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A Crude Bargain: Great Powers, Oil States, and Petro-Alignment

Inwook Kim

ABSTRACT
Petro-alignment, a quid pro quo arrangement whereby great powers offer security in exchange for oil states' friendly oil policies, is a widely used and yet undertheorized energy security strategy. One consequential aspect of this exchange is that great powers choose different levels of security commitment to keep oil producers friendly. With what criteria do great powers rank oil states? How do we conceptualize different types of petro-alignments? What exactly do great powers and oil producers exchange under each petro-alignment type? I posit that a mix of market power and geostrategic location determines the strategic value and vulnerability of individual client oil states, which then generates four corresponding types of petro-alignment—security guarantee, strategic alignment, strategic favor, and neglect. Two carefully selected case comparisons—Saudi Arabia and Kuwait in 1970–91, and Azerbaijan and Ecuador in 1990–2013—show how great powers created, utilized, and maintained petro-alignments under the unique logic of oil markets and across varying geopolitical settings. The findings have important implications on great powers' grand strategies, strategic behaviors of oil states, and the role of oil in international security.

Petro-alignment, a quid pro quo arrangement whereby great powers offer security support in exchange for oil states' friendly oil policies, has been a widely used and deeply consequential energy security strategy. Back in 1940, Nazi Germany concluded a weapons-for-oil pact with Romania, which fueled their early campaigns of World War II.[1] Throughout the Cold War, the United States, Britain, and the Soviet Union competitively made varying levels of security commitments to oil states, most demonstrably in the Persian Gulf, in a bid for friendly access to their vast pool of oil.[2] Recently, China joined the tradition of "supplier relations management" with oil producers in Africa, Central Asia, and the Middle East, generating heated debates about its political, market, and security implications.[3]

Beyond recognizing the shared "oil-for-security" principle, however, the literature is yet to grasp the striking variation found in the form and level of petro-alignments. Study of the history and practice of US commitment to the Persian Gulf, for instance, is predominantly directed to the region as a whole and rarely disaggregated into individual oil producers. Bilateral petro-alignment relations, however, exhibit significant and subtle variations: only to Saudi Arabia was Washington willing to openly proclaim its determination "not to allow Saudi Arabia to fall into the hands of any external and internal forces."[4] In contrast, Kuwait, another significant and dovish producer, was explicitly denied any hint of security guarantee throughout the Cold War.[5] Variation outside the Persian Gulf is equally striking. Oil allegedly was what attracted varying levels of security support to producers such as Angola, Kazakhstan, or Nigeria from interested great powers, while barely any additional security was available to others like Brunei, Ecuador, or Equatorial Guinea. Clearly, oil states are not born equal. Great powers accordingly rank them based on the strategic worth of individual producers and allocate their military risks and resources correspondingly, generating the petro-alignment variation.

What makes Saudi Arabia distinct from other producers? With what criteria do great powers rank oil states? How do we categorize different types of petro-alignments? Under each type of petro-alignment, how do oil producers serve great powers' interests, and what kind of security patronage do great powers offer in return?

The study of petro-alignment variation matters because, first and foremost, the dynamics of petro-alignment are a key international security variable affecting regional security dynamics, great power politics, and global oil market stability. Yet, by lumping all levels of petro-alignment relations into a single "oil-for-security" concept, the literature has generally failed to comprehend the precise sets of strategic opportunities and limits oil states face, how great powers allocate military resources and risks to secure access to foreign oil, and how different types of petro-alignments function in practice.

Giving analytical primacy to petro-alignment and its variation also uncovers previously underexplored properties of oil in international security: oil as a security asset that helps oil states reduce security burdens and as a security cooperation facilitator. In making this case, I advance the latest challenge against the popular portrayal of oil as a security liability that victimizes oil states and that triggers interstate conflicts and wars.[6] Furthermore, the variation within petro-alignment—oil sometimes forges a full-fledged security patronage, but other oil productions are entirely commercial and draw little strategic interests from great powers—emphasizes that oil's security consequences are not absolute but embedded in the unique logic of the oil market and surrounding strategic conditions. Overall, petro-alignment and its variation imply that oil's security consequences are more conditional, complex, and diverse than often assumed.

To analyze the petro-alignment variation, I first conceptualize that petro-alignment emerges and functions as an asymmetric alliance in which a great power and an oil state exchange security and oil to realize their interests in oil security and additional security support, respectively. The level and substance of this exchange is not equal across petro-alignment. Instead, it corresponds to varying levels of oil states' ability to promise and deliver oil benefits.

The argument of this paper is that petro-alignment variation is largely accounted for by an interplay between oil states' market power and geostrategic location. Market power refers to producers' ability to stabilize or disrupt the oil price. New categories are proposed, which divide producers into "price-stabilizer," "price-upsetter," and "price-follower," according to a presence of spare production capacity and by the nature in which oil producers influence oil price. Geostrategic locations, on the other hand, are concerned with the client oil states' strategic vulnerability to rival powers' control and influence, coded by the presence or absence of rival great powers' military power projection capability. Overall, a mix of the two determines the strategic needs for great powers to form petro-alignment with individual oil states, resulting in offering one of four ideal types of petro-alignment: security guarantee, strategic alignment, strategic favor, and neglect.

I examine this theory with two carefully chosen comparative case studies. An in-depth study of Saudi Arabia and Kuwait in 1971–91 reveals that

Saudi Arabia's replacement of the United States as a sole price-stabilizer in the early 1970s, in the context of deepening rivalry with the Soviet Union, was pivotal in Washington's decision to scale up, institutionalize, and enhance the credibility of its de facto security guarantee to Riyadh. In contrast, despite being a critical price-upsetter located in a geostrategic location, Kuwait's petro-alignment relations took the shape of strategic alignment with the United States, reflecting its more limited market power. A short plausibility probe on Azerbaijan and Ecuador in 1991–2015 follows, illustrating how different geostrategic location settings led the two oil states of similar market power to very different petro-alignment opportunities: strategic favor and neglect, respectively.

The first section explains the organizing principles of petro-alignment and how they serve great powers' oil interests. Next, I explain the market power and geostrategic location variables and construct the four ideal types of petro-alignments based on the coding of three criteria: material support, institutionalization, and commitment. I then lay out the theory to explain the petro-alignment variation. Next, I present the two comparative case studies. Lastly, I discuss how the paper contributes to larger theoretical debates within the security studies literature.

Conceptualizing Petro-Alignment and Its Variation

Historically, oil has been integral to great powers' national security calculus because it fuels virtually all modern transportation. Oil's monopoly still persists today; it accounts for 92 percent of US civilian transportation fuel; oil is also a key source for US military operational energy, or "energy required for training, moving, and sustaining military forces and weapons for military operations."[7] Furthermore, for the same reasons, uninterrupted and friendly access to oil has been one of key "public goods" that great powers are expected to deliver to their allies.[8] Overall, the monopolization of fuel sources made oil indispensable in macroeconomic stability, military power, great powers' grand strategies, and consequently, according to Kenneth N. Waltz, "the only economic interest for which the United States may have to fight."[9]

In their search for stable and secure access to oil, great powers have long created, maintained, and utilized different types of petro-alignments with oil producers. At its core, petro-alignment emerges and functions as an "asymmetric alliance" in which great powers and oil producers exchange favors between oil and security.[10] The term usefully captures large power differentials usually found between great powers and oil states acting as patron and client states, respectively, whereby two separate goals define the incentives to form and join a petro-alignment: for great power patrons, they pursue a stable and secure access to oil; for client oil states, they seek additional external security support. Each possesses assets that meet the other's needs; a zone of mutual benefits thus emerges in which the two engage in "a reciprocal exchange of goods and services between the patron and client governments that serves to enhance the security of the two countries and cannot easily be obtained by them from other sources."[11]

The forms and levels of petro-alignment vary markedly. Above all, oil states are not created equally. Large disparities among oil states exist in location, quality of crude oil, production volume, strategic context of oil flows, and in other geological conditions or political contexts. For great powers, provision of security assistance and guarantee through petro-alignments are also costly and risky business, compelling them to rank oil states according to the needs for petro-alignment. In short, some producers will merit security patronage more than others, and great powers must prioritize their limited military resources toward more valuable and vulnerable clients.

