and Dubai has added to these an increase in power and water prices, there remains a segment of society that opposes benefit reductions. These voices are expressed in newspaper articles grumbling about rising gasoline prices or through political representatives who have asked for reversal of price increases.⁴⁷¹ UAE political scientist Abdulkhaleq Abdulla, who described energy subsidies as an unnecessary relic, estimates that as much as a third of the population of UAE nationals still believes in welfare benefits as a birthright.⁴⁷²

A second question posed by the aggregated EE results is just as messy. Electricity subsidies are a small part of the overall rentier benefit package, but a particularly damaging one because of the undermining of the export economy. It therefore ought to be among the easiest welfare components to reform. But only two of the six Gulf monarchies appear likely to raise prices by 2020. What is the future for the others, if they do not follow along? If regimes are unable to develop an alternative legitimacy formula that can substitute for in-kind resource distribution, how long can these rentier political economies be expected to survive? If, as scholars claim, autocracies such as those in the Gulf are sustained by patronage, repression and – when patronage is unavailable – increases in repression

⁴⁶⁸ Iran will be discussed in depth in the following chapter.

⁴⁶⁹ Sixty-one of 76 respondents, said “yes” to the question “Several academics have stated that subsidies in the GCC are perceived by nationals as rights of citizenship. Do you agree?”

⁴⁷⁰ This was the opinion of multiple interviewees.

⁴⁷¹ Such as Ahmed al-Shamsi, representative to the UAE Federal National Council from Ajman, who called in 2012 for reduced gasoline prices, and for all UAE nationals to pay the same electricity price, with everyone paying the lower price of Abu Dhabi. The proposal seeks electricity tariff reductions for UAE citizens in the other six emirates with higher rates. Author interview, Dubai, April 8, 2012.

⁴⁷² Author interview, Dubai, Jan. 31, 2012.

or pluralism, one suspects that for states which forfeit their patronage, resources will be mobilized toward repression or pluralism.⁴⁷³

A third question concerns theory. Have scholars been wrong all along in declaring the inviolability of the rentier social contract? No. Classic rentier theory is grounded in the 1980s context of comparatively undeveloped political economies. Although core theoretical tenets retain substantial explanatory power, theory has required updates through the years to cope with the growth and modernization of these monarchies. Amid such thoroughgoing change as has occurred in the Gulf, one expects that theory *and* governance structures would require substantial adjustment. Despite these circumstances, it is surprising to discover the extent to which energy policy still adheres to the literature's view of the "inviolable" social contract. Ministries and regulators in the Gulf have sought to ease demand by raising electricity prices nearly everywhere else first: on commercial and industrial customers and on foreign residents. The agonizing difficulty in raising citizen prices shows that this aspect of the theory retains substantial explanatory power.

Scholars examining the stress-testing of the social contract during the oil bust period found similar regime creativity in maintaining subsidies they could no longer afford. Chaudhry documented Saudi Arabia's failure to implement austerity measures, including a tax proposal repealed three days after it was announced.⁴⁷⁴ Crystal documented Kuwait's similar failure, including an attempted electricity tariff hike in 1986, which revealed "the great reluctance of these regimes, even in times of substantially reduced revenues, to tax more resources from the population, or to cut back substantially on social services, preferring instead to draw down reserves or flout (OPEC) production quotas."⁴⁷⁵ However, as mentioned, the current dilemma is distinct to that of the oil bust, since it is of a structural rather than fiscal nature. A rising oil price can provide only temporary fiscal relief if exports are displaced.

Economic necessity is forcing a change in government perception of once sacrosanct social contracts. More tariff-setting entities in the Gulf monarchies will embrace reforms, most likely beginning with those in the UAE and Saudi Arabia, because abiding by a narrow interpretation of the social contract presents regimes with the potential for a worse outcome than antagonizing citizens with rising prices. Absent reform, and all else equal, regimes face diminishing hydrocarbon exports and the subsequent loss of all-important rents. Whether one takes the view that social contract menus are rigid or malleable, these findings suggest that energy subsidies will either become "replaceable" or, as in Dubai, "expendable."

⁴⁷³ Desai, Olofsgard, and Yousef 2009; Tullock 1987

⁴⁷⁴ Chaudhry 1997, 34-5, 274-5

⁴⁷⁵ Crystal 1990, 191-2

I argue on both theoretical and empirical grounds that the rentier constructs that purport to explain stability of the Gulf monarchies through their distributional structures will need to be updated to accommodate the separation of rent distribution from in-kind resource distribution, and the winding up of the latter practice in the name of preserving the state. This revenue maximization strategy entails an instability risk. By cutting back on energy handouts, regimes risk triggering a backlash from citizens angered by the loss of benefits which are often understood as compensation for their lack of political participation.

The ongoing Arab Spring has made regimes reluctant to move ahead. By retaining energy subsidies, regimes must continue to shoulder the threat to vital exports and rent streams. This means that one of the state's key political structures – the distribution of energy benefits – will remain locked in an escalating conflict with the state's chief economic structure, the export of that same energy resource. As mentioned, domestic mispricing of a primary export commodity can only be sustained if production of that resource rises at least as fast as domestic demand.⁴⁷⁶ Since production is essentially flat and economies have not diversified much beyond reliance on resource exports, these countries will face an increasingly sharp conflict between sustaining export earnings and keeping prices down for domestic customers. In short, in spite of the risks, reform is likely because the alternative is worse.

Whether or not reform comes to pass, this chapter has demonstrated that rentierism is structurally encumbered with a stability threat. Theories of politics of rentier states must acknowledge this contradiction and concede the possibility of its reform, through the social contract. My research shows that reform is either happening or likely in at least two of the six Gulf monarchies, states occupying the epicenter of natural resource rentierism. Together, Saudi Arabia and the UAE account for 80% of the GCC population, 70% of oil exports and 75% of oil reserves. The increasing potential for subsidy reform does not mean that rentier theory lacked predictive power, but rather that it was unable to foresee the evolution of internal dynamics in these countries that conflict with export models.

⁴⁷⁶ Or if the economy is diversified sufficiently to offset the loss of commodity exports

Chapter 6: The ‘Demand Side’ of Persian Gulf Energy Subsidies: Citizen Attitudes on Proposed Reform

6.1 Introduction

Are citizens of autocracies entitled to cheap energy? How amenable are they to losing the subsidies behind those “entitlements”? A public survey in the six Persian Gulf monarchies reveals levels of public entitlement to energy subsidies that are less universal than those inferred by rentier theory. As theory would suggest, citizens claiming entitlement to national resource wealth are those least willing to accept higher prices. On the other hand, a substantial portion of the public did not oppose higher prices. Support for higher electricity prices rose substantially when the public was given a national-interest explanation, and when an alternate benefit was offered. These findings suggest that the Gulf public may be more amenable to subsidy reform than current caution in policymaking implies.

Subsidy reform has become a major priority, albeit with steep political hurdles, given the rapid growth in domestic energy consumption that threatens to displace hydrocarbon exports, the economic mainstay of the Gulf monarchies. This chapter uses interviews and surveys of policymakers and other regional elites to reveal notions of “rigid” social contracts and welfare expectations that are consistent with rentier theory, while public survey data demonstrates that society holds a more varied and flexible interpretation. Results show that subsidy reforms predicated on appeals to the national interest may win support among some citizens, while opposition remains staunch among those who attribute energy subsidies to personal “ownership” of national resource endowments.

Classic rentier literature makes bold claims about regimes in resource-exporting states while offering underdeveloped sketches of societies living under their typically autocratic rule. Rentier regimes are depicted as autonomous from their publics, securing public support by abundant distribution of natural resource revenues. For their part, citizens are portrayed as complacent and lacking in motivation for economic and educational self-improvement, since their incomes flow from citizenship rather than from hard work.⁴⁷⁷

Several recent studies on the Gulf Arab states pose challenges to some of these claims through close examination of state obligations, which might be described as the “supply” side of the social contract. These include work by Gray on the Gulf monarchies, Davidson and Calvert Jones on the UAE, Hertog on Saudi Arabia and Jocelyn Mitchell on Qatar, which dispel some of the more caricatural

⁴⁷⁷ Mahdavy 1970; Beblawi 1987; Luciani 1987; Gause III 1994; Crystal 1990

notions of early theory, while depicting regimes as increasingly deferential toward citizens.⁴⁷⁸ However, other than Mitchell's depiction of citizen activism among Qataris, these works ascribe little agency to citizens or suggest that Gulf nationals can mobilize to pursue their interests. Rather they imply that regimes have maintained or increased benefit allocations in the interest of *avoiding* citizen mobilization. As in the classic literature, the state-society social contract is still understood as difficult to change.

With this chapter I illuminate a portion of the less-explored "demand" side of the rentier social contract, which comprises the expectations of citizens. My results challenge the literature's monochrome view of the citizen by showing a more complex public understanding of the interconnection between the state's natural resources and citizen welfare benefits. I gather public attitudes toward reform of energy subsidies, a topic with present-day policy relevance, and show that, while many citizens do express notions of entitlement to welfare benefits and opposition to reform – in this case of subsidized energy – others are willing to consider the loss of those benefits under certain conditions.

One reason why the citizen "demand" side of the social contract has been relatively unexplored is lack of data. There have been few public surveys on attitudes toward energy in the Gulf and none that delve into matters comprising the foundations of public support for ruling families.⁴⁷⁹ To compensate, I gathered views of the general population by conducting a major public survey of 730 Gulf nationals that sought insights into their sense of energy entitlement and attitudes toward higher retail prices. I use these responses to revise theoretical assumptions on the distributive practices of Gulf monarchies in three ways. First, by measuring citizen interpretations of the patronage distribution mechanism, to which scholars ascribe so much magnitude in generating regime support; second, by contrasting citizen interpretations with expectations in the literature; and third, by contrasting citizen views with those of elites and experts.

The data reveal a disparity suggesting that commonly held assumptions – and academic theory – are wide of the mark. Where theory and elite observers remain beholden to views of a rigid social contract that precludes "extraction" from the public, citizens reveal notions of a more flexible compact. While elites see citizens as fierce opponents of proposals that would erode public "rights" to cheap domestic energy, only a subset of the public conforms to this view. A substantial portion of the public appears more amenable to subsidy reforms, especially when portrayed in the national interest.

⁴⁷⁸ Such as M. Gray 2011b on the Gulf monarchies and Hertog 2010a on Saudi Arabia, Davidson 2005 on the UAE, J. S. Mitchell 2013 on Qatar. Earlier works touched on these themes, including Anderson 1986 on Libya and Tunisia, Chaudhry 1997 on Saudi Arabia and Yemen, and Vandewalle 1998 on Libya.

⁴⁷⁹ Willis Energy Services and the Nielsen Co. used survey methodology to prepare their Study of Modes of Energy Consumption in the UAE (2011), a government document obtained by the author. However, the survey does not address public conceptions of entitlement.

Citizens are less likely to claim rights to subsidized energy than scholars and experts are to concede those rights.

This disjuncture between views of citizens and those among scholars and elites is consistent with the “dictator’s dilemma” problem, in which policymaking in autocracies is insufficiently informed by public opinion.⁴⁸⁰ Results of an expert elicitation reveal overestimation of public opposition that is symptomatic of this view. Elites, policymakers among them, develop understandings and make policy under certain assumptions and conditions. Given their imperfect information on public opinion, those assumptions may be misguided, as this chapter will illustrate. However, the observation that policy is crafted under conditions of imperfect information does not invalidate the methodology of expert elicitation, nor does it undermine the findings of the previous chapter, which suggest that policy reforms may go ahead in certain states and perhaps not others. Policymakers and experts may not have perfect information about the preferences of policy recipients, but that does not stop them from making policy.

The survey results detailed below suggest that policymakers may have more scope than commonly understood for reforming the trends of resource consumption that characterize these monarchies. This chapter focuses on reform of residential electricity prices because of the large and growing amounts of exportable energy commodities consumed in the sector, and because electricity’s distribution technology allows regimes leeway to impose discriminatory pricing in ways that reflect a customer’s economic status or political clout. Electricity pricing thus provides information on political entitlements that is more difficult to obtain from pricing of transportation fuels, for example.

The reform challenges facing these regimes are of enormous significance for their countries, as well as for international energy markets and the global community of resource-importing states. State-society relations and the social contract are the underlying structures on which questions of reform of domestic resource consumption are situated. The manner in which states and societies confront these issues will provide clues about the viability of an important source of supply to energy markets, and the ultimate longevity of some of the world’s last remaining absolute monarchies.