Unfortunately, the variation is not adequately recognized in the literature. Mainstream realism typically treats alliances as tools of power aggregation against common adversaries or threats.[12] Since alliance formation is motivated by exogenous factors under the power-aggregation model, it struggles to explain why the United States differentiated its security commitment between friendly oil states in the Persian Gulf that were perceived to be under Soviet threats during the Cold War. Petro-alignment, in contrast, emphasizes intra-alliance exchange of favors to satisfy their separate goals, not to add fighting capabilities against a common enemy.

Furthermore, the literature also needs to go beyond the vague and undersubstantiated notion that oil is vital and thus warrants national security concern. Scholarship generally remains uninformed about complexity surrounding the actors in, and the structure and logic of, the oil market itself, which leads to a relative dearth of relevant historical analysis and policy debates about great powers' response to energy anxiety.[13] In filling this gap, Rosemary A. Kelanic recently argued that great powers adopt so-called "anticipatory measures" to reduce coercive vulnerability imposed by oil dependency and that varying degrees of "petroleum-deficit" determines a choice of anticipatory measure. Petro-alignment, termed as "indirect control," is one such measure, designed to "keep oil in friendly hands and away from adversaries."[14] While outlining petro-alignment's general principles and characteristics, Kelanic still leaves an important gap, most notably why great powers choose different levels of security commitment to keep oil producers friendly. It calls for explanation of exactly how petro-alignment addresses great powers' energy concerns, how petro-alignment varies across oil states, and with what types of military commitment great powers seek to create and maintain each petro-alignment relation.

Benefits of Petro-Alignment

Market Stability

By almost singlehandedly powering modern mobility without viable substitutes, even a small-sized oil-supply disruption could cause disproportionately large distress in a state's macroeconomic performance—oil price increases dampen industrial production by raising input cost, suppressing demand by shrinking disposable income, sharpening adjustment or allocation costs, and discouraging investment.[15] Indeed, sudden increases in oil price have often preceded economic recessions in the post–World War II world.[16]

Great powers have sought to bolster market stabilizing force through petro-alignment. First, great powers reduce the chances of supply shocks by buttressing client oil states' internal and external security against coups, civil wars, and geopolitical conflicts. Oil states' security is a concern in the oil market particularly when such states are in conflict-ridden regions. Great powers' support can take a variety of forms, including arms sales and transfers, training, joint exercises, military basing, or even a security guarantee. Because client states' enhanced defense and deterrence capability reduces the chance of politically oriented supply shocks, petro-alignment creates a thicker cushion against market panic and bolsters market confidence in general.

Second, great powers leverage their security ties to influence clients' oil pricing and production policy in their favor. In 1979, for instance, following a meeting with President Jimmy Carter, Iran's Shah decided to "give Western nations a break" by moderating his previously hawkish pricing policy "in exchange for the continued flow of arms from the United States."[17] Washington also had repeatedly requested dovish client producers such as Saudi Arabia to exert price-moderation influence. Although the Saudis' rationale was generally to keep the market stable, its dovish intervention was far from assured when nonmarket factors such as domestic budgetary needs, political climate, or rise of regional tensions over Arab–Israel conflicts or Iran incentivized hawkish pricing.[18] Another price-stabilizing mechanism is the use of excess capacity in times of supply disruption. By being able to swiftly make up the lost barrels, petro-alignment with swing producers serves to stabilize oil price movement and restore market confidence.[19] Overall, petro-alignment has historically served as a reliable and effective, if not perfect, strategy to prevent unanticipated supply shocks and reduce their impact on the market.

Military Advantage

As a critical source for military fuel requirements, petro-alignment functions as a vital asset in great powers' military preparations, plans, and operations. In wartime, ensuring supply of friendly foreign oil proved critical to executing and winning mechanized warfare, as few states can maintain full self-sufficiency in meeting demanding wartime fuel requirements. During World War II, for instance, the Soviet Union and Britain relied on the United States, which supplied six out of seven billion barrels consumed by the Allies.[20] Once the United States became a net oil importer in the 1950s, the Persian Gulf helped fuel America's wars, including the Vietnam War and the First Gulf War. Great powers' allies are additional beneficiaries of client producers' oil. During the Cold War, the mobility of US allies, most notably the North Atlantic Treaty Organization (NATO) and Japan, reportedly critically hinged on friendly foreign oil supply from the Persian Gulf.[21]

Conversely, if petro-alignment is either lacking or troubled, the resulting oil shortage could entail dire military implications. In peacetime, an oil shortage could cause great powers to struggle to train troops and maintain military readiness. In the oil crises of 1973 and 1979, for instance, the United States had to curtail its operational and training activities, causing "significant degradation of combat readiness."[22] In wartime, an oil shortage severely jeopardizes the military's ability to deploy and concentrate forces, and diversify means of military attack and defense. As a result, a large-scale oil supply disruption could cost as much as "the loss of an important military campaign, or indeed a war," then–Defense Secretary Harold Brown once remarked.[23] Of course, as a foreign source of oil, credibility and security of petro-alignment cannot be entirely assured. However, petro-alignment gives a friendlier and securer access to vast pool of foreign oil than otherwise, and accordingly it has been a crucial source in meeting the great powers' and their allies' military operational energy requirement.

Second, petro-alignment denies rival powers' access to client states' oil in times of military contingencies. As witnessed during World War II, competition for oil becomes an intense zero-sum game during wartime. Great power patrons achieve denial by extending the defense capability of the client oil producers and securing the preferential supply of oil for themselves and not their rival powers. The rival powers are then compelled to concentrate more military resources than otherwise required, should it become necessary to take over the oil producers. If oil fields are deemed indefensible, petro-alignments also allow a denial-by-destruction strategy, which retreating Dutch technicians employed by destroying the Balikpapan oil fields in 1941 in the wake of Japanese invasion.[24] During the Cold War, the United States and Britain maintained covert plans to sabotage oil fields in Saudi Arabia, Iran, and Iraq, possibly using nuclear weapons, as part of a denial strategy against the Soviet invasion.[25] These plans required prepositioning of necessary explosives, training of people on the ground, and easy access to the oil fields, all of which were politically sensitive but ultimately attainable due to the petro-alignment arrangements.

Commercial Benefits

Though not as central as market stability or military power, petro-alignment brings benefits that are not easily available otherwise. One is influencing destinations of petro-dollars. Oil states accrue a large sum of oil revenue, and therefore how they spend those dollars on imports, investment, or procurement often raises large enough financial and business interests for great powers to warrant state-level involvement.[26] The other benefit concerns where to award the lucrative exploration and production (E&P) contracts, which are often not made transparently but behind the closed doors.[27] Unsurprisingly, oil states tend to favor their patrons as a gesture of goodwill to further entrap their strategic commitments. For instance, Saudi Arabia awarded US companies billion-dollar contracts in the early 2000s, including one on Al-Ghawar field to ExxonMobil in 2001.[28] The decision went against opposition from the domestic business community and ARAMCO, who were sufficiently capable of developing and commercializing the new fields themselves. Ali Al Naimi, then-CEO of Saudi ARAMCO and an influential ex-minister of petroleum and mineral resources, recalled that the decision represented a strategic objective of top leadership to "revitalize the relationship" with Washington, not economic rationale.[29]

Petro-Alignments as Myth?

How useful is petro-alignment in advancing oil security? Recently, critics contended that state military intervention is an unnecessary and costly energy strategy. More specifically, the oil market is globally integrated, efficient, and well prepared such that great powers' mercantilist and military approach adds little stability while risking political backlash and consuming military resources.[30] In this vein, petro-alignment is a myth and not a practical solution to energy anxiety.

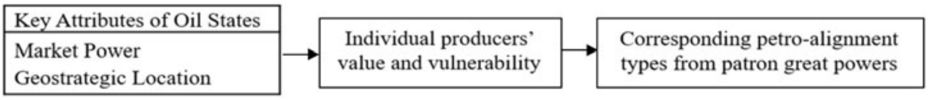
Key Attributes of Oil States
Market Power
Geostrategic Location
Individual producers' value and vulnerability
Corresponding petro-alignment types from patron great powers

Figure 1. From oil to petro-alignment relations.

While rightly warning against excessive alarmism, petro-alignment as myth is far from uncontroversial. Other scholars counter that the oil market carries nonnegligible uncertainty and risk. Jennifer Lind and Daryl G. Press, for instance, maintain that states worry about the "four C's"—imperfect contracting, collusion, geographical concentration, and conflict—which create needs for energy mercantilism.[31] Perception matters, too. The oil market is a politicized enterprise partly because "policymakers believe it is."[32] Such a perception, justified or not, has been self-fulfilling, persistent, and therefore consequential.[33] Although there may be competing arguments regarding whether great powers *should* care about oil access, there is little evidence that they *do not*. Paradoxically, advocates for laissez-faire and strategic restraint demonstrate that great powers have never fully decoupled the question about access to foreign oil from national security policy.

Variation in Petro-Alignments

In the search for an optimal level of petro-alignment, I posit that an interplay of two critical factors—market power and geostrategic location—determine individual producers' value and vulnerability; great powers then choose the corresponding levels of security commitment to their present and potential client producers, which consequently generates the petro-alignment variation (Figure 1). This section defines market power and geostrategic location and proposes categories for the two variables.

Market Power

Market power refers to "the ability of a single economic actor (or small group of actors) to have a substantial influence on market prices."[34] In the

Table 1. Market power. Price-effecting mechanism and production capacity.

	Price-Effecting Mechanism	Production Capacity
Price-Stabilizer	1. Release of spare production capacity 2. All mechanisms listed in price-upsetters cell	A large oil producer with sizeable spare production capacity
Price-Upsetter	1. Conflict among price-upsetters 2. Two or more crises simultaneously happening 3. Collapse of entire production	2.5% or more of global total production
Price-Followers	None	Less than 2.5% of global production

oil market, two factors are salient for determining a producer's market power—production volume and spare production capacity. According to the nature of how the individual oil producer can influence the market price or an inability to do so, I categorize the oil producers' market power into the following three groups—"price-stabilizer," "price-upsetter," and "price-follower."

Price-Stabilizer

Price-stabilizers, often known as swing producers, keep some oil fields offline and maintain the so-called spare production capacity that "can be brought to the market within thirty days and sustained for least for ninety days."[35] Because foregoing some production capacity requires both incentives to influence the commodity price and willingness to bear the opportunity and maintenance costs, usually only the largest producers(s) in a highly skewed market adopt such a practice. With high geological concentrations of oil deposits, the global oil market is conducive to an excess of capacity developing.[36] Only a few states have the capability and incentives to attain and operate excess capacity, and historically there were only two such unique producers—the Texas Railroad Commission (TRC) from the 1930s to the late 1960s and Saudi Arabia since the 1970s.[37]

Price-stabilizers have historically acted as a buffer against price volatility via two mechanisms. One is by making up lost barrels in times of supply disruption. For instance, the TRC pumped out almost 1 million barrels per day (mb/d) of additional oil during the 1967 Six Day War, helping to compensate for the Arab's selective embargo, a function it also performed in the 1956 Suez crisis.[38] The excess capacity of TRC eventually vanished in 1972, when it could no longer cope with soaring domestic demand. Riyadh shortly emerged as a replacement swing producer throughout the 1970s and has similarly intervened in the market, including during the 1979–80 oil shock, the First Gulf War (1990–91), and the recent 2011 Libyan crisis.[39] The swift compensation of lost barrels has significant restoring power. The International Monetary Fund projected that, against a permanent two percent oil supply shock, Riyadh's "full replacement" can bring down the price to a pre-crisis level within three quarters, as opposed to a 40 percent or more price increase under a no-intervention scenario.[40]

The other mechanism is more structural. The existence of spare production capacity itself can have a price-stabilizing effect, as it creates market confidence, lowers business risks, reduces incentives for hedging, and therefore helps to dampen market volatility. By converse logic, a lack of spare production alarms the market by signaling its reduced ability to withstand geopolitical risks.[41] Indeed, the rapid decline of spare production capacity has arguably contributed to the run-up in oil prices from 2003 to 2008.[42]

Spare production capacity, however, is not a panacea for oil price fragility.[43] Its release is usually a short-term countermeasure, effective only against temporary and limited supply disruptions, and not against long-term demand-driven increases in oil price. For instance, it was unable to prevent the sustained price upsurge throughout the 2000s caused by rising demand in China and India and stagnant global production.[44] However, given the market's exposure to exogenous supply shocks from geopolitical events, which are not infrequent, a presence of spare capacity has arguably "proven to be the most important single asset for the world's supply security,"[45] creating a unique market status and power for price-stabilizers.

Price-Upsetter

Price-upsetters are those who produce more than 2.5 percent of global supply. They can upset the market because a shock that suddenly takes that much oil off the market for a sustained period has historically imposed heavy cost on great powers.[46] For instance, a supply loss of 2.9 percent with Iraq's invasion of Kuwait in 1990 caused the oil price to skyrocket by 71.6 percent, significantly dampening global gross domestic product growth.[47] Admittedly, the price shock in 1990 was unusually severe, and in other crises oil prices were restored relatively quickly.[48] However, the impact can become severe when other market conditions, such as the growing demand for oil or a low level of excess capacity, sharpen the impact of supply loss.[49] And, together with the unsettling records of causing market panic in the past, the stability of price-upsetters remains closely watched in both market and energy security policy.

The history of oil shocks reveals that market upsets frequently involve price-upsetters. Upsets occur via three routes. Above all, a disruption of a price-upsetter's entire production alone can cause market distress, as witnessed during the Iranian Revolution in 1979, the fire at a Kuwaiti oil field in 1991, and to a lesser extent the Libyan crises in 1970 and 2011. More powerful market upsets occur when two or more price-upsetters engage in wars with one another, such as the Iran–Iraq War in 1980–88 or Iraq's invasion of Kuwait in 1990. During the latter, for instance, much of the Iraq and Kuwait oil fields stopped producing, which represented 4.43 percent and 2.2 percent of global oil production, respectively.[50] Lastly, market upsets occur through unrelated but simultaneously or consecutively occurring crises that involve price-upsetters. The supply crisis in 2003, for instance, was a succession of events starting with Venezuela's oil strike in December 2002, and unrest in Nigeria and the Iraq War in March 2003. The continuous and combined loss of supply contributed to the 25.8 percent price rise from $24.34/barrel (all dollar amounts in USD) in November 2002 to $30.61/barrel in March 2003.[51]

Price-Follower

The remaining oil-producers are price-followers. Producing below 2.5 percent of global production volume, their ability to affect global oil price is minimal, either as a member of a cartel or on its own. Historically, supply disruptions originating from price-followers rarely cause price swings.[52] In fact, most oil exporters—32 out of 49 producers—fall into this category, having never produced more than 2.5 percent of global oil production in any given year since 1970.[53]

Geostrategic Location

Great powers also assess geostrategic location, the regional strategic landscape surrounding client oil states, in deciding the level of petro-alignment. A region is "geostrategic" if a great power patron faces competition for control and influence with the rival powers, and "non-geostrategic" when it does not or cannot compete against rival powers. The geostrategic location variable is accordingly coded by whether two or more great powers have military power projection capabilities to a given oil state. According to this definition, the Middle East or Europe during the Cold War or Central Asia and the Caucasus post-Cold War were geostrategic locations whereby the United States and the Soviet Union (and Russia) had overlapping military power projection capabilities. In contrast, during the Cold War, South America and most of Africa were non-geostrategic due to being largely detached from the Soviet Union's military power projection capability.