The rest of this chapter unfolds as follows: Section two reviews literature on social contracts and subsidy reforms, with a focus on rentier states. Section three offers my research design, hypotheses and methods, as well as my statistical model. Section four provides the results of the statistical analysis. Section five offers an in-depth discussion of the survey results and introduces additional qualitative research data from an expert elicitation and discusses potential biases that could affect results. A brief section on policymaking amid uncertainty precedes the conclusion. The public survey text and associated variables are given in the appendix.

⁴⁸⁰ Wintrobe 2001; Tullock 1987; Desai, Olofsgard, and Yousef 2009

6.2 Subsidy Reform and the Social Contract

As discussed in the literature review, rentier scholarship affords little ambiguity on regime options vis-à-vis citizen subsidies. Welfare benefits are portrayed as vital components of citizenship which, collectively, comprise the citizen's most important inducement for acquiescence to his government's rule. This acquiescence is typically framed as a social contract or "ruling bargain." Authors declare that benefits cannot be retracted without offsetting their loss with a corresponding increase in democratic legitimacy. To do otherwise would challenge the basis of the state.

The concept of the social contract is thus central within the rentier state and in the theoretical works examining these states. Whereas in democratic states, social contracts generally refer to collective bargains among representatives of labor, capital and the state,⁴⁸¹ in more autocratic states the social contract becomes a redistributive "authoritarian bargain" enshrining the terms by which citizens legitimate governing regimes and the constraints and incentives that apply to both parties. In the rentier Middle East, these pacts assume the crucial role of institutions that in more participatory polities confer government legitimacy through formal citizen input. Farsoun argues that rentier social contracts wind up according citizens with *political rights to economic security* which go beyond mere humanitarian aspirations. In so doing, Farsoun argued presciently that Arab regimes unwittingly created a bargain they could not maintain forever, ensuring that the growing expense of providing subsidy "rights" would become a central issue of governance in the current century.⁴⁸²

Benefit reforms have been amply covered in the political literature on welfare states, but mainly in reference to reforms done under democratic governance. However, works on the risk of "retrenchment," or retracting benefits, also contain much of relevance for autocracies. As in democracies, government subsidy creates solidarity among beneficiaries who can rise up and threaten political leadership when their interests are jeopardized. Pierson argues that welfare societies thus maintain a constant *potential* for mobilization that raises the stakes of reform.⁴⁸³ As mentioned in the literature review, centralized power poses an additional obstacle to subsidy reform, since it concentrates accountability. Reform-minded regimes are exposed to the full force of public reaction.

There is little doubt that Middle East social contracts are sheltered by formidable barriers to reform, despite their "negative effects on employment, productivity, foreign investment, trade, and macroeconomic performance."⁴⁸⁴ Heydemann and others characterize reluctance to reform as an incumbent's rational response to circumstances in which costs of reform are immediate, while

⁴⁸¹ Yousef 2004a, 6

⁴⁸² Farsoun 1988, 231

⁴⁸³ Pierson 1996

⁴⁸⁴ Heydemann 2003a

benefits are delayed and uncertain. Regimes pondering changes to state benefits – including those on energy – face a daunting confrontation with the social contract.

6.2.1 Dangers of Abrogating Gulf Social Contracts

Gulf scholars have speculated for decades on how the public might react to government violations of the social contract, including in the area of energy pricing. Writing during the oil bust of the 1980s and 1990s, Crystal saw the threatened (but mostly unimplemented) reduction of welfare benefits and imposition of taxes in Kuwait and Qatar as a source of instability that would drive demands for participation.⁴⁸⁵ Gause argued that Gulf monarchies' failure to meet their ends of the social contract would jeopardize the future of their political systems.⁴⁸⁶ More recently, Davidson forecast in 2012 that an inability to maintain social contracts – along with a technology-empowered political opposition – will bring about the demise of all six Gulf monarchies by 2017.⁴⁸⁷

Regarding the energy subsidies that are the focus of this research, Hertog and Luciani have been among those arguing that higher prices would be helpful in reducing demand, but conceding that regimes would be unlikely to raise prices, especially on citizens' residential consumption.

“Encouraging (residents) to change their electricity consumption pattern is much more difficult than pursuing a more rational use of energy in industry, and it is especially difficult if the price lever cannot be used. It is therefore expected that emphasis will be on increasing electricity production rather than reining in consumption and, if anything, savings efforts will be focused on industry rather than the residential sector.”⁴⁸⁸

Dargin writes that raising domestic natural gas prices to even half of international levels would result in severe political repercussions.⁴⁸⁹ And Kazim, in his 2007 study outlining energy conservation options for the UAE, stretches as far as to recommend that the Emirates cut consumption by reducing population growth, but does not even broach the possibility of raising residential electricity prices.⁴⁹⁰ Perhaps the strongest reason for the one-sided portrayal of subsidies and social contracts as so difficult to reform is related to the risks to the survival of the regimes which launch them. As Gurr writes, and as history shows, declines in state benefits and social welfare are common triggers for political violence and even overthrow of governments.⁴⁹¹

⁴⁸⁵ Crystal 1990, 191–2

⁴⁸⁶ Gause III 1994, 147

⁴⁸⁷ Davidson 2012, ix

⁴⁸⁸ Hertog and Luciani 2009, 6–7

⁴⁸⁹ Dargin 2008

⁴⁹⁰ Kazim 2007

⁴⁹¹ Gurr 1970, 338–40

6.2.2 Comparative Subsidy Reform in Energy Exporting States

What does history reveal about subsidy reform in mineral exporting countries? The record is mixed. Raising prices of subsidized energy and food has been a prime driver of unrest, with numerous examples – including overthrown regimes in Venezuela and Indonesia – provided in the literature review. However, the record of subsidy reform also reveals positive outcomes. All but five of 28 substantial energy subsidy reform efforts documented by the IMF in the past two decades managed to meet with some success.⁴⁹² Most of those occurring in exporting states have come amid a decline in national oil production.

Among energy exporters, Indonesia, after failed attempts in 1997 and 2003 successfully raised fuel prices in 2005 and 2008. Indonesia reduced its subsidy load from 3.5% of GDP in 2005 to 0.8% by 2009. Yemen has also managed small reductions in fuel subsidies, which, however, still accounted for 7.4% of 2009 GDP. Mexico reduced gasoline subsidies in 2005 and 2006⁴⁹³ after failing to reform electricity prices between 1999 and 2002. Malaysia underwent a series of attempts to reduce fuel subsidies (which stood at more than 1% of GDP in 2012) but most were reversed following public outcries.⁴⁹⁴ Nigeria’s fuel price reforms of 2011-12 triggered anti-government unrest but still managed to reduce costs from 4.7% to 3.6% of GDP.⁴⁹⁵ However, the most relevant example of subsidy reform has arisen in an OPEC member state in the Gulf, itself a former monarchy, and the country for which the term “rentier state” was coined.⁴⁹⁶

6.2.2.1 Iran’s Subsidy Reform of 2010

In December 2010, Iran became the first major energy-exporting country to drastically cut indirect subsidies on energy products⁴⁹⁷ as well as the first country in the world to replace energy handouts with a universal cash transfer program for households.⁴⁹⁸ Iran’s dramatic reform, which exchanged one social contract benefit for another, achieved positive welcomes from the IMF and, at least initially, the Iranian public.⁴⁹⁹ The IMF and press reports have 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. Demand reduction was sufficient to permit a temporary increase in oil exports, before Iran’s oil trade was blocked by international sanctions.⁵⁰⁰ The

⁴⁹² International Monetary Fund 2013a

⁴⁹³ Uri and Boyd 1997

⁴⁹⁴ Malaysia was not included in the IMF’s case study report. See instead Chyi 2012 and International Monetary Fund 2013b

⁴⁹⁵ International Monetary Fund 2013a

⁴⁹⁶ First use of the term “rentier state” is generally credited to Mahdavy 1970 on Iran.

⁴⁹⁷ International Monetary Fund 2013a; Guillaume, Zyteck, and Farzin 2011

⁴⁹⁸ Tabatabai 2011

⁴⁹⁹ Initial public support is documented in Guillaume, Zyteck, and Farzin 2011

⁵⁰⁰ Middle East Economic Survey (Apr. 30, 2012) “Second Phase Of Subsidy Reform Plan To Await Budget Approval” p. 17-18. See also: Tehran Times. (Dec. 31, 2011) “Petrol rationing saves Iran \$38 billion: Official.”

government built support for the reform by creating bank accounts for each household and depositing monthly payments worth about \$40 per person prior to the program's launch. Recipients could only access those payments after prices were raised.⁵⁰¹

Iran's reform confronted a structure of energy underpricing that the IMF described as unsustainable. Domestic demand was curtailing oil exports while forcing Iran to import market-priced gasoline at around US\$2 per gallon, which it then sold domestically for 38 US cents.⁵⁰² Government reports claimed that 70% of these subsidies accrued to the richest third of the population.⁵⁰³ When subsidies were reduced, the largest increase in price affected smuggling-prone diesel fuel, which rose from US 1.6 cents to 37 cents per liter (an increase of more than 2,000%), followed by electricity for large residential consumers, where prices for consumption in excess of 600 kilowatt-hours per month jumped from US 1.6 cents to 19 cents per kWh (a rate nearly double the average US price in 2012). Rising price bands were designed to encourage conservation and protect the poor, with the first 100 kWh of electricity per month remaining available for 2.7 US cents.⁵⁰⁴ (Fig. 6.1)

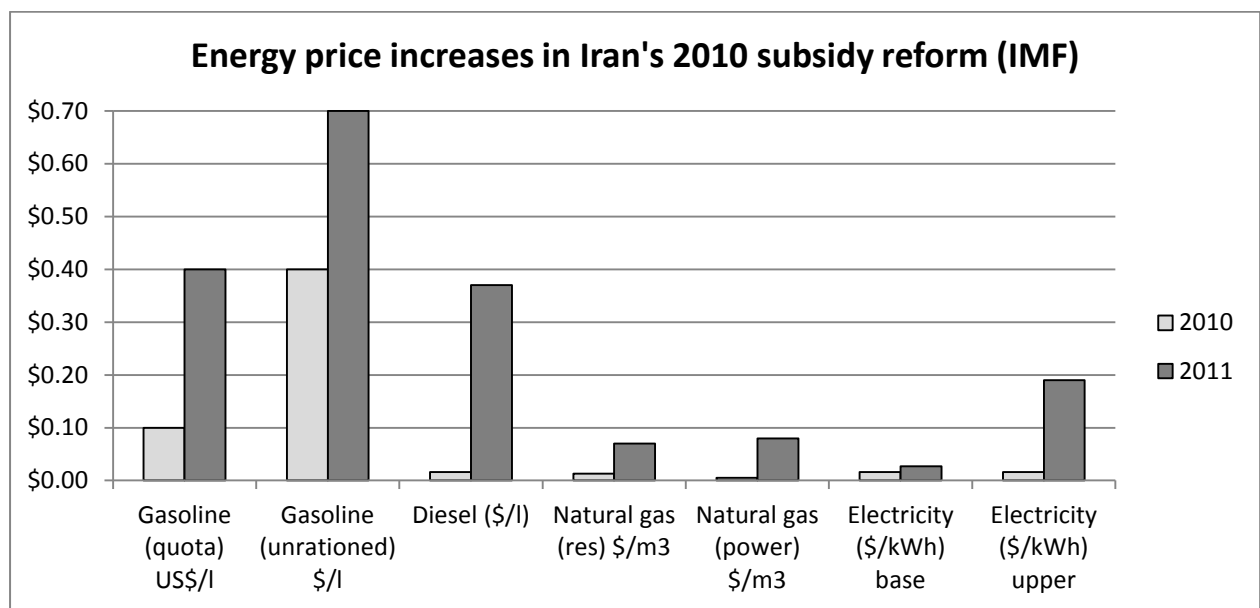


Figure 6.1: Comparison of energy prices in Iran, 2010 vs 2011

Although initial plans called for prices to be increased to 90% of international levels over five years, the subsidy reform was halted in 2012 by rising inflation and a lack of parliamentary support.⁵⁰⁵ The tightening of international sanctions targeting Iran's nuclear program in 2010 and 2012 made it difficult to separate the macroeconomic effects of the subsidy reform from those triggered by the

⁵⁰¹ Guillaume, Zytek, and Farzin 2011

⁵⁰² International Monetary Fund 2013a

⁵⁰³ Tabatabai 2011

⁵⁰⁴ Note that 100 kWh is a fraction of Iran's average monthly consumption of 2,500 kWh. Guillaume, Zytek, and Farzin 2011

⁵⁰⁵ Bozorgmehr 2012; International Monetary Fund 2013a

embargo. Whatever the cause, severe inflation undermined the subsidy measure, reducing energy prices in real terms as well as the value of the replacement cash transfers.⁵⁰⁶ Dwindling political will also undercut the reform, since prices and payments were not adjusted for inflation. The overall outcome remains inconclusive. The IMF has reported in 2013 that energy consumption growth was “initially stabilized” and describes the reform as “partially successful.”⁵⁰⁷

Regardless, the Iranian reform and replacement stipends resonated within GCC energy ministries. In Saudi Arabia, which operates amid similar levels of subsidy and budget dependence on oil exports, an adviser expressed sentiments similar to those of President Ahmadinejad, that prices needed to be raised to encourage efficient resource consumption, rather than to reduce the social contract’s burden on fiscal accounts.⁵⁰⁸ (See Table 6 in Introduction for subsidy details)

To sum up, the literature emphasizes the illegitimacy of subsidy reform and the dangers of renegeing on social contracts. Despite this, several countries have managed to reform subsidies, albeit mainly outside the GCC. What do the experiences of Iran and the other reformist energy exporters portend for the Gulf monarchies? Will citizens in the Gulf monarchies accept reforms that reduce domestic pressure on exports, and, perhaps, compensate citizens for their loss in welfare?