Location determines the vulnerability of client states' oil to great power rivalry. On the one hand, the overlapping military power projection capabilities renders oil fields and states in geostrategic locations more vulnerable to military competition and confrontation, territorial conquest, and disruptions in oil-transportation routes by rival powers.[54] This vulnerability potentially jeopardizes a stable flow of oil to the patron great powers. Its impact can be particularly critical during wartime, when competition for oil is an intense zero-sum game. Military campaigns in Southeast Asia and the Eastern Front in Europe during World War II, for instance, demonstrated how the zero-sum game imposed by oil can drive the war strategies of major powers and ultimately an outcome of the war.

Oil's vital role historically justified a strategic rationale for great powers to form a petro-alignment with the client producers in geostrategic locations. Petro-alignment aimed to enhance their defense and deterrence capacity against rival powers' threats and to forge an implicit or explicit agreement that the client producers can supply oil to the patron during wartime. At the same time, by building better defense capability, petro-alignment effectively increases the cost for rival powers to gain control and influence over the client oil producers, which then divert the rival powers' limited military and political resources away from other potential points of conflicts.

Not all oil states are sufficiently vulnerable to warrant petro-alignments. Large producers such as Canada, Venezuela, Nigeria, or Indonesia were valuable partners, but, thanks to their respective locations, rival powers could not occupy their territory and deny their oil during wartime.

Table 2. Petro-alignment types and their attributes.

	Petro-Alignment Type			
	Security guarantee	Strategic alignment	Strategic favor	Neglect
Attributes				
Material support	Y	Y	Y	N
Institutionalization	Y	Y	N	N
Commitment	Y	N	N	N

Competition for influence was correspondingly less, and therefore the need for anticipatory petro-alignment less severe. And unlike in geostrategic locations where local conflicts could quickly escalate into great power intervention, as frequently seen in the Persian Gulf, in non-geostrategic locations domestic and regional conflicts and competition involving oil states generally remained isolated and local. Military support was therefore largely limited to internal and regional sources of threats.

Oil and Petro-Alignment Type

Great powers' security patronages vary in credibility and commitment in tandem with different levels of market power and geostrategic location. However, the alliance literature has long used a dichotomous coding of alliance commitment being either being "present" or "absent," and has yet to equip itself with a typology that captures more fine-grained distinctions across petro-alignments. To address this gap, I propose three criteria—material support, institutionalization, commitment—to differentiate the subtler distinctions in security relationships. At a basic level, a petro-alignment involves some level of transfer of military support from great power patron to client oil state, coded as material support. Examples of such transfers include military aid, provision of training, preferential access to arms, and, under extreme conditions, troops deployable in a rapid manner in times of military contingencies. Institutionalization strengthens the tie further by ensuring that material support occurs in a more sustained and coherent manner rather than in an ad hoc, needs-based arrangement.[55] Lastly, the robustness of petro-alignment is complete with the great power's commitment or an explicit statement to protect its client oil state(s) against external threats.[56]

Table 2 shows an aggregate value of these criteria determines different types of petro-alignment. In descending order of a great power's

Table 3. Determinants for petro-alignment types.

	Geostrategic Location	
	Geostrategic	Non-Geostrategic
Market Power		
Price-stabilizer	Security guarantee	
Price-upsetter	Strategic alignment	Strategic favor
Price-follower	Strategic favor	Neglect

commitment to its oil-state client, the values are security guarantee, strategic alignment, strategic favor, and neglect.

At the top of the list is security guarantee, which largely conforms to the traditional definition of alliance, whereby a great power pledges to protect the sovereignty of its client oil state from outside aggression. Accordingly, the relationship of a security guarantee carries a significant transfer of military support, operates on institutionalized procedures, and most significantly is founded upon an explicit commitment to protect the client state. These properties are costly to maintain due to the financial expense, reputational cost, and enhanced risk of entrapment. A security guarantee is therefore offered only under exceptional circumstances, where security of the client ally is vital to a patron's own national security.

Next is strategic alignment. Here, a great power's interest is to support regime stability through institutionalized military cooperation but stops short of an explicit commitment. In other words, automatic military intervention to defend an oil state is neither guaranteed nor even expected. Instead, repeated and substantive expressions of sustained and institutionalized military cooperation in forms of military aid, sales of advanced weapons systems, or joint military exercises are requisites. Under strategic alignment, an institutionalized form of military ties makes the relationship relatively resilient against exogenous shocks but lacks a patron's provision of full protection.

The third petro-alignment type is strategic favor. Substantively, material support is likely to be less frequent, less ambitious, and smaller in overall scope than with strategic alignment. More importantly, military cooperation occurs absent mutually agreed institutionalized procedures and instead is ad hoc and needs based. No regularized meeting or institutionalized procedures exist for such cooperation.

Lastly, a great power can "neglect" an oil state to the point where military cooperation is negligible, and the bilateral relationship is only diplomatic: material support, institutionalized procedures, and issuing a commitment statement will not occur in the name of the great power's interest in oil.

Determining Petro-Alignment Types

The petro-alignment type available to oil states is determined by a combination of market power and geostrategic location. First, a price-stabilizer obtains a great power's security guarantee regardless of its location. The price-stabilizing role is the "energy equivalent of nuclear weapons,"[57] making swing producers' friendliness and stability absolutely vital for a great power's energy security, macroeconomic management, and its design and implementation of grand strategies. Furthermore, spare production capacity is an asset bestowed only on the largest producers: the history of oil is unambiguous about the highly sensitive, instantaneous, and consequential movements of the global oil market to the preferences, regime and state security, and behavior of its top producer(s). The mix of excess capacity and large market share renders an uninterrupted and friendly access to price-stabilizers' oil vital for great powers' own market and military interests. Even market optimists acknowledge that a crisis in Saudi Arabia, the contemporary price-stabilizer, would be a "nightmare."[58] Given the price-stabilizer's exceptional power and status in the market of an exceptionally important commodity, I posit that a patron great power has both political and economic rationales to guarantee the price-stabilizer's stability and survival, independent of its exposure to a rival great power's influence.

Second, price-upsetters in geostrategic locations will secure great powers' strategic alignment. These oil producers, such as Kuwait, Iran, or Iraq, each carry a combination of partial market power conferred by their substantial volume of oil production and partial strategic vulnerability to rival great power's control and influence. These producers have historically proven capable of altering the oil market equilibrium, tying the stability of the oil market to their regime and state security. Geostrategic location also bolstered their military values and created politicized competition for commercial opportunities. The competitive pressures exerted toward Iran by the Soviet Union and the United States in the late 1940s or Iraq in the late 1960s, for instance, were predicated upon concern for strategic ramifications and commercial access.[59]

However, price-upsetters are not indispensable to great powers' macroeconomic or strategic preferences like price-stabilizers. Supply disruptions originating from price-upsetters fall short of destructive and are increasingly manageable within the market. Unlike price-stabilizers, the military value of price-upsetters do not go beyond their respective regions. Large commercial projects can occur for exploration, production, delivery, or refinery within price-upsetters, but they are intermittent and, with most of the large oil fields already in operation, declining in number and size.

Overall, the necessity and desirability of keeping price-upsetters friendly clearly necessitates some degree of institutionalized interaction to allow constant and close monitoring and assistance to address their security concerns. Yet its value is less than that of a price-stabilizer. A full security umbrella is too pricey for a great power's foreign security posture; hence strategic alignment is a likely choice for a price-upsetter.

Third, strategic favor or an ad hoc strategic commitment will be the outcome for price-upsetters located in non-geostrategic locations and price-followers located in geostrategic locations. Their strategic value is more limited than price-upsetters in geostrategic locations, as they lack either geostrategic significance (Nigeria, Venezuela) or market power (Azerbaijan, Yemen).