6.3 Research Design

6.3.1 Hypotheses

Regime survival considerations are surely one of the chief inhibitors of social contract reforms. If the literature’s picture of the inelastic social contract is accurate, regimes are in a bind. In an expert elicitation conducted for this research, 80% of experts (61 of 76) agreed that citizens consider subsidies as “rights of citizenship,” backing up the claims in the literature.⁵⁰⁹ This consensus appears to conflict with moves toward reducing benefits. If energy subsidies are “rights,” is it possible to reform them? Answering this question depends less on regime or expert concepts of the social contract, and more on the understandings of citizens. Policymakers contemplating a reduction in energy subsidies would therefore want to understand the boundaries of acceptable reform: Do citizens claim entitlement to energy resources? If so, does that mean they oppose higher prices? Would citizens require or even accept a replacement benefit in exchange for agreeing to pay more for

⁵⁰⁶ International Monetary Fund 2013a

⁵⁰⁷ International Monetary Fund 2013a, 6

⁵⁰⁸ This author discussed its details with Dr. Majid al-Moneef, an advisor in the Saudi Ministry of Petroleum and Minerals, on Oct. 17, 2012. Dr. al-Moneef displayed in-depth knowledge of the Iranian reforms and their relevance for the kingdom.

⁵⁰⁹ Sixty-one of 76 respondents (80%) said “yes” to the question “Several academics have stated that subsidies in the GCC are perceived by nationals as rights of citizenship. Do you agree?” See further detail below.

energy? With this logic in mind, I designed three hypotheses that could be tested with public survey data.

First, I wanted to learn whether entitlement-minded citizens – those who express ownership over national resources – are more opposed to higher electricity prices, when no rationale is given for an increase. In numerous settings, including in Dubai in 2011, subsidized energy prices have been raised with little warning or explanation. Given their sense of entitlement to energy, it should logically follow that the entitled group would oppose encroachment on that benefit, therefore:

H1: Citizens exhibiting entitlement are less likely to support increased electricity prices

However, what if the national interest is invoked as the rationale for higher prices? If citizens are told that higher prices were needed to reduce waste so that their country's exports of oil and gas could be maintained, might entitlement-minded citizens be convinced to relinquish those entitlements? The second hypothesis tests the assumption that entitlement-minded citizens are more inclined than others to remain opposed to higher prices.

H2: Citizens exhibiting entitlement will express lower support for higher prices than the overall public, even if the national interest is invoked

As mentioned above, Iran designed its subsidy reform to include a compensation payment for lost benefits, and citizens largely supported this strategy. Would entitlement-minded GCC citizens also support such a benefit swap?

H3: Citizens exhibiting entitlement will demonstrate more support for higher prices if offered an alternate benefit

I am also interested in measuring the relationship between demographic variables and support for higher prices. This is not because the rentier literature suggests certain categories of citizen are more prone to claiming subsidy rights, but to determine whether effects other than "entitlement" can better explain any citizen support for higher electricity prices. To test for these effects, I included demographic variables (presented in Table 6.1) as part of a regression which seeks to correlate support for higher prices with socio-economic status, education, gender, and age. One might expect that in the patriarchal Gulf that women and younger citizens are less likely to control household finances or bear the responsibility for paying bills and therefore could exhibit more support for higher electricity prices. Also, more educated citizens might be expected to possess a greater understanding of the region's economic quandary and therefore might also support higher prices, while less educated citizens might be less willing to contemplate paying more.

6.3.2 Data and Methods

Data from the public survey provide the source for hypothesis testing, while I also pursued a complimentary approach through responses to an expert elicitation (EE) of Gulf energy experts (discussed in Chapter 2) to illuminate elite conceptions of energy subsidies and citizen entitlement.

The two methods are logically complementary but statistically incompatible due to differences in selection of respondents and their available response categories. On the one hand, the public survey reflects an attempt to gather a representative sample of the public. On the other, the EE selects particular subject-matter experts, and makes no attempt to be representative. Therefore I did not compare the two datasets statistically, but instead provide the aggregated EE responses as an alternate view of the social contract to contrast with the ground-level citizen-participant view. These juxtapositions are useful in establishing whether prevailing views of elites, as well as those in the academic literature, reflect understandings held by citizens. The EE data provide context for benchmarking public opinion, which eases interpretation of the survey and regression results.

6.3.2.1 Public Survey

The polling firm YouGov conducted the public survey online, translating it into Arabic and providing it to its Middle East panel, which included the 730 citizen respondents in the six GCC countries (Saudi Arabia, UAE, Kuwait, Oman, Qatar and Bahrain) which provide the data for this chapter. The survey responses were gathered between from Nov. 28 to Dec. 4, 2011. (See Appendix for survey questions and demographics) The data is heavily skewed toward Saudi respondents and contains proportionately few responses from the smaller monarchies. All responses are from citizens. Expatriate residents did not participate. However, YouGov warned that its panel was not representative of the citizen population as a whole, and that it may be affected by errors in sampling and coverage. A company official said that, since the survey was conducted online, and Internet penetration remained less than universal in parts of the Gulf and Middle East in 2011, the results should be considered broadly illustrative of public opinion rather than statistically representative.

Due to small sample sizes in the smaller monarchies, I aggregated the GCC responses in the interest of statistical robustness. While I had hoped to differentiate among the countries and recognize the shortcomings of grouping the responses, the aggregated results may still represent opinion in the smaller countries given the close regional similarities in energy pricing, level of subsidy, and in political structure and culture. Perhaps the chief distinction among respondents lies in income level, as can be seen in the Appendix. The terms of my agreement with YouGov limited me to six questions

and did not allow for differentiating questions by country. Survey responses from outside the six Gulf monarchies were excluded.⁵¹⁰

My approach involves examining concepts of the social contract through citizen attitudes toward their receipt of subsidized electricity. Given the urgency of reforming energy subsidies in five of the six monarchies (Qatar excepted), how amenable are citizens to paying a cost-reflective price for their electricity consumption? How do citizens respond to a proposed loss of energy benefits? The survey allowed me to tease out perceptions of entitlement among citizens and evaluate levels of public opposition and support for a hypothetical retraction of citizen subsidies under conditions which might be useful in a Gulf policymaking context. Survey responses providing data for the three dependent variables were arrayed on five-point Likert scales. (See Appendix for full detail)

- I asked how willing the citizen would be to paying the full cost of electricity without government assistance, explaining only that “the true cost without government subsidies is more than the average price that citizens in your country pay now.” Respondents were offered five choices ranging from “very willing” to “very opposed.” Responses from this question are designed to measure the first dependent variable (Dep 1) and will be used to test H1.
- I asked how willingly citizens would pay higher prices to moderate consumption in the national interest. “Some people have said that since electricity is provided to citizens at an artificially low price some people waste it. This consumes oil and gas that could be exported.” Responses on higher prices ranged from “strongly support” to “strongly oppose.” Responses from this question will be used to measure the second dependent variable (Dep 2) and test H2.
- I sought comment on what might be termed the “Iran model,” asking whether the public would support a price increase if citizens were compensated with an alternate benefit of equal value. Responses ranged from “strongly support” to “strongly oppose.” Responses from this question will measure the third dependent variable (Dep 3) and be used to test H3.
- The main independent variable in my model is that which measures citizen entitlement to subsidized energy. To measure this variable, labeled “share” below, I used responses which agreed with the statement that government electricity subsidies were a manifestation of “my share of the country’s energy wealth.” I classified those who selected this response option as the “entitlement-minded” group, and used their aggregated responses to discern the effect of the main independent variable.

⁵¹⁰ The YouGov panel in the GCC included few participants outside Saudi Arabia. Numbers of responses are lower than 730 because I excluded “don’t know” and incomplete responses from the dataset.

- Remaining independent variables are taken from demographic data from the YouGov survey panel. These predictors include respondents’ reported gender (“female”), income (“income”), educational level (“edu”) and age group (“age”).

Each of the three dependent variables measures a component of my theory. Dep 1 measures the impact of entitlement on willingness to pay, when prices are raised without an explanation. Dep 2 measures the impact of entitlement on willingness to support increased prices, when invoking the national interest in conserving natural resources for export. Dep 3 measures impact of entitlement on willingness to consider a benefit swap. I also sought to determine whether, as the rentier literature implies, a majority of citizens believe they are entitled to subsidized electricity as their “share” of the national resource patrimony. As depicted in the frequency tables below (Table 5.1), and discussed in subsequent sections, this assumption was not accurate.

Dep 1	Freq.	Percent	Valid	Cum.	Dep 2	Freq.	Percent	Valid	Cum.
1 (v. willing)	49	9.06	10.54	10.54	1 (s. support)	64	11.83	14.1	14.1
2	90	16.64	19.35	29.89	2	117	21.63	25.77	39.87
3	90	16.64	19.35	49.25	3	110	20.33	24.23	64.1
4	94	17.38	20.22	69.46	4	114	21.07	25.11	89.21
5 (v. opposed)	142	26.25	30.54	100	5 (s. oppose)	49	9.06	10.79	100
Total	465	85.95	100		Total	454	83.92	100	
Missing	76	14.05			Missing	87	16.08		
Total	541	100			Total	541	100		
<hr/>					<hr/>				
Dep 3	Freq.	Percent	Valid	Cum.	Share	Freq.	Percent	Valid	Cum.
1 (s. support)	53	9.8	11.32	11.32	0 No	312	57.67	57.67	57.67
2	113	20.89	24.15	35.47	1 Yes	229	42.33	42.33	100
3	126	23.29	26.92	62.39	Total	541	100	100	
4	130	24.03	27.78	90.17					
5 (s. oppose)	46	8.5	9.83	100	Female	Freq.	Percent	Valid	Cum.
Total	468	86.51	100		0 male	332	61.37	61.37	61.37
Missing	73	13.49			1 female	209	38.63	38.63	100
Total	541	100			Total	541	100	100	
<hr/>					<hr/>				
Edu	Freq.	Percent	Valid	Cum.	Income	Freq.	Percent	Valid	Cum.
1	9	1.66	1.67	1.67	1	105	19.41	19.41	19.41
2	184	34.01	34.07	35.74	2	97	17.93	17.93	37.34
3	58	10.72	10.74	46.48	3	100	18.48	18.48	55.82
4	261	48.24	48.33	94.81	4	102	18.85	18.85	74.68
5	19	3.51	3.52	98.33	5	137	25.32	25.32	100
6	9	1.66	1.67	100	Total	541	100	100	

Total	540	99.82	100			
Missing	1	0.18		Age	Freq.	Percent
Total	541	100		Valid	Cum.	
				1 18 to 24	158	29.21
				2 25 to 29	149	27.54
				3 30 to 34	123	22.74
				4 35 to 39	59	10.91
				5 40+	52	9.61
				Total	541	100

6.3.3 Model Specification

The three dependent variables for this study contain five ordered categories measured on a scale from 1 to 5. I use OLS as my main analytical technique, since there is a long tradition of using OLS regression to analyze Likert scales. However, as a further test of reliability of these results, I ran ordinal logit models for the three dependent variables of interest. These models yielded results bearing the same level of significance.⁵¹¹ See Appendix Table A9 for results. Therefore, in the interest of easing interpretation, I will present findings from the OLS models.