Non-geostrategic upsetters lack military value and commercial challenges since there is no competing rival power influence. This situation renders sustained strategic commitment unnecessary, and minimally functional needs-based strategic favors can serve a great power's interest in securing occasional commercial contracts. Price-followers in geostrategic locations, on the other hand, have no influence in the market. Their worth is constructed upon potential military value and business openings that rationalize some security assistance. Overall, neither non-geostrategic price-upsetters nor price-followers in geostrategic locations warrant sustained and significant security assistance. Instead, the strategic commitment emerges only when needs arise, such as intermittent conduct of joint exercises and training, or the occasional sale of advanced weapon systems.

Fourth, those oil states that have neither market power nor geostrategic value do not receive any oil-based military commitment from great powers. Because their oil raises no strategic interests for great powers, their political economies of oil are effectively decoupled from their alliance opportunities. Although some non-geostrategic price-followers, such Australia or Thailand, are military allies of the United States, their bilateral security ties have little to do with oil; hence they do not qualify as petro-alignment.

Case Selection Strategy

To formulate a case selection strategy, I coded the market-power status and geostrategic location of individual oil states in every year they produced oil of any quantity during 1970–2013. Market power was coded based on the British Petroleum (BP) dataset.[60] For illustration purposes, I separately created Table 4 based on the average market share of individual oil producers

Table 4. Distribution of oil states according to average market power (1970–2013) and geostrategic location.

	Geostrategic Location	
	Geostrategic	Non-Geostrategic
Market Power		
Price-Stabilizer	**Saudi Arabia**	
Price-Upsetter	Iran; Iraq; **Kuwait**; UAE	Canada; Mexico; Venezuela; Nigeria
Price-Follower	**Azerbaijan**; Kazakhstan; Turkmenistan; Uzbekistan; Denmark; Norway; Oman; Qatar; Syria; Yemen;	Argentina; Brazil; Colombia; **Ecuador**; Peru; Trinidad and Tobago; Italy; Romania; Algeria; Angola; Chad; Congo; Egypt; Equatorial Guinea; Gabon; Libya; Sudan; Tunisia; Australia; Brunei; India; Indonesia; Malaysia; Thailand; Vietnam

Bold denotes involve countries selected as case studies.

in 1970–2013 to show a broad distribution of market power across oil producers.[61] For price-stabilizers, Saudi Arabia was the only swing producer in this period. There were eight price-upsetters who produced more than 2.5 percent of global production on average during the period, and the remaining thirty-five producers were price-followers.

Geostrategic location was coded on an examination of qualitative evidence. I consulted secondary sources to determine whether a region where a given oil producer is located was exposed to competing spheres of influence or military power projection capabilities by great power(s). Generally speaking, the Middle East during the Cold War, or Central Asia and Caucasus post-Cold War, are coded as geostrategic, while Africa or Latin America was out of the Soviet's military reach, hence "non-geostrategic," as reflected in Table 4. I considered and substantiated great power military presence and projection capability for each case study examined below.

In selecting cases to demonstrate the effects of market power and geostrategic locations on petro-alignment types, I chose oil states facing intense rivalry in the region or a severe external security threat on a sustained basis. Such a security environment necessitates an active search for an external patron and full utilization of its strategic value in foreign security policy. According to this selection criteria, two pairs of cases were identified. One is Saudi Arabia and Kuwait, 1971–1991. While isolating other confounding factors such as effects of changing oil-industry structure and the effects of the end of the Cold War, the pair allows one to examine whether and how differential market power, combined with the shared geostrategic setting, led to the distinct petro-alignments. The Saudi Arabia–Kuwait comparison serves as a major case, as their rich histories of security interaction with the United States are useful to test the theory of petro-alignment. I follow this with a short plausibility probe on Azerbaijan and Ecuador in 1991–2015—two price-followers producing comparable volumes of oil but under different geostrategic settings. Azerbaijan is located where the United States and Russia compete for spheres of influence while facing stiff security competition from Armenia over the Nagorno-Karabahk region. Ecuador is not exposed to great power rivalry but faces a long-standing territorial dispute with Peru, including a brief war in 1995. The Azerbaijan–Ecuador dyad compares the effects of geostrategic location and explores the applicability of petro-alignment theory beyond the Persian Gulf.

Saudi Arabia and Kuwait, 1971–91

Geographically, Saudi Arabia and Kuwait sit at the center of the highly strategized Persian Gulf, where the political economy of oil has constituted an integral part of their national security strategies and environment. Given their common location, their differential market powers ultimately accounted for varying credibility and commitment of US patronage. Saudi Arabia, a price-stabilizer, secured a security guarantee, whereas the United States offered strategic alignment to Kuwait, a price-upsetter.

Geostrategic Location

The strategic environment for both Saudi Arabia and Kuwait was defined by the superpower rivalry during the Cold War. Their geographical proximity to superpowers' military bases, together with strategic significance of the region, rationalized the development of great power military power projection capability to the Persian Gulf. In the 1970s, the region underwent a rapid acceleration of this superpower rivalry, initially prompted by the British departure in 1971 and a series of following intra- and interstate conflicts. On the one hand, US Persian Gulf strategy has always been accompanied by military power projection capability, transitioning from a symbolic presence of Middle East Force (MIDEASTFOR) with reliance on its two local allies—Saudi Arabia and Iran in the 1970s—to a creation of a more formalized and institutionalized Rapid Deployment Joint Task Force (RDJTF) and the US Central Command (CENTCOM) by the early 1980s.

The Soviet Union, on the other hand, was concerned with contributions of Gulf oil to US military and industrial power, and embarked upon building its strategic presence there.[62] By 1980, it allegedly had achieved the capability to project heavy and armored ground forces to the "waters of the Arabian Sea" and the Kuwaiti oil fields within ten to twelve days.[63] Deepening military ties with states such as Iraq, Somalia, and Yemen in the 1970s complemented the Soviets' pursuit for a greater regional military presence. Though more limited than the United States, the Soviet's projection capability was sufficient to create competitive pressure in the region—not all of the Persian Gulf had to be occupied to disrupt US interests.[64]

Contributions of Saudi and Kuwaiti Oil

The oil market in the 1970s had witnessed two crucial changes in the Persian Gulf: the nationalization of oil companies across the region and Iran's concomitant push for hawkish oil pricing due to the Shah's aggressive search for prestige, autonomy, and influence. With the shock from the 1973 crisis barely gone, Saudi Arabia and Kuwait gained increasing importance in Washington's search for dovish and powerful oil suppliers.

Both were valuable producers since 1971, but their market powers significantly differed both quantitatively and qualitatively. On the one hand, Saudi Arabia's production volume outnumbered other producers, rapidly increasing from 3.9 mb/d in 1970 to 10.3 mb/d in 1981; a production cut followed until the mid-1980s, which gradually recovered to 8.8 mb/d by 1991. In the same period, the United States and the Soviet Union generally produced more, pumping out around 9–11 mb/d and 8–12 mb/d, respectively, but they needed additional barrels of oil for domestic and allies' consumption.[65] Saudi Arabia also held the largest proven reserves, and its relatively meager domestic consumption made it by far the largest oil exporter in the world, accounting for up to 32.9 percent of daily oil trade.[66] These attributes naturally made Riyadh emerge as a long-term source of secure and stable oil supply.