The basic regression model is as follows:

Support for higher electricity price = entitlement + age + education + income + gender

$$OLS (\text{Support for Higher Electricity Prices}) = \alpha + \beta_1 (\text{Entitlement}) + \beta_2 (\text{age}) + \beta_3 (\text{education}) + \beta_4 (\text{income}) + \beta_5 (\text{Female}) + \varepsilon$$

Where β_1 through β_5 are the parameters of interest in the study.

The results are shown in Table 6.2, columns 1, 2 and 3. Each column presents results for the dependent variables aggregated for the six countries surveyed in the study. The tables present the coefficients from the multivariate model and the p-values to indicate the significance level of each variable. Standard errors are also given.

6.4 Results

What can the survey responses tell us about citizen attitudes toward subsidy reform in the rentier Gulf? I tested hypotheses 1, 2 and 3 using regression, with “share” as the main independent variable signifying a citizen’s entitlement to subsidies, and the three “support for price increase” responses as dependent variables. I also inserted respondent demographics as predictor variables.

⁵¹¹ Robustness tests were also conducted for multicollinearity and parallel regression. Tests upon each of the three models revealed no multicollinearity and no violation of the parallel regression assumption.

The regression results for the first two dependent variables displayed the expected signs and marshalled strong support for H1 and H2, finding that citizens who express entitlement to national resources are indeed more opposed to higher tariffs under the conditions described, as shown by the negative signs on coefficients in Table 6.2, at the top of column 1 and 2. These findings conform to long-held assumptions reflected within rentier works that portray reforms of energy subsidies as violations of citizen rights. As shown in the table, citizen “entitlement” to energy as a personal share of a national resource is strongly associated with higher levels of opposition to higher prices, when compared with the overall population, in models 1 and 2.

MODEL 1: The results of the first model are given in Table 6.2, column 1. Entitlement-minded citizens are seen to be less willing to pay the full cost for electricity in their homes when informed only that the government is paying for a portion of their consumption. This result provides strong support for H1. Also significant (at the 0.05 level) was level of education. However, contrary to what was surmised above, more educated respondents are actually *less* likely to support higher prices. Based on the other results of this model, there was no corroboration for assumptions that women or younger or wealthier people were also more likely to support higher prices.

Table 6.2: Entitlement and subsidy reform			
(Dependent variables are "willingness to pay" variations in Dep 1, Dep 2, and Dep 3)			
Model:	1	2	3
Share (entitlement)	-.525*** (.1259)	-.422*** (.1142)	-.128 (.1098)
Age (age groups)	-.033 (.0508)	.007 (.0458)	-.002 (.0443)
Income	.007 (.0458)	.027 (.0417)	.0198 (.0402)
Education	-.128* (.0605)	-.025 (.0549)	.094* (.0526)
Female	-.198 (.1349)	-.350** (.1223)	-.153 (.1175)
Constant	2.61 (.2475)	2.61 (.2315)	3.25 (.2190)

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level; Standard errors are in parentheses below coefficients.

MODEL 2: The results of the second model are given in Table 6.2, column 2. Here again, citizens who expressed entitlement to natural resources were less supportive of higher electricity prices, in this case, when invoking the national interest. Again, this result is highly statistically significant and offers strong support for H2. Also significant (at the 0.01 level) was gender, but, again, contrary to what was surmised above, women were less likely than men to support higher prices, despite being informed it

was in the national interest. Based on the results of this model, there was no support for assumptions that more educated, younger or wealthier people were more likely to support higher prices.

MODEL 3: The results of the third model are given in Table 6.2, column 3. Entitlement has no statistically significant effect on whether a respondent would accept an alternate benefit in lieu of higher prices. Here, education was again significant (at the 0.05 level) but this time the sign is in the positive direction, which signifies that respondents with higher levels of education were more likely to accept higher prices if provided an alternate benefit. The other demographic variables were statistically insignificant. There is thus insufficient evidence to support H3, which declares that entitlement-minded citizens will demonstrate more support for higher prices if offered an alternate benefit.

6.5 Discussion

Analysis of citizen survey responses reveals a more nuanced view of the social contract than that implied in the literature. Citizens who express feelings of entitlement to subsidized energy accept the notion that they are entitled to that energy at a special price. Significant correlations from multiple regressions were consistent with the subsidies-as-rights narrative in rentier theory. However, as demonstrated by minority of respondents who selected the entitlement option, a majority of citizens did not express entitlement to subsidized electricity. As mentioned, nearly six in 10 respondents (312 of 541 total) did not select the “entitlement” option.

How does citizen understanding of subsidy and potential reform contrast with that of experts? Broadly speaking, expert opinions reflect the portrayal of subsidies in the literature: Citizens are entitled to subsidized energy and should be expected to oppose increased prices.

When asked a question related to that which informed H1, experts overestimated citizen opposition to proposals that would erode public “rights” to cheap domestic energy. Among the entire pool of citizen respondents (including the “entitled” and those who did not choose this option), 41% were either very or quite opposed and 41% were unopposed to higher prices.⁵¹² By contrast, when experts were asked how citizens would respond, 92% of the expert respondents portrayed citizens as opposed, with just 5% portraying them as not opposed.

In the second survey question that informed H2, the percentage of total respondents “strongly opposed” to higher prices dropped from 26% to just 10%. Therefore a substantial portion of the public was actually willing to make a personal sacrifice to promote the national interest⁵¹³ in a more optimal

⁵¹² The unopposed camp includes the 24% who were either “very” or “quite willing” and the 17% who were “neither willing nor opposed.” I excluded the “don’t know” responses.

⁵¹³ All of the GCC countries have introduced campaigns asking the public to conserve energy

allocation of exportable resources. (As shown above, those expressing entitlement happened to be much less likely to make this sacrifice.) The expert elicitation questionnaire did not contain this question, thus there is no comparison between cohorts.

What if citizens were offered an alternate benefit to replace subsidized prices for electricity, as occurred in Iran? Alaskans, who pay some of the highest electricity rates in the United States, also receive a yearly cash dividend as their portion of the state’s oil revenues. Might a substitute benefit plan be accepted in lieu of higher tariffs in the Gulf monarchies? Responses to the survey question that informed H3 found that opposition was also assuaged by an alternate benefit. Opponents comprised 32% of respondents, with just 9% of those remaining in the “strongly oppose” category. Conversely, 51% of respondents did not oppose this hypothetical exchange of benefits. There was no statistically significant difference in response between those who expressed entitlement to subsidies and those who did not.

As Table 6.3 shows, once again, the expert respondents in the EE survey assumed a greater level of public opposition to a tariff increase, even when replaced by a *quid pro quo* benefit.

Variable/Model	Public Survey		Expert Elicitation	
	Public opposition to higher prices	Public support or indifference to higher prices	Experts who assume public opposition to higher prices:	Experts who assume public support or indifference to higher prices
Dep 1: No explanation	41%	41%	92%	5%
Dep 2: Nat’l interest explanation	32%	49%	n/a	n/a
Dep 3: Alternate benefit	32%	51%	53%	47%
IV: Entitlement	% public choosing “entitlement”		% of experts assuming public would choose “entitlement”	
subsidies = “my share” of energy wealth	42%		75%	

Note: Figures do not add to 100% because “don’t know” responses and missing values were deleted

Citizens were also less likely to claim entitlement rights to subsidized energy than elites and experts anticipated. Whereas 75% of experts selected the option that subsidies represent the citizen’s share of national resource wealth, only 42% of public survey respondents chose it.

The comparison of the two sets of survey results above, one from the public survey, another from an expert elicitation, should be treated as broadly illustrative rather than statistically robust. The methodologies and questions used to gather opinions from both groups differed. While the public was asked for personal opinion, experts were asked to estimate how the public, in aggregate, would respond. Therefore the right-hand column in Table 6.3 represents expectations of experts regarding results in the left-hand column. The differences between the two methods also extend to techniques of data gathering and selection of respondents. It was thus not feasible to use statistical methods to examine differences among the two groups, or to test hypotheses based on such a comparison. However the varying percentages in Table 6.3 still provide a useful illustration that citizen perceptions of social contract benefits are more varied and nuanced than the monochromatic portrayals assumed by experts and within the literature. Likewise, the expert elicitation results illustrate the extent to which experts' understanding of the social contract conforms to portrayals within the literature.

6.5.1 Other Reasons to Support Higher Prices

The aggregate public survey results in Fig. 6.2 beg a further question: Why would anyone want to pay more for electricity? While the regression results found a propensity to oppose higher prices among entitlement-minded citizens, these citizens are in the minority. Overall, a surprising amount of the public did not oppose increased prices. This finding suggests that, while the subsidies-as-rights construct within the rentier literature holds among a subset of the public, alternate explanations for citizen perspectives toward energy may also hold validity. Another account suggested by the aggregate citizen response is desire for more prudent stewardship of national resource patrimonies, given that the interests of citizens and future generations are congruent with optimal allocation of natural resources between domestic consumption and export markets. Since the largest share of the rentier social benefit system rests on export revenues, citizens' best interests might be served more effectively by *reducing* domestic waste and the associated opportunity cost of foregone revenues, while ensuring long-term sales at the highest possible prices, both inside and outside the country. Rentierist constructs of subsidy "entitlements" appeal to some members of the public, but these constructs probably more closely represent regime needs for purchasing domestic loyalty than long-term interests of citizens.

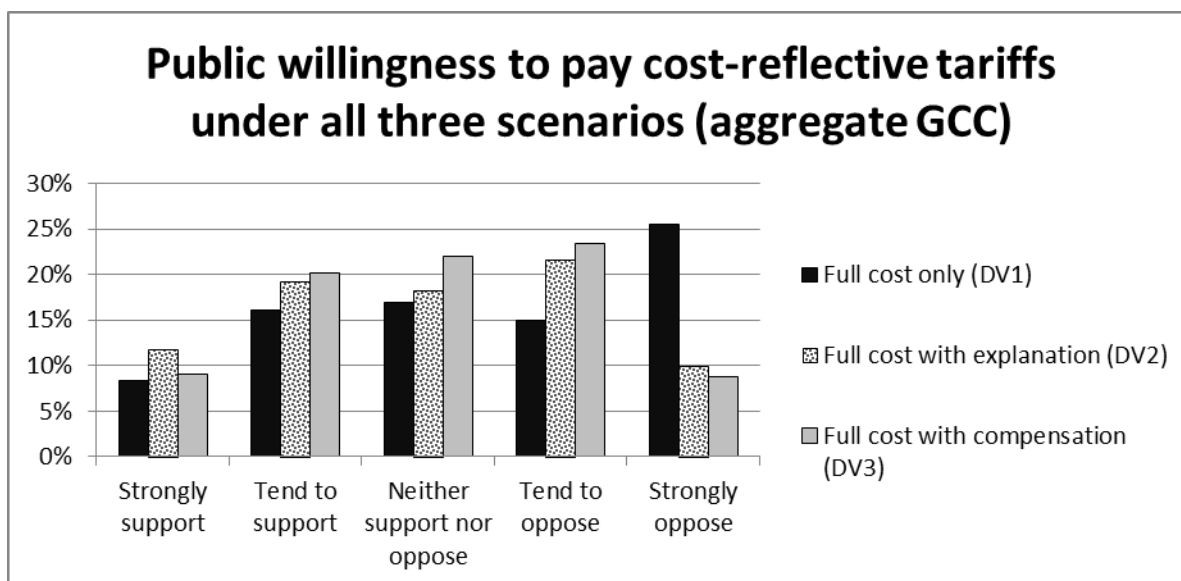


Figure 6.2: Public survey responses regarding higher electricity prices under three scenarios

However, another explanation might also offer insight into this willingness to pay more. In the question informing Dependent Variable 1, where respondents are given no rationale for higher prices, a surprising 24% of the public is nevertheless willing to pay more. This choice appears to run contrary to the public’s immediate financial interest. One possible explanation flows from the implied terms of the authoritarian social contract. If a respondent disputed his or her role in exchanging political support for government subsidies and instead preferred more political participation, he or she might reject government subsidies.⁵¹⁴

The survey did not ask respondents outright whether they would trade subsidies for more participation in governance. However, if this rationale was driving some support for cost-reflective electricity prices, it would provide an opposing message to governments considering raising electricity prices. Whereas the “economic rationality” explanation by which citizens should oppose wasted resources in the name of preserving long-term state distribution appears to *encourage* increased prices, the explanation of demands for increasing political participation does not. In fact, this explanation would validate regimes’ cautious approaches to tinkering with subsidies, assuming ruling families do not wish to encourage participatory demands. In the past, regimes have demonstrated this stance by drip-feeding any political openings into their societies, ensuring that they pose no challenge to ruling family control. Recent repression of pro-democracy forces, including violent responses in Oman,

⁵¹⁴ I am indebted to Bill Nuttall at Cambridge for pointing this out. This hypothesis is undermined by the experience of Kuwait and Bahrain, however, where democratic openings have only intensified rent-seeking opportunities. Also, if survey respondents support higher prices because they seek a corresponding increase in political participation, one would expect to see correlations between the “entitlement” explanation for subsidies and support for higher electricity prices. However, as shown in the retention of H2 and H3, this was not the case.