Kuwait, on the other hand, produced around 2–3 mb/d, approximately 3–6 percent of global production in the 1970s. In the 1980s Kuwait cut its production volume following Saudi Arabia's effort to control oil prices, and thus technically failed to meet the 2.5 percent threshold. Its production volume, however, gradually recovered from the self-imposed cut in the late 1980s, eventually producing comfortably more than 2.5 percent of global supply in the 1990s. Large reserves and the small domestic consumption also made Kuwait a significant player in the oil trade, for which Washington evaluated its power to be “extremely important in terms of oil production and financial aspects.”[67]

Saudi Arabia and Kuwait aligned their oil production and pricing policy largely with Washington’s preference for market stability. One venue was a highly divided Organization of Petroleum Exporting Countries (OPEC), where the two consistently played doves against price hawks. Saudi Arabia and Kuwait preferred price moderation and stability over maximization of short-term profits, as their high per capita income, small population, and large proven reserves created more resilience in state finance and made them prefer world’s long-run reliance on oil.[68] On the other side, OPEC had many hawkish members, notably Iran and Iraq, who repeatedly called for cartelized action to shore up the oil price to quickly increase their revenue at the expense of stability in the oil price and Western industrialized economies. Against the backdrop of vivid memories of the 1973 oil-price shock, Washington engaged in active diplomacy with the OPEC producers to not repeat the economic downturn out of volatile oil price’s movement. To Washington’s disappointment, however, its long-time ally Tehran did not drop its demand for oil price increases; it was Riyadh who agreed to exercise its market power to resist, moderate, or even reverse the hawkish pressure.[69]

One of the earliest such efforts occurred in December 1976, when Saudi Arabia initially managed to procure a moderate price increase of 5 percent rather than the 10 percent demanded by other OPEC members in 1977, freeze prices later in the year, and pump out at a higher volume in 1978 to lower the oil price.[70] Kuwait also remained generally dovish by playing a moderate within OPEC.[71] Overall, Kuwait, along with Saudi Arabia, had “consistently indicated their recognition of a strong mutual economic interest with the major industrial nations,” as testified by Assistant Secretary of State Joe Siseo on the alignment of the two producers’ policy and Washington’s push for market stability.[72]

In addition to the price-stabilization efforts, the two producers have also proven valuable in US military strategy. One lesser known consequence of the 1973 oil embargo was its deleterious effect on meeting daily oil requirements for US military postures around the globe, including the Sixth Fleet in the Mediterranean.[73] In November, for instance, the Pentagon advised the White House that the "DoD [Department of Defense] petroleum shortage is very serious … we will soon be forced to begin standing down operational forces."[74] Upon receiving the US request for fuel, Saudi king Faisal, fearing further deterioration of diplomatic relations with Washington, agreed to ship a variety of fuels to US warships and bases. Not only did Riyadh bear the financial costs to provide military fuels, it also risked domestic and regional political backlash. In the First Gulf War, Saudi Arabia similarly offered fuel to coalition forces free of charge. Kuwait, on the other hand, provided free fuel for MIDEASTFOR ships escorting reflagged tankers during the Stark incident in 1987,[75] though their more limited oil volume meant that Kuwait's contribution was usually less notable. No direct confrontation between the superpowers leaves no actual cases of Gulf oil fueling the larger and more critical conflicts. Their oil was perceived to be "crucial to the war capability of the NATO alliance," however, and the safety of its production and flow was at the heart of the top-level decision making.[76]

Saudi Arabia as the Swing Producer

While Saudi Arabia's market power was partly built upon its unrivalled size in production, reserves, and export, what truly set it apart from the rest of producers was its possession of excess capacity.[77] Saudi Arabia emerged as a new dominant swing producer in the early 1970s when rising domestic demand forced the TRC to deplete its spare capacity. The National Intelligence Estimate recognized the new reality and what it meant in the market—only the Gulf's oil, a majority of which was in Saudi Arabia, could compensate for any future supply interruptions.[78]

The extent to which the use of excess capacity stabilized the market is hard to quantify due to the data-availability issue and other confounding factors that could have affected price movements. Studies strongly suggest, however, that Riyadh functioned as a critical buffer. By the end of 1970s, for instance, Washington's top leadership came to a conclusion that the survival of the global oil market against supply shocks critically hinged on the Saudi Arabia's use of excess capacity.[79] A systematic Energy Information Administration study found that in both supply disruptions in 1978 Iran and at the outbreak of the Iran–Iraq War in 1980, which respectively removed 5 mb/d and 3 mb/d, the market successfully minimized the supply disruptions by drawing extra oil out of the ground.[80] The largest intervention occurred in the wake of the Iraqi invasion of Kuwait in 1990, which immediately took 4.4 mb/d off the market. In a similar fashion, Riyadh responded by quickly adding 2.8 mb/d to global supply, minimizing and shortening the price shock.[81] The market-stabilization benefits made the excess capacity "the signal characteristic of Saudi [oil] policy, [serving as] the centerpiece of US-Saudi relationship."[82]

The spare production capacity was also what enabled Riyadh to prevail over OPEC hawks. No cartelized action by OPEC could succeed without the Riyadh's blessing, as its pumping out additional barrels of oil could effectively neutralize the agreed production cut. That was precisely the mechanism—a production increase from 8.5 mb/d in December 1976 to 9.7 mb/d in February 1977—with which Saudi Arabia thwarted the Shah's vigorous push for the price increase in 1976–77.[83] As the outgoing Henry Kissinger observed in 1977, "Only they [the Saudis] can raise production to make it [OPEC's price moderation] stick."[84]

While Saudi Arabia's self-interest to maintain market stability and aid the recovery of the Western economies drove these behaviors, the dovish intervention was neither cost free nor assured. In fact, Saudi Arabia's lone push for price moderation occasionally caused political tension with its Arab neighbors who wanted a higher oil price for oil revenue increases and as leverage against the West's pro-Israeli policies. Amidst Iran's production fall in 1978–80, for instance, Saudi Arabia went against its own professed commitment to price moderation by refusing to release its excess capacity, allegedly due to the troubled US-Saudi relations over the fall of the Shah and the highly contentious Egyptian-Israeli peace treaty.[85] In response, the United States had to undertake a major diplomatic effort to convince

Saudis to offset the Iranian shortfall and stabilize the price.[86] Washington simply could not rely on the Saudis' goodwill in ensuring market stability. Nor did Saudi Arabia intend to let the West enjoy the benefits for free. Instead, the price-moderating intervention was dubbed as "a present," or "Christmas box" that Washington was expected to value and reciprocate.[87] "We expect the West, especially the United States, to appreciate what we did," reminded Ahmed Zaki Yamani, an influential oil minister of Saudi Arabia.[88]

The US Security Guarantee to Saudi Arabia

In evaluating and determining the level of security commitment to the House of Saud, Washington consistently made references to its rare mix of exceptional value and vulnerability. As Defense Secretary Caspar Weinberg once justified needs for increased military support to Saudi Arabia, its oil resources were "vast and irreplaceable [and] … vulnerable and threatened." [89] In terms of vulnerability, Washington was growingly agitated about Soviet military forces in the 1970s, which was believed to be capable of "swiftly occupy[ing] and declar[ing] *fait accompli* in certain areas of the [Gulf] region.[90] According to President Carter's National Security Council (NSC)'s assessment, such a scenario could potentially "undermine the viability of NATO and Japan and cause enormous economic disruptions in Europe, Japan, and the United States."[91] Waltz went as far as arguing that the Soviet's control of Persian oil would be "comparable to its seizing territories in Western Europe or Japan."[92] Washington consequently began serious discussions about shifting priorities toward the Persian Gulf at the expense of its preexisting commitment to Europe and northeast Asia in the late 1970s in order to stem such possibility.[93]

And within the vulnerable Persian Gulf, it did not require complex and long calculation for Washington to conclude that "US long-term interests were greatest in Saudi Arabia."[94] Simply put, no producers could rival the scale, speed, and range of benefits the largest exporter and a dominant swing producer offered to the patron. Such unique oil power revived a view that "security of Saudi Arabia [was] … of vital interest to the US," for which Washington's security assistance and assurance to Saudi Arabia was rationalized "as a concomitant of that interest,"[95] and sometimes more specifically, as to "convince the Saudis that Washington appreciated their [favorable] oil pricing and production."[96]An increase in material support in both quantity and quality, institutionalization of military cooperation, and public and private assurances of US commitment to Saudi Arabia's territorial sovereignty followed, fortifying the bilateral security ties that, summed up, made a security guarantee.

First, the United States expanded its material support to enhance the Saudi defense capability from a meager $305 million in 1972 to $5 billion in 1975.[97] Not only did the volume increase but also Saudi Arabia was granted access to the most sophisticated weaponry. As a US policymaker then observed, "I do not know of anything that is nonnuclear that we would not give the Saudis."[98] Indeed, in May 1978, US Congress approved Saudi Arabia as one of only three countries granted the entirety of its original arms request, the others being Israel and Egypt.[99]

Material support was frequently justified in terms of the Saudis' practice and promise of price-stabilizing power. For instance, the US Government Accounting Office defended selling military hardware and services as explicitly due to the Saudis' "ability to vary production within a wide range and thereby be a decisive factor in the amount and price of oil available for the world market."[100] In the late 1970s, Saudi-American relations began to be redefined by an exchange of market stabilization and security commitment. In trying to cope with a supply disruption because of the Iranian Revolution in 1979, the Policy Review Committee agreed to consider making "progress … in security issues … before the US could weigh in seriously with the Saudis on increasing their long-term production capacity."[101] In July 1979, Saudi Arabia increased its oil production from 8.5 mb/d to 9.5 mb/d, to which the US government responded with approving the sale of $1.2 billion of military equipment to the Saudi National

Guard.[102] In similar quid pro quo fashion, at the onset of Iraq–Iran War in 1980, Saudi Arabia agreed to raise its production from 9.7 mb/d to 10.3 mb/d to stem panic and stabilize the market, but also as a specific return for US deployment of an Airborne Warning and Control System (AWACS) with supporting equipment and personnel.[103] The security support and patronage represented Washington's key leverage in the petro-alignment arrangement. The transfer of large volumes of high-technology weapons systems continued into the 1980s, albeit with occasional moments of tension, under a pro-American King Fahd, who assumed the throne in 1982, and President Ronald Reagan, who, despite fierce opposition from the Senate and Israel, spent a significant amount of his political capital on the sale of state-of-art AWACS and F-15s to the Saudis.[104]

Furthermore, because Saudi excess capacity was a constantly sought after and structural asset to the market and US military, material support correspondingly occurred in a sustained and institutionalized format, not on an ad hoc basis. Historically, the 1970s witnessed a proliferation of such initiatives, including the creation of the Joint Security Cooperation Commission and the Office of Program Manager, Saudi Arabian National Guard aimed to advance US-Saudi military ties and arms sales, and to strengthen the regime security against internal dangers, respectively.[105] Similar earlier initiatives like the US Military Training Mission, set up in the 1950s, continued and expanded as well. The pinnacle was the creation of CENTCOM after the Carter Doctrine in 1980. While aimed to upgrade and institutionalize US deployability with broadly defined regional coverage, it was an open secret that Saudi Arabia sat at the center of CENTCOM.[106] In all, the creation and proliferation of institutionalized formats for military cooperation were not only instrumental in reorganizing, developing, and upgrading the Saudi military but also ensured that "US military assistance programs [were] … lineal descendants of the recommendations and proposal embodied in the plan and not simply politically inspired US responses to ad hoc Saudi arms requests."[107]

Finally, Washington has repeatedly assured Saudi Arabia of its full commitment to protect its security since the 1970s.[108] The United States' first such statement dates to a meeting between President Franklin D. Roosevelt and King Abdel Aziz al Saud on the *USS Quincy* in 1945. However, after a quick succession of crises in 1979—the Iranian Revolution in January, the siege of the Grand Mosque in Mecca in November, and the Soviet invasion of Afghanistan in December—exposed Riyadh's heightened vulnerability, Washington began to make its commitment more explicit and substantial. In March 1979, Secretary of State Cyrus Vance publicly declared that the United States would use force to defend vital Saudi oil fields.[109] Soon after the Soviet invasion of Afghanistan exacerbated the strategic rivalry over Gulf oil, a higher-level and more-formal statement of the US commitment followed in what later became known as the Carter Doctrine. Riyadh was assured of Washington's commitment to use "any means necessary, including military force," by which Vance's statement on the defense of "vital Saudi oil fields" was made "more explicit."[110] Reagan expanded the scope of the assurance to internal threats, stating that "the US will not allow Saudi Arabia to fall into the hands of any internal or external forces threatening to cut off oil supplies to the West … the bulk of the energy needed to turn the wheels of industry in the Western world … there's no way that we could stand by and see that taken over by anyone that would shut off that oil."[111]

While the US security guarantee was visible and credible, caution is in order about the role Riyadh's oil played in the evolution of US-Saudi security relations. First, Saudi price-stabilizing power was significant but not absolute. In fact, Riyadh was not the only actor that helped market stability; oil-importing states' strategic petroleum reserves or use of private inventories were also available to restore the supply-demand equilibrium.[112] Second, oil was not the only reason Riyadh was valuable to Washington. Saudi Arabia's anticommunism, religious influence, and regional leadership all formed central parts of Washington–Riyadh ties.[113] Third, the bilateral relationship had been far from harmonious, constantly facing moments of tensions and conflicts, most notably over the ongoing Arab-Israeli conflict.

However, the historical record consistently shows that oil was the Saudis' key leverage in extracting security patronage from the United States. As Kissinger once uttered, "We wouldn't give a damn about Saudi Arabia if it didn't have most of the oil in the region."[114] Saudi oil was uniquely powerful. No other producers could rival Saudi Arabia's production and export volume, or replicate its ability to stabilize the market in times of unanticipated supply shocks with the comparable effectiveness, making it "vital to U.S. interests and really to the interests of the Western world."[115] For the protection of this vital and vulnerable interest, the United States accepted the costs and risks involved in providing a security guarantee.

Strategic Alignment for Kuwait

As a price-upsetter, Kuwait's security, stability, and friendliness were significantly relevant to global oil price movement and US military planning. Unlike the global dependence on Saudi Arabia, however, the world market was simply not beholden to the orientation, decisions, or exogenous development of oil production in Kuwait. Consequently, the United States was content with providing strategic alignment, or assisting with arming under a moderately institutionalized agreement, but explicitly without commitment to the security of Kuwait.

Institutional format for US assistance dates to 1972, when, at the request of the Kuwaiti government, the United States proposed the creation of the Military Assistance Advisory Group to facilitate the deployment of military advisors and enroll Kuwait in its Foreign Military Sales program. Kuwait ultimately agreed to establish a permanent US Liaison Office in Kuwait in 1975, supervising weapons transfers and training of Kuwaiti armed forces in an institutionalized manner.[116] Arms sales soon followed and continued, including $500–$600 million of cutting-edge military equipment in the 1970s and the training of 3,000 Kuwaiti military personnel at the Pentagon in the 1980s.[117] By the mid-1980s, a $1.9 billion arms package deal was also agreed upon.