Kuwait and in Bahrain – where Saudi and Emirati forces joined in – provides another demonstration that regimes remain staunchly opposed to broader liberalization.

6.5.2 Statistical Bias and Mitigation Measures

As Weisberg argues, errors are inevitable in surveys.⁵¹⁵ While useful in gathering an externally valid measure of attitudes and beliefs in society by sampling a small subsection, they remain prone to influencing respondents through question wording and order, as well as other effects, including statistical biases. One such bias that may be relevant here is the so-called “hypothetical bias” that stems from use of “willingness to pay” questions such as the three “support for price increase” questions. These constructions have been shown to overestimate actual willingness to pay because participants given hypothetical opportunities are more willing to commit to a purchase than those offered genuine opportunities.⁵¹⁶ Since this bias might have inflated levels of citizen support for higher prices, especially in Models 1 and 2, I designed the response choices as a Likert range that allows respondents to express a level of willingness rather than a firm commitment, which has been shown to reduce hypothetical bias.⁵¹⁷ Considering these responses a “range” is sufficient for the methodological goal of this chapter, which is to demonstrate that entitlement-minded citizens as a portion of society profess *reduced willingness* to support higher prices, and vice versa. It might be interesting to know whether or not hypothetical support for higher prices among the less-entitled cohort translates to *actual* willingness to pay (on behalf of heads of households with responsibility for utility bills) but this knowledge is not required to prove my hypotheses.

Another effect known as “status quo bias” could be exerting a counteracting effect to hypothetical bias in Model 3, where subjects were queried on willingness to trade one benefit for another. Experiments have shown that people are reluctant to give up a good they own for something of equal value, and that those who own a good happen to value it more highly than those who do not. This bias could be dampening public enthusiasm for trading electricity subsidies for alternate benefits.⁵¹⁸ Mitigation strategies for status quo bias tend toward survey formulation that acknowledges respondents’ preferences for the status quo and their inherent resistance to change, and addressing those through a process unavailable for this research which involves exposing participants to an optimal alternate choice.⁵¹⁹

⁵¹⁵ Weisberg 2008

⁵¹⁶ Several authors have studied this bias aiming to overcome it. In one experiment, respondents offered a hypothetical opportunity to buy medical supplies were more likely to buy them than those offered a genuine opportunity. See Blumenschein et al. 2008. See also: Cummings, Harrison, and Rutström 1995; List and Gallet 2001; Harrison 2006

⁵¹⁷ Champ, Moore, and Bishop 2009; Champ and Bishop 2001

⁵¹⁸ Tversky and Kahneman 1991; Samuelson and Zeckhauser 1988

⁵¹⁹ Samuelson and Zeckhauser 1988

The so-called “fear bias” can affect surveys in authoritarian states, especially on questions delving into sensitive subjects, where respondents may be tempted to give insincere responses due to fear of government repression or retaliation.⁵²⁰ For the reasons given in Chapter 3, however, I suspect fear bias has not produced a large influence on responses.

6.5.2.1 EE Biases

Regarding the expert elicitation portion of this paper, a few potential biases bear reiterating beyond their treatment in the Methodology chapter. The most common is that of overconfidence on behalf of participants, which I address here by grouping similar responses given at varying levels of confidence, and by corroborating EE results against the literature and my own interview data. Anchoring bias can also influence responses on longer surveys like the EE. I addressed anchoring where possible by measures such as validating responses through redundant questions and by requesting extreme high and low values, followed by a request for a median estimate. Related “sequential” effects, which concern to a tendency to over-emphasize the importance of the first and last pieces of evidence in a sequence, were addressed in all surveys, where possible, by randomizing response order. The effect of so-called herding or rational bias has been shown to affect forecasts of GDP or oil prices, for instance, since analysts tend to follow a consensus,⁵²¹ or in the case of anti-herding, deliberately placing forecasts away from the consensus.⁵²² Herding effects are not significant here, given the lack of a consensus on the topics, which can be seen in the wide variations in electricity price predictions and large standard deviations in Appendix Table A3.

Finally, any motivational bias associated with participant selection was probably small. This bias tends to arise in research on controversial topics where experts are divided. Since expert elicitation by its nature deals with “experts” and not random members of the public, experts should be expected to accord topics in their area of expertise with more importance than the average person. Experts are chosen precisely because of their expertise, and their selection is thus *purposefully* biased. Hence EE selection bias is related to the *motivation* behind an expert’s participation in the survey, not whether too many people were selected with higher-than-average knowledge of the topic. In my EE, motivational effects were probably inconsequential, given the lack of controversy or public divides among experts that might affect the issue under study, and the generalized wording of elicitation requests and questions.

6.5.2.2 Mitigation Options for Future Research

Limitations within the public survey might be overcome in future research by methods not available for this work, including a more extensive survey and a more diversified and representative panel that included larger sample sizes in the smaller monarchies. Questionnaires containing specific country-

⁵²⁰ Horne 2011

⁵²¹ Batchelor 2007

⁵²² Pierdzioch, Rülke, and Stadmann 2010

level prices – which would detail the current average monthly electricity expense and compare it to the much higher spending under cost-reflective pricing – might be useful in reducing hypothetical bias.⁵²³ Also, an expanded survey could ask respondents whether they are responsible for paying their electricity bills, how much they pay, and how willingly they would accept a tripling or quadrupling of their current bill. Improvements in questions’ relevance to respondents would allow the researcher to focus on citizens with actual responsibility for payment, helping the research overcome limitations on bias and differentiating among countries and demographic groups. Biases associated with online surveys – which tend to exclude older and less technologically sophisticated segments of society, which remain significant in some Gulf monarchies – would be lessened over time as the Internet penetrates these societies.

Even taking account of these caveats, my results provide nuanced perspective on rentier state subsidies that contrast with the monochromatic portrayal within the literature. These findings also suggest policy avenues that could address energy consumption challenges. For instance, given the relatively high levels of public support for higher tariffs, voluntary programs appealing to the national interest that encourage citizens to opt-in to higher tariffs might achieve efficiency gains without risking a political backlash from the entitled-opposition group.⁵²⁴

6.5.3 Policymaking and the Information Deficit

The gap in perceptions regarding the social contract – with citizen understandings diverging from those of experts and the literature – is consistent with the information deficit that is said to impair policymaking in autocracies. Scholarship examining the institutional environment of authoritarian states has long argued that policymakers in autocracies suffer from much weaker awareness of public preferences than do their counterparts in democracies.⁵²⁵ The democrat’s advantage stems from institutions that offer avenues for criticism and amendment of unpopular measures. These range from freedoms of speech and press, independent judiciaries, and elections that provide opportunity to vote for an organized political opposition. Since these constraining institutions are less common in autocracies, Wintrobe argues (in similar fashion to classic rentier scholars) that autocracies thus enjoy enhanced freedom of policy action. However, citizens in autocracies also tend to be reluctant to signal their displeasure with policy. Rulers are apt to fear the public since they lack information on public opinion. The phenomenon is known as the dictator’s dilemma. Regime understanding of public

⁵²³ Blumenschein et al. 2008

⁵²⁴ Borenstein finds efficiency gains from an opt-in tariff in California that allows utility customers to choose a flat rate or a variable rate with discounts at off-peak hours and a premium at peak times. See Borenstein 2012

⁵²⁵ Bueno de Mesquita et al. 2002; Tullock 1987, 122–3; Kuran 1989; Wintrobe 2001

preferences is thus negatively correlated with repression. Rational choice literature describes this information deficit as the result of weak institutions that characterize personality-based rule.⁵²⁶

The autocratic governance that typifies Gulf monarchies is consistent with the dictator's dilemma, but the information deficit stems not only from deficient institutions and signaling, but also an absence of common consultative practices, such as use of survey and focus groups, that can illuminate public preferences. Social policy is fragmented, and regimes wield rent streams, business licensing and import restrictions to co-opt rivals with economic privileges that increase costs of defection.⁵²⁷ Policy proposals are typically debated in traditional family-tribal networks and then launched.

A UAE government official's description of policymaking reveals a process which pays little heed to public preferences:

“Policymaking isn't very mature in the government. People will just brainstorm around an idea, take it to the legal department and draft a law. From legal it goes to the *diwan* [ruler's court] and then to the sheikh. He will discuss whatever proposal they bring him. Most (policymakers) don't see the value in consultation.”⁵²⁸

But while avenues of citizen protest are not institutionalized in the Gulf, they still exist. The freedom of policy action that the literature describes often disintegrates when a public backlash ensues. Complaints filter into the media and social networks. Prominent citizens go directly to the ruler or his agents. When the outcry is sharp enough, the law is adjusted.

“This is what happens when you announce the policy with no proper analysis or consultation. We don't have a mechanism for public complaints. We hear about it through the newspapers and our own social connections. We need channels of communication.”⁵²⁹

6.5.4 The Uncertain Boundaries of Extractive Policy

Sensitivity to public opinion has inculcated in governments a reflexive resistance to “extractive” proposals such as the subsidy reforms discussed in this chapter. Gray and other rentier scholars suggest that regimes increase responsiveness to society over time, while displaying little appetite for testing the boundaries of social contracts. Recent pan-Arab uprisings have only redoubled these sensibilities.⁵³⁰ Policymakers said they feared negative public reactions as well as unwanted scrutiny

⁵²⁶ Wintrobe 2001; Bueno de Mesquita et al. 2002; Bueno De Mesquita et al. 2003, 73–4; Kinne 2005

⁵²⁷ Mares and Carnes 2009; Haber, Maurer, and Razo 2003

⁵²⁸ UAE government official, interviewed by the author on condition of anonymity, Apr. 8, 2012.

⁵²⁹ UAE government official, interviewed by the author on condition of anonymity, Apr. 8, 2012.

⁵³⁰ Results from a separate expert elicitation the author conducted with UAE policymakers in March 2012 found that 15 of 25 respondents said the Arab Spring events made the government “less willing” to raise utility rates (one of three choices); while 21 of 26 respondents said the government was either “very sensitive” or “extremely sensitive” to citizen opinion on subsidies (of five choices). One respondent commented that the

from the ruler's office. Despite the sensitivity, governments appear to be unwilling to use common consultative tools such as surveys and focus groups. Nor is there a clear understanding of the ruling family's boundaries on policymaking.

"I haven't done public surveys. I don't know what the public thinks. I'm making all kind of assumptions that may not be true. I don't know whether it's the sheikh's perception that (subsidized energy) is a right. But if he got a proposal that advocated a 30 percent price increase, he might say, 'Give me an idea what this means to the average person's account.' Or 'Let's go with 10% instead.' The answers he gets (from staff) might not be based on a proper study. If you develop some government policy tools to capture public opinion, then you have less chance to base policies on hypotheses that aren't true."⁵³¹

A government official in Oman described blocking or retraction of extractive measures.

"There have been attempts to create toll systems on the roads. Those have been stopped. There used to be an immigration payment of two to five riyals when you crossed the border to go to Dubai. That has actually been stopped. Groups of people went to his majesty to request exemption. It's really not easy in this part of the world. You have to listen to the people's demands. In the United States or Europe people pay 50 or 80 percent of their salaries for democracy. It's a tradeoff."⁵³²

A prominent Saudi energy official reiterated the quid pro quo assumptions that typify the EE responses, which suggest that benefit substitution, as per the Iran example, remains a viable possibility.

"The residential electricity tariff is part of the social agreement between the royal family and the people. If you touch it you have to repay it somewhere else."⁵³³

An expatriate energy policymaker in Qatar echoed these sentiments, saying that any attempt to impose extraction would have to be balanced by a new gesture of government largesse.

"My role when I came here seven years ago was to introduce cost-reflective tariffs. I've been incredibly unsuccessful. The locals have this right to free power and water. For the foreseeable future it won't change. The government has enormous wealth. It sees distributing

uprising had made the government "much, much, more sensitive and less willing to raise prices or antagonize anybody, anywhere, at any time."

⁵³¹ UAE government official, interviewed by the author on condition of anonymity, Apr. 8, 2012.

⁵³² Author interview with Omani government official on condition of anonymity, Muscat, Nov. 13, 2011.

⁵³³ Author interview with Saudi energy policymaker on condition of anonymity, Riyadh, Oct. 16, 2012.

free power as a way to share that wealth. If you reduce that benefit, you would have to find another benefit to replace it.”⁵³⁴

Anonymous surveys offer the possibility of sidestepping the signaling problems and information deficits that obscure policymaking. Gathering survey responses allowed me to assess citizen responses to subsidies often described as a key component of the autocratic social contract. While the social contract is well understood as the *mechanism* governing the exchange of government benefits for public support, this research shows that citizen concepts of the *terms* of that bargain are not uniform or clear, nor are the boundaries for policymaking.

Elites, perhaps because of their lack of information on public opinion, believe that the public is overwhelmingly opposed to subsidy reform unless it receives an alternate benefit to compensate for those revoked. Public survey results challenge that perception. In Model 1, the public was as supportive or indifferent to higher prices as it was opposed. The expert understanding was one of overwhelming public opposition. Public willingness increased substantially under the still-extractive terms of Model 2, when the national interest was invoked, and remained nearly identical to that in Model 3, when a replacement benefit was offered. Given the urgency of reducing energy demand in these countries, the overestimation of public opposition to reform would seem a costly misperception.

6.6 Conclusion

The relationship between state and society in the rentier monarchies of the Gulf is more nuanced and complex than portrayed in the rentier literature. Many citizens conform to the pronouncements in the literature by expressing entitlement-based reasoning for their receipt of energy subsidies. This “entitled” group is statistically more likely than the general population to oppose reform of those subsidies. On the other hand, substantial portions of the public did not express entitlement to subsidies or oppose higher prices. Support for higher electricity prices rose substantially when the public was given a national-interest explanation, although the “entitled” group still remained significantly more opposed. However, when the public was offered a benefit to replace the foregone subsidy, opposition within the entitled group dropped to the point where it lost statistical significance.

The public’s understanding of the urgency of reform would thus appear to be an important element in policy acceptance. As depicted in Table 6.3, citizens in aggregate were willing to pay more in nearly equal measure when informed of the national interest, or when offered a replacement benefit.

These results lead to three subsidiary findings. First, the participants in social contracts in the Persian Gulf monarchies exhibit divergent views of the terms of exchange. Rigid theoretical understandings

⁵³⁴ Author interview with Qatar government official on condition of anonymity, Doha, April 4, 2012.

find more support among experts – elite policymakers, economists, and sector participants – and less acceptance among average citizens. This finding suggests a deficit in elite understanding of public preferences consistent with the signaling problems described by Wintrobe.

Second, elites exhibit a conservative bias. The experts surveyed – whether in government or industry, expatriate or national – assumed higher levels of citizen “entitlement” to cheap energy and deeper citizen opposition to increased prices. Experts’ views on subsidy rationale and reform appeared to mirror tenets of the rentier literature, whereas citizen views often diverged.

Third, the disconnect identified between theory and public opinion points to a problem with the core assumptions of the literature. Those assumptions imply that autocracies govern with a fixed set of inputs and outputs: if there is a reduction in patronage, there must be a corresponding increase in repression or in political participation.⁵³⁵ Public responses to my survey – and the public responses to tariff increases in Dubai⁵³⁶ – show that these assumptions are off-base.

What do these findings mean for policymaking? The survey results suggest that a segment of the populace would consent to price reforms that might extend the economic models of these states while leaving regime legitimacy intact. Opposition would be concentrated among members of the public with a strong sense of entitlement to subsidies, based upon feelings of personal ownership of natural resources. Significantly, a third of the survey population remains opposed to higher energy prices, even when invoking the national interest or offering a substitute benefit. Even among those who claim to be willing to accept higher prices, one should keep in mind that a hypothetical survey is different from reality. Those who are indifferent or mildly supportive may be swayed by opponents once policies are proposed. And the presence of an anti-reform cohort appears to validate regime fears of antagonizing citizens in ways that could provide a conduit for protest and Arab Spring-style mobilization.

Even acknowledging the necessary caveats, these findings imply that governments in need of reducing energy consumption may have more scope for reform than they or regional elites believe. Although more work must be done to investigate public opinion in the Gulf, particularly at the country level, results suggest that reforms could be made more palatable via a mainstreaming campaign that highlights resource waste and intergenerational equity, such as that which preceded Iran’s subsidy reforms of 2010.⁵³⁷

However, Dubai’s subsidy reform of 2011 was launched without either of these inducements. As described in the previous chapter, Dubai raised electricity prices by 15%, including on Emirati

⁵³⁵ Desai, Olofsgard, and Yousef 2009. I am indebted to Sean Foley for suggesting this input-output construct in his comments on an early draft of this chapter.

⁵³⁶ See previous chapter for a discussion of Dubai’s electricity price reforms

⁵³⁷ Guillaume, Zyteck, and Farzin 2011

nationals, and did so without public discussion. Citizens complained, and the new prices became a temporary newspaper and talk-radio theme, but the increases were ultimately accepted without a quid pro quo benefit, such as that provided in Iran. Most importantly, the state utility registered a corresponding drop in average household consumption.⁵³⁸ Either way, it seems that citizens may be willing to submit to higher prices.

Among the oppositionist “entitlement” group, effective language advocating reform might include allusions to citizens’ proprietary interest over resources, and the understanding that those resources are being depleted on an uneconomic basis that endangers the long-term rentier bargain. In this case recalibrating the distributive social contract is not just in the interest of the regime, but that of society, even those feeling “entitlement.”

Energy entitlement structures in the Persian Gulf monarchies appear frozen in time, with prices unchanged for decades in some cases.⁵³⁹ The gains from these welfare benefits have long since been eclipsed by the harm caused by wasted resources and the political-economic threat embodied in the state’s accumulating distributive burdens. As distribution of subsidized energy reaches its limit, prospects for reforming the exchange of entitlements for quiescence appear more necessary, and more promising, than the rentier literature – or regional elites – would accept.

⁵³⁸ The Media Office for HH Sheikh Mohammed bin Rashid al-Maktoum 2011; author interview with Dubai government official on condition of anonymity, Dubai, April 8, 2012.

⁵³⁹ Kuwait’s current electricity tariff was set in 1966. Abu Dhabi’s dates to 1989.

Chapter 7: Conclusion: Energy and the Rentier State

When UAE Prime Minister Sheikh Mohammed bin Rashid al-Maktoum was a boy, he slept in a single room without electricity together with his parents and siblings. His only relief from the smothering summer heat came via the humid breeze off the nearby Gulf, captured by a *barjeel* wind tower which rose above the roof and funneled the cooler air indoors. In the courtyard of his home, slaves carried barrels of Tigris River water brought in from Iraq, one of the few luxuries afforded the ruling family. Most of his countrymen drank brackish local water sold by donkey cart vendors.⁵⁴⁰

The well-known transformative effects of oil swept away these humble methods of cooling and water distribution. Oil brought wealth and development, and oil rents flowed into distributional structures that allowed Sheikh Mohammed's family – and his counterparts in neighboring monarchies – to maintain control of the state without needing to offer increases in political pluralism to society. Moreover, while export rents financed the infrastructure behind air-conditioning and desalinated water, it was surplus production of oil and gas that provided the primary energy required to power these services. Since oil, like export rent, was distributed liberally across societies and lands in the Gulf, it produced a distinct, energy-intensive pattern of development.

Five decades later, Sheikh Mohammed and his children can don winter parkas and ski at an indoor slope in a shopping mall, even in the middle of summer. They can tend to horses in air-conditioned barns, or swim in chilled pools. The gargantuan un-insulated villas of Kuwait City and Riyadh, the skating rinks and gas-guzzling SUVs in Doha, and the irrigated golf courses and heat-trapping glass-walled skyscrapers in Abu Dhabi are made possible not just by energy *rents*, but by state-subsidized energy *products*. Pricing and supply patterns set in the early days of the oil boom are integral parts of the distributional structures of political control. The availability of inexpensive oil and gas became an important component of the rentier bargain, alongside better-known inducements like jobs in the bureaucracy and subsidies on food and housing. Rentier energy policy shaped cities and infrastructure, allowing developers to reduce costs by sidestepping the expense of efficient techniques and “locking in” a pattern of energy intensive development that has become difficult to change. Energy intensity is an outcome of the rentier governance practiced in the Gulf, alongside other, previously documented peculiarities of rentier states.

The influence of energy and energy prices is an underappreciated property of the rentier system, at least as it is conceived by scholars. This feature may have languished in obscurity even longer were it not for the compounding effects of steady rises in consumption that now threaten to displace exports, a trend that has triggered alarm among policymakers and a reappraisal of energy distribution

⁵⁴⁰ Krane 2009

practices. My investigation of avenues for reforming energy subsidies found that the rentier literature, despite providing such a strongly predictive political economy model that has weathered enormous changes in these states and societies, does not sufficiently address the long-run repercussions of allocation.

This dissertation has addressed this gap by documenting and elevating the under-researched role of energy allocation in these rentier states, and incorporating the theoretical significance of energy as a physical commodity – rather than as a source of rent – into the rentier literature. The entrenchment of energy in these political economies extends far beyond that envisioned in classic rentier state theory, encapsulated in Luciani’s declaration that oil “has value only to the extent that it is exported.”⁵⁴¹ The practice of energy subsidization has transformed these states into prodigious consumers of their chief export commodities, nurturing a dependence that has driven choices in industrialization, city design, technology preference and use, and personal habits. Cheap fuel, electricity and desalinated water have supported population growth, foreign investment and the once-isolated region’s integration into the global economy. Price subsidies have also helped build public acquiescence to unelected regimes. But perhaps the more significant role of subsidies is in shaping what have become some of the most energy-intensive economies in the world. The Gulf and wider Middle East has become recognized as a rising global center of energy demand which complicates its heretofore one-sided portrayal as a source of supply. The duality of energy’s role contributes to the difficulty of subsidy reform. Externally, energy is the main source of state revenue; but domestically, it is an important driver of political support.

As demonstrated in Chapter 4, subsidies account for one-quarter to one-half of energy demand in the GCC. Low prices have also restricted incentives for the production of natural gas, which, given the demand environment, has turned two Gulf states – the UAE and Kuwait – into net importers of gas. Five of the six GCC monarchies are shifting to high-cost models of electricity production that depend on costlier feedstocks such as LNG, crude oil and unconventional natural gas. Price reforms present an opportunity to reduce the prodigious economic cost of diverting resource production into the subsidized domestic market. Calculations using modest estimates of price elasticity of demand show that the positive economic effect of rationalizing prices would be huge. A rising tide of evidence and aggregated opinion demonstrate that the literature’s prohibitions on these sorts of reforms appear ripe for challenge. As detailed in Chapter 5, however, the disposition of states to carry out those reforms is far from uniform. Among the six monarchies, Saudi Arabia and the UAE appear as the most likely reformers of price subsidies, Kuwait and Qatar the least.

⁵⁴¹ Luciani 1987, 65–8

The imperative of accommodating energy within rentier theory is also driven by contradictions emerging within rentier governance structures. Rising domestic consumption and steady exports are, in the long run, incompatible. The limiting factor on resource draws is not the size of reserves, but the amount of production; and production levels have reached or are nearing plateaus. Rentier consumption practices now threaten the flow of rents. This dissertation has introduced the self-consuming nature of rentierist resource distribution, while revising theory to accept a more flexible interpretation of subsidies as customary privileges, which allows for reform of these practices.

Until now, the literature left energy subsidies undistinguished within the aggregate rent distribution stream that theory correlates with political stability. I argue on both theoretical and empirical grounds that the “rent distribution” construct must accommodate the separation of financial rent distribution from in-kind resource distribution, and allow for the winding up of the latter practice in the interest of preserving the system. As explained in Chapter 5, distribution of energy resources is a less flexible practice than distribution of energy rents. Whereas rents can be generated from many sources, national oil and gas resources are finite and subject to limits on extraction. Ultimately, maintaining exports while meeting rising domestic demand requires these governments to make choices that may be less palatable than constraining domestic demand. The alternative choices include coping with costs of rising market-priced imports, investment in alternative energy technology, or increasing domestic oil and gas production. Raising production for the domestic market would require states to make capital investments for the sole purpose of continuing to supply energy products at prices which, in most cases, do not even cover *average* cost of supply, let alone the marginal cost associated with additional production. In this sense, the domestic distribution of primary exports that is characteristic of the rentier state comprises an encumbrance on its economy, which, in the longer term, becomes a potentially destabilizing factor within the governance structure. My findings suggest that some regimes, at least, may view subsidy reform as the most sensible of their near-term policy options.

For regimes, energy has heretofore proven an opportune component within social contracts. As Wintrobe argues, in-kind distribution allows regimes to maintain control over the type of services delivered, as well as preserve a more directly dependent patrimonial relationship with their citizens.⁵⁴² Energy allocation thus conforms to regimes’ wishes to trade income for loyalty without the fiscal transparency associated with cash distributions. But in-kind resources may not comprise the preferred benefit of citizens, whose interests are more congruent with long-term maximization of exports and state rent distribution. Citizens in Iran and Alaska appear content to receive their benefits in cash rather than as in-kind energy. Moving forward, the efficiency premium implied by converting

⁵⁴² Wintrobe 2007, 98

the in-kind energy allocation to cash – akin to Hertog’s citizens’ income⁵⁴³ – may outweigh the potential sacrifices for the regime in opacity and political control.

Citizens’ perceptions are another under-researched theme in the literature on rentier benefit systems. Scholars inveigh against ending subsidies and experts agree that they are rights of citizenship, but the views of citizens – the primary recipients of any reform agenda – are more complex. As demonstrated in Chapter 5, some citizens do claim entitlement to energy subsidies and those who do are more likely to oppose their reform, but these views are not representative of society at large. A substantial portion of the public appeared willing to go along with subsidy reform, even more so when given a good reason, or when offered an alternate benefit.

Energy consumption is the latest in a series of challenges that have tested the resilience of the GCC monarchies. Most recently the six ruling families emerged intact from the Arab Spring uprisings. Previously they survived the prolonged fiscal crisis of the 1980s-1990s oil bust. The energy demand challenge presents a new set of factors. Prior (albeit mistaken) assumptions about monarchical longevity tended to revolve around global oil prices. However, assuming steady global demand, the trends covered here are playing out independently of oil prices. As demonstrated by the example of Indonesia, rising oil prices can compensate for the effects of reduced exports in the short run, but not forever. The consumption challenge is more structural than the fiscal challenge of the oil bust years.

Policymakers and experts have already come around to this view, as demonstrated by Chapter 5’s expert elicitation results and documentation of public statements regarding the danger posed by subsidies. In at least four of the six monarchies, experts view rising consumption as an economic threat rather than in more typical fashion as a driver of growth or stability enhancement. This dissertation introduces this concept into the academic literature.

Rentier approaches must accommodate this change in perception of energy subsidies. Theory must differentiate among various types of social benefits and adapt to the real possibility that some types of subsidy “entitlements” can be revoked, as demonstrated in Dubai, or replaced, as Iran has done. Introducing the self-consuming characteristic of rentierism and allowing for its reform does not challenge or undermine the core validity of rentier theory, which retains considerable power in its explanation of regime durability, behavior and relations with society. Rather, pointing out this omission highlights a long-term weakness in the literature’s previous theoretical prohibitions on subsidy reform. This dissertation retains the core rentier thesis on the importance of externally generated rents, while strengthening the theory’s explanatory power by reconfiguring subsidies from “rights” to “customary privileges.” This new portrayal provides theoretical allowance for the retraction of social contract benefits which are traded for regime support. These amendments provide

⁵⁴³ Hertog 2012

a necessary re-alignment of theory with changes in the on-ground context within these allocation states, as well as with mounting evidence that state-society interactions involve more than just exchanges of rent for political support, as demonstrated by Dubai's successful imposition of subsidy reforms, and the likelihood that other regimes may follow.

Also worth noting is the heterogeneity among countries often analyzed as a regional unit. Some of my key results examine differences at the national level, showing, for instance, that subsidy reform pressures are not uniform across the six monarchies, nor are levels of resources per capita, nor the political risks of tinkering with social contracts. A few avenues to delve more deeply into regional heterogeneity were limited by survey sample size within some of the smaller monarchies, but the richness of the findings points to opportunity for further research. It is worth noting some differentiating characteristics.

Qatar consistently stands out as an exception to the regional norm. Given the size of its population relative to the value of its resource exports, Qataris have become the world's richest people on a per capita basis. The tiny monarchy is the only major gas exporter in the Gulf and surrounding region, and the only GCC state that is neither undergoing a shortage of natural gas nor facing the challenge of increasing cost in gas production and electricity generation. Qatar has experienced the GCC's highest rates of immigration, economic growth and energy consumption in recent years, while simultaneously exhibiting less urgency for reform, despite giving its citizens unlimited free electricity and desalinated water. Qatar's electricity sector is dominated by industry, which also contrasts sharply with the residential-dominated sectors of the other five monarchies. Unlike its Arab neighbors, Qatar's gas resource is mainly unassociated with oil, which means extraction is more flexible. Production of non-associated gas can be raised or lowered without regard to oil production and OPEC quota, in contrast to the more restricted opportunities in most other GCC states. However, as its oil production begins to plateau, Qatar will grow more exposed to global gas prices in ways unmatched by neighboring states. For these reasons and perhaps others, Qatar stands out from its GCC cohorts.

The other five monarchies all exhibit unique features, but none is as regularly caveated. Perhaps Bahrain comes closest, given its small and depleting resource base, its marginal contribution to markets, and its unique sectarian character, with a Sunni Muslim regime and a population that is majority Shia. For Bahrain, as mentioned in the introduction, energy consumption issues are eclipsed by more pressing concerns of political stability. For these reasons, as well as small sample sizes, Bahrain was dropped from some of the statistical analyses in this thesis.

In a more important way, Saudi Arabia also stands out. The kingdom's sheer size and global importance signifies the far higher stakes that rest on its ability to restrain domestic consumption. To some extent, the well-being of the other monarchies – and not to mention the oil importing world at

large – depend on Riyadh’s response to its demand challenge, given that its spare production and export capacity is perhaps the single most important asset in maintaining the strategic interest and protection of the West. This protection, of course, undergirds the hard security needs of all six regimes.

As for the UAE and Kuwait, they harbor nearly equal hydrocarbon resource bases, but display few similarities beyond this. The authoritarian state-capitalist UAE plays China to Kuwait’s more democratic India, with its vibrant but obstructionist parliament and top-heavy bureaucracy. The UAE federation presents an example where the rentier theory concept of regime autonomy remains strong. In the emirate of Dubai, regime autonomy was sufficient for the state to raise utility rates on the most politically sensitive customer group, the citizen residential sector. In Kuwait by contrast, there appeared few prospects for the retraction of citizen subsidies or indeed any other form of government extraction. The current level of regime autonomy in Dubai may never have existed in Kuwait.

Oman is the easternmost and most isolated Arab state, cut off from the rest of the Middle East by sea and the vast sands of the Empty Quarter. Oman is arguably the most absolute of the monarchies and one of its more potentially volatile. The sultanate exhibits troubling characteristics in the form of an aging ruler who has not publicly named an heir nor institutionalized the role of his family in governance, as well as a very young population and fast-growing energy consumption from a depleting resource base. Dampening the prospects of subsidy reform in Oman is the perception that ruling autonomy appears to be waning in equal measure to the availability of surplus hydrocarbons.

Finally, it bears mentioning how predictive and durable the core rentier thesis has proven over the years. The Gulf states modernized but remained autocratic, in defiance of the tenets of modernization theory. The onset of democracy in Turkey, Indonesia and other Muslim or tribally riven states (Tunisia being the latest) undermined political culture explanations for autocracy. By linking autocracy to rent, the economists led by Mahdavy, Beblawi and Luciani created an attractive and parsimonious explanation which has endured three-and-a-half decades of tumultuous change. Just like the region it analyzes, rentier theory has been challenged, amended and strengthened, while growing more complex and less parsimonious than it once was.

Previous audits of rentier theory have provided timely updates that remedied earlier oversights on regime autonomy and deference to citizens, as well as the development of industrial and economic policies, even the careful reconsideration of political culture variables. This dissertation joins this conversation by examining trends in the rentier energy sector, neglected within the literature, and unearthing developments that appear incompatible with current theory. The result is another update, one which overturns theory’s ban on extraction – in the case of energy subsidies – and increases the role of energy in state formation. Reforms in energy policy are important not just because they

challenge the most important academic theories of governance of these states, but because they present a framework for understanding the difficult tradeoffs between politics and economics that drive to the heart of the survival of these peculiar regimes.

The rentier monarchies of the Gulf have grown far more complex than early theorists had imagined, and societies and their preferences have evolved. However, the basic tenets of rentierism still pose a source of tension when juxtaposed with the austere features of society's Bedouin heritage. This tension, which offers some optimism for outcomes to the problem analyzed in this dissertation, has been present for some time. The great Andalusian sociologist Ibn Khaldun, who derided "weak-minded opportunists" who parlayed resource rents into lives of "laziness and ease," also harbored great admiration for the Bedouin ancestors of the Gulf tribal clans, and the codes and values that still permeate institutions underlying Gulf society. These traits may well prove useful once again. "They pay attention to the most distant barking or noise," Ibn Khaldun wrote of the Bedouin. "They go alone in the desert, guided by their fortitude, putting their trust in themselves. Fortitude has become a character quality of theirs, and courage their nature."⁵⁴⁴ As the distant barking grows louder, I believe we will see evidence of that fortitude among Gulf's ruling clans and their subjects, as they take up the challenge of energy demand.

⁵⁴⁴ Khaldūn 2005, 93–5

Appendices

Appendix 1: Fieldwork

As mentioned in Chapter 3, below is a table outlining my fieldwork visits to the Gulf, conference attendance and PhD research presentations.

Table A1: Dissertation Fieldwork			
Destination	Dates	Days	Tasks
UAE	Nov 6-12, 2010	7	Meetings Abu Dhabi crown prince's court; interviews; presentation Dubai School of Gov't
UAE	Nov. 28- Dec. 6, 2010	5	Attended EU-GCC energy conference Dubai; interviews; speech Capital Club Dubai
UAE	Apr 16-21, 2011	6	Attended Dubai Global Energy Forum
UAE	Sept 25-30, 2011	6	Attended/presented at Dubai Future Cities Conference
Oman	Nov. 11-16	6	Interviews, presentation, tour Barka combined cycle power plant
Qatar	Nov. 17- Dec. 7, 2011	21	Interviews, conferences, meetings, survey design and preparation
Qatar	Jan. 16-29	14	Interviews, conferences, meetings, expert elicitation design and preparation
UAE	Jan. 30-31, 2012	2	Interviews
Qatar	Feb. 1-7, 2012	7	Interviews, meetings, transcripts typed
UAE	March 4-24, 2012	20	Interviews, conferences (MEED Power and Water Conference Abu Dhabi, UAE University exchange and meetings in Al Ain; Presentation and focus group Dubai Prime Minister's Office; Presentation GDF Suez Dubai
Kuwait	March 25-30, 2012	5	Interviews, meetings Ministry of Electricity and Water, presentations at American University of Kuwait, focus group
Qatar	March 30- Apr. 3, 2012	5	Interviews, meetings, research presentation Georgetown University Doha
UAE	April 4-18, 2012	15	Interviews, meetings, focus group Dubai School of Government
Saudi Arabia	Oct. 12-23	12	Interviews and meetings in Riyadh (Ministry of Petroleum and others) and Eastern Province (Saudi Aramco, GCC Interconnection Authority, etc.); Presentation and meetings KAPSARC, Riyadh
Qatar	Oct. 23-25, 2012	3	Interviews, meetings
Austin, Texas	Nov. 3-7, 2012	5	Attended Int'l Association Energy Economics conference, lectures at conference and U Texas LBJ school
Denver, Colo.	Nov. 15-21, 2012	7	Attended/presented at Middle East Studies Association conference
Washington DC	Nov. 11-15, 2012	5	Attended/presented NDU Gulf Security conference; meetings US Dept. of Energy, Energy Info Administration

London	Jan. 28-29, 2013	2	Chatham House MENA energy conference
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Appendix 2: Expert Elicitation Tariff Estimates

Table A3 depicts the range of experts' estimates for 2020 residential electricity tariffs in the six Gulf monarchies.

Table A3: Expert elicitation results: 2020 Tariff estimates in comparison with current rates (local currency)					
What do you expect AVERAGE RESIDENTIAL tariffs to be in 2020?	Lowest price (95% chance the real price will be higher)	Median price (Your "best guess" prediction of the 2020 price)	Highest price (5% chance the real price will be higher)	Current avg. citizen price	Diff. between median estimate and current price
Bahrain 2020 (avg. of 3 estimates)	1.6	2.3	2.9	1.1	+1.2 fils (109%)
Bahrain std. dev.	0.8	0.8	1.0		
Kuwait 2020 (average of 15 estimates)	1.4	3.1	5.9	0.7	+2.4 fils (343%)
Kuwait std. dev.	1.0	2.1	3.8		
Oman 2020 (avg. of 9 estimates)	4.4	7.3	10.5	3.1	+4.2 baiza (135%)
Oman std. dev.	1.9	3.3	5.5		
Qatar 2020 (avg. of 11 estimates)	4.9	7.2	10.2	0.0 (citizen price)	+7.2 dirham (n/a)
Qatar std. dev.	5.2	6.4	8.0		
KSA 2020 (avg of 20 estimates)	4.9	8.9	13.2	3.2	+5.7 halala (178%)
KSA std. dev.	3.6	5.9	7.1		
UAE 2020 (avg. of 25 estimates)	4.9	7.6	11.0	4.1 (avg citizen price)	+3.5 fils (85%)
UAE std. dev.	1.9	2.9	5.1		

Appendix 3: Expert Elicitation Participants

Deleted in the public version, available in the printed versions at Cambridge main and Judge Business School libraries. Note that the full expert elicitation questionnaire and results, too large to include here, is available in PDF format by emailing the author.

Appendix 4: Pricing Comparison

Table A5 offers a comparison of charges for residential utilities, showing a hypothetical case based on an actual residential utility bill issued by the Dubai Electricity and Water Authority in October 2013 revealing that, even after a 15% rate increase, foreign residents pay substantially higher rates (slightly more than quadruple) than those charged to citizens.

Table A5. Dubai residential electricity and water: Citizen vs. non-citizen pricing based on a residential bill from October 2013

Electricity use (kwh/mo.)	Citizen price (fils/kwh)	Foreigner price (fils/kwh)	Usage	Citizen cost (AED)	Foreigner cost (AED)
0-2000	7.5	23	2000	150.00	460.00
2001-4000	9	28	2000	180.00	560.00
4001-6000	10.5	32	2000	210.00	640.00
6001 and above	12.5	38	4380	547.50	1664.40
Subtotals:			10380	1087.5	3324.4
Water (gals/mo.)	Citizen price (fils/gal)	Foreigner price (fils/gal)			
0-6000	0	3.5	6000	0.00	210.00
6001-1200	0	4	5867	0.00	234.68
12001-20000	0	4.6			
more than 20,000	1.5	4.6			
			Subtotals	0	444.68
				Citizen cost	Foreigner cost
Fuel surcharge (electricity)	0	6.0 fils/kwh	10380 kwh	0	622.8
Fuel surcharge (water)	0	0.6 fils/gal	11867 gals	0	71.2
			Subtotals	0	694
			TOTAL (AED)	1087.50	4463.08
			TOTAL (USD)	\$296.13	\$1,215.30

Appendix 5: Public Survey

Details of public survey, coding of survey variables and demographics

Conducted by: YouGov

Fieldwork period: Nov. 28-Dec 4 2011

Sample size: 730 respondents

Language: The survey was written in English and translated into Arabic. Display language was governed by the user's browser settings. The English text of the survey follows.

Table A6: Public survey text - English version

Introduction: In the GCC countries, there is increasing concern about energy issues. Some residents are concerned about rising prices, while governments worry about growing consumption. In this very short survey you are encouraged to have your say about energy issues.	
Question JK1. In 2010, GCC governments paid, on average, more than 50% of the cost of electricity in nationals' homes. From what you know, why does the government contribute in paying for your electricity? (please select all that apply)	1=Because it is my share of the country's energy wealth; 2=Because it is the government's responsibility; 3=Because the ruler is generous; 4=Because energy is abundant in my country; 5=Because I cannot afford to pay the full cost; 6=Other; 7=Don't know (<i>Note: responses randomized in actual survey</i>)
Question JK2: How willing are you to pay the full cost of electricity consumed in your home? The true cost without government subsidies is more than the average price that nationals in your country pay now.	1=Very willing; 2=Quite willing; 3=Neither willing nor opposed; 4=Quite opposed; 5=Very opposed; 6=Don't know
Question JK3: Some people have said that because electricity is provided to nationals at an artificially low price some people waste it. This consumes oil and gas that could be exported. If the government sought to conserve energy by asking you to pay the full cost of electricity, would you:	1=Strongly support; 2=Tend to support; 3=Neither support nor oppose; 4=Tend to oppose; 5=Strongly oppose; 6=Don't know
Question JK4: If your government raised the prices of electricity to nationals and also compensated them with a benefit of equal value, would you:	1=Strongly support; 2=Tend to support; 3=Neither support nor oppose; 4=Tend to oppose; 5=Strongly oppose; 6=Don't know
Question JK5: Which is the best way to distribute benefits from your country's oil and gas resources? (please choose one answer you think is the best)	1=Spend it all now; 2=Spend most now, save a little for future generations; 3=Spend half, save half; 4=Spend a little now, save most for future generations; 5=Save it all for future generations; 6=Don't know

The survey also included the following demographic question:

Are you a national of your country of residence or an expatriate?	1=National of country of residence; 2=Expatriate
The survey cohort supplied the following demographic information:	
Gender:	1=Male, 2=Female
Age Groups:	1=18 to 24; 2=25 to 29; 3=30 to 34; 4=35 to 39; 5=40+
Income Groups:	1=Less than \$266; 2=\$266 to \$532; 3=\$533 to \$799; 4=\$800 to \$1,065; 5=\$1,066 to \$1,599; 6=\$1,600 to \$2,132; 7=\$2,133 to \$2,665; 8=\$2,666 to \$3,999; 9=\$4,000 to \$5,332; 10=\$5,333 to \$6,665; 11=\$6,666 to \$7,999; 12=\$8,000 to \$10,665; 13=\$10,666 to \$13,332; 14=\$13,333 or more; 15=Prefer not to say; 99=Don't know
What is the highest level of education you have completed?	1=elementary school; 2=secondary school; 3=vocational college education; 4=university first degree; 5=university higher degree; 6=professional higher education
To which of the following religions do you consider you belong?	1=None - not religious; 2=Islam; 3=Christianity; 4=Hinduism; 5=Sikhism; 6=Judaism; 7=Buddhism; 8=Jainism; 9=Zoroastrianism; 10=Other religion; 11=Not specified
What is your current marital status?	1=Single - never married; 2=Married with Children; 3=Married without Children; 4=Divorced; 5=Widowed; 6=Not specified

Table A7: Respondents by country and region

GCC	Bahrain	Kuwait	Oman	Qatar	KSA	UAE
730	36	18	36	4	611	25

Table A8: Coding of the Variables

Dependent Variables			
Dep1	Support for electricity price increase, no explanation	H1	1=Very willing; 5=Very opposed
Dep2	Support for electricity price increase, national interest explanation	H2	1=Strongly support; 5=Strongly oppose
Dep3	Support for price increase, with compensation by alternate benefit	H3	1=Strongly support; 5=Strongly oppose
Independent Variables			
Share	Entitlement		1=Selected, 0=Not selected
Female	Predictor-gender		0=Male, 1=Female
Edu	Predictor-education level		1-6
Income	Predictor-income level		1-15
Age	Predictor-age group	Age18-24	1=Selected, 0=Not selected
Age	Predictor-age group	Age25-29	1=Selected, 0=Not selected
Age	Predictor-age group	Age30-34	1=Selected, 0=Not selected
Age	Predictor-age group	Age35-39	1=Selected, 0=Not selected
Age	Predictor-age group	Age40+	1=Selected, 0=Not selected

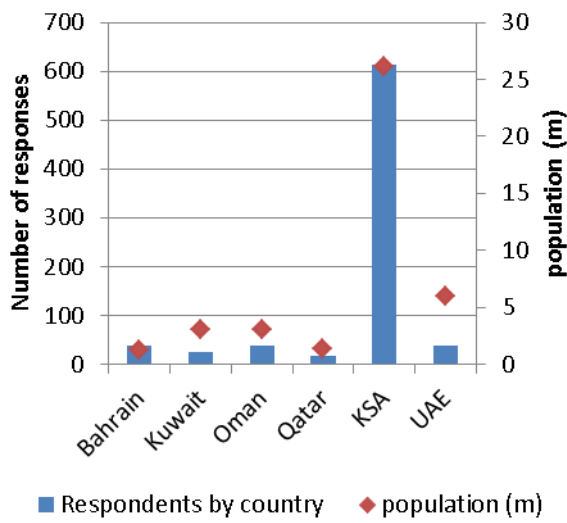
Note: Number coding of variables D1-D3 were reversed from those in the survey to aid interpretation of results. Age group results were combined to form the variable Age

Table A9: Results from ordinal logit regression

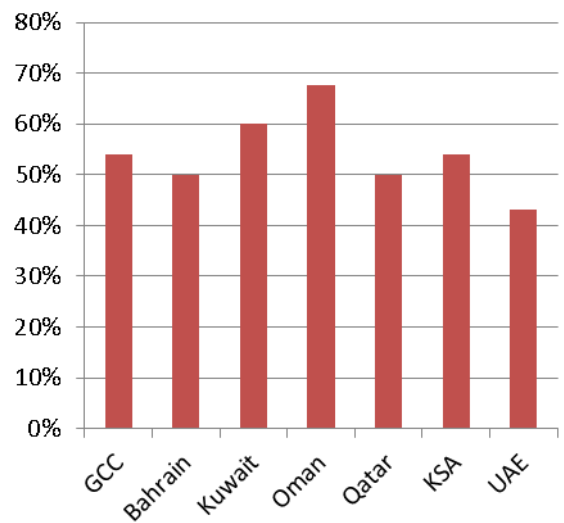
Entitlement and subsidy reform			
(Dependent variables are "willingness to pay" variations in Dep 1, Dep 2, and Dep 3)			
Model	1	2	3
Share (entitlement)	-.719*** (.1711)	-.663*** (.1718)	-.207 (.1681)
Age	-.046 (.0668)	.018 (.0666)	-.008 (.0669)
Income	.021 (.0625)	.040 (.0621)	.029 (.0619)
Education	-.172* (.0821)	-.056 (.0812)	.149* (.0811)
Female	-.239 (.1823)	-.521** (.1825)	-.217 (.1782)

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

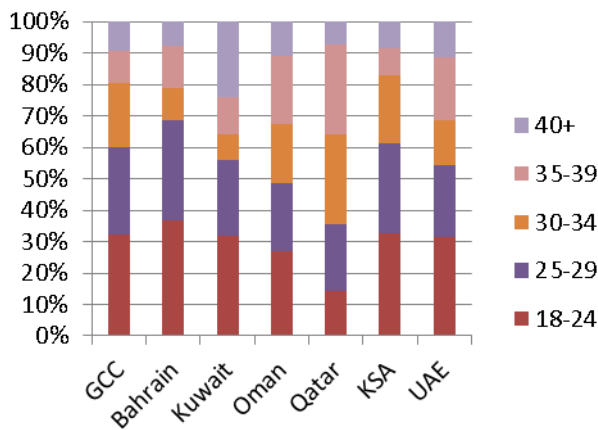
Public survey responses by country, with population



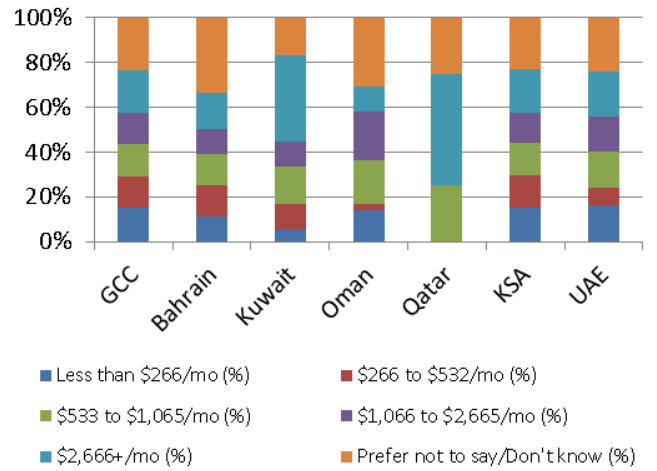
Public survey respondents by gender (% male)



Public survey respondents by age group



Public survey respondents by income group



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