The scope of US military support to Kuwait was largely limited to enhancing Kuwait's military prowess through arms transfers and training.[118] What distinguished the two client oil states was the absence of an explicit US security guarantee. Unlike Saudi Arabia, in almost all crises involving Kuwait, the United States remained categorical in its refusal to state a commitment to protect Kuwait's sovereignty. Over the border dispute with Iraq throughout the 1970s, the United States refused to take a stand when asked, or simply paid little attention to the security situations.[119] In the aftermath of the Iranian Revolution in 1979, the United States again refused to commit to addressing the spread of revolution and its delegitimating impact on Kuwait's politics and society in a US House of Representatives hearing.[120]

There were two crises where Saudi Arabia and Kuwait were under the same exogenous security threats, allowing rare analytical windows of opportunity to compare US security responses across the two oil producers. First, at the onset of the Tanker War, when both asked for Stinger missiles to use against Iranian missile attacks, only Saudi Arabia was immediately granted permission to purchase them; the Congress blocked the sale to Kuwait. Kuwait also secured the reflagging operation only after Washington's learning that Kuwait was seeking Soviet assistance.[121] The US responses were lukewarm and passive at best, leading Kuwait to feel that "the US [was] less interested in defending them than in controlling both them and their oil."[122]

The second test came with the First Gulf War. In some respects, Desert Storm contradicted the expectation of petro-alignment, as the United States ultimately committed its military to drive Iraqi forces out of Kuwait, a price-upsetter. However, a closer look strongly suggests that Kuwait's security was not necessarily seen as a US vital interest that warranted military intervention. Less than two weeks before the invasion, April Glaspie, the American ambassador to Iraq, made an infamous statement during her meeting with Saddam Hussein: "We have no opinion on the Arab-Arab conflicts like your border disagreement with Kuwait," which some accused of unintentionally giving a greenlight to the invasion.[123] Only three days before the Iraq's invasion of Kuwait, John Kelly, the US assistant secretary of state for Near East and South Asian affairs, also openly remarked that the United States had no commitment obliging it to send forces should Kuwait be overrun.[124]

In fact, the security of Saudi Arabia dominated White House thinking once the Iraqi invasion began in August 1990. "Our first objective is to keep Saddam out of Saudi Arabia, our second is to protect the Saudis against retaliation when we shut down Iraq's export capability," remarked President George H. W. Bush during a NSC meeting on 4 August 1990.[125] Colin Powell, then chairman of the Joint Chiefs of Staff, was more explicit: "I don't see us going to war over Kuwait. Saudi Arabia, yes, if we had to; but not Kuwait."[126] Reflecting the atmosphere, Operation Desert Shield was authorized only five days after Iraq's occupation of Kuwait in August 1990 as a preemptive and unmistakable statement of security guarantee to Saudi Arabia.

Kuwait was simply no Saudi Arabia, which could and did "sweat" the rest of OPEC in 1980s.[127] And many in the military and the White House were skeptical of committing military forces. General Gary E. Luck, commander of the Joint Special Operations Command, confided to Undersecretary of Defense Paul Wolfowitz that he did not believe Kuwait was worth the lives of US servicemembers.[128] James A. Baker III, then secretary of state, also recalled, "If the president had said prior to August 1990 that we were willing to go to war to protect Kuwait, many members of Congress would have muttering impeachment."[129] The ambivalence about the use of force was widespread. As Baker continued to recount, "Even after Saddam had invaded Kuwait, there was little, if any, domestic support for using our military … we had to build that support painstakingly."[130] In short, the skepticism suggests that Kuwait's oil alone was not a sufficient cause for US intervention. Other factors such as the disintegration of the Soviet Union were relevant, but the most decisive factor that prompted the military intervention appears to be the prospect of Iraq advancing toward Saudi Arabia, a lynchpin in US Persian Gulf strategy.

Azerbaijan and Ecuador, 1990–2015

This section conducts a short cross-case plausibility probe on Azerbaijan and Ecuador, two price-followers that carry opposite geostrategic significance. As one of the most important "geopolitical pivots of Eurasia,"[131] Azerbaijan secured strategic favor from increasingly interested great powers. Ecuador, in contrast, carried little strategic value, and their meager oil production alone could do little to entice US military interests, hence the neglect.

Market Power and Geostrategic Location

As Figure 2 illustrates, both Azerbaijan and Ecuador produced far below the 2.5 percent threshold of global daily supply, putting them in the category of price-follower in the post–Cold War period. Azerbaijan produces around 0.8–1.0 mb/d, thanks to discoveries of new oil fields, upgrades in

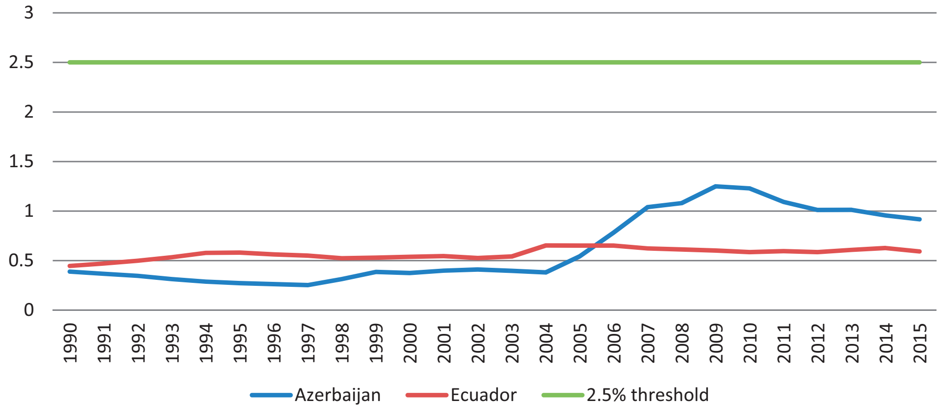

Figure 2. Oil production share of Azerbaijan and Ecuador (%), 1990–2015.[132]

extraction technology, and constructions of new pipelines. Ecuador produced at consistent levels of 0.50–0.55 mb/d throughout the 2000s.

The two countries' geostrategic locations are anything but similar, however. Azerbaijan sits at the intersection of intense rivalry, mired in Russia's struggle to protect its "near abroad" against US suspicion of Russia's intentions. The rivalry translated into competing military power projection capabilities. Since the 2000s, Russia stationed a significant military force in South Caucasus, most notably its navy in the Caspian Sea.[133] The United States' exceptional power projection capability in the region has been increasingly evident, as initially observed in the Balkans during the late 1990s, which then strengthened with the post–September 11 deployments to Khanabad in Uzbekistan, Manas in Kyrgyzstan, and Dushande in Tajikistan.[134]

Ecuador, on the other hand, was never subject to a competing sphere of influence. Latin America's strategic significance hardly changed from the Cold War, when the region was deemed "peripheral of Soviet security concerns," and simply out of the Moscow's military reach.[135] China, despite its increasing economic presence today, is far from committed to acquiring military power projection to the region. The United States, by virtue of sheer proximity and historical ties to the region, has exerted political influence but, absent a competing rival, Ecuador has yet to bear strategic weight in US grand strategy.

US Strategic Favor to Azerbaijan

Azerbaijan held some strategic significance derived from its location in the post–Cold War context. The location itself, however, was insufficient to distinguish it from other neighboring states, noticeably its long-time foe, Armenia. In fact, at the time of Azerbaijan's independence, Armenia was better connected to great powers. Moscow was more disposed to Yerevan due to a shared historical and religious identity. Yerevan also had support from powerful lobbying groups in Washington that allegedly succeeded in the inclusion of Section 907 in its US Freedom Support Act, making Azerbaijan the only post-Soviet country deprived of US government aid.[136] Internationally isolated, Azerbaijan was eventually defeated by the Armenia-supported Karabahk Army in the winter of 1992–93.

The great powers' attitude dramatically changed, however, when Heydar Aliyev seized power in Baku in October 1993 and undertook commercialization and modernization of its long-expended and obsolete oil industry by inviting international oil companies to develop the Caspian Sea. Great powers began to eagerly approach Azerbaijan to secure E&P opportunities, which were partly driven by lucrative nature of the contracts, but also because who acquires the E&P rights entailed strategic significance. For the United States, Azerbaijan's oil, given its location, could partially relieve Europe of its overreliance on Russian oil and gas. For Russia, it was not only about commercial contracts; protecting its traditional sphere of influence and denying the Western influence was equally, if not more, important.

Sensing the strategic opportunity, Aliyev carefully designed oil policy to maximize the security benefits from the interested great powers. First, he pushed for an inclusive and diversified award of the Caspian Sea oil E&P contracts, clearly designed to secure political support from the host countries of the contracted oil companies.[137] Many were American "because … that would bring the American government into the equation by orienting towards Europe and against Russia."[138] Aliyev was also careful not to jeopardize the Russians, another key player in Azerbaijan's national security, by transferring 10 percent of the State Oil Company of Azerbaijan Republic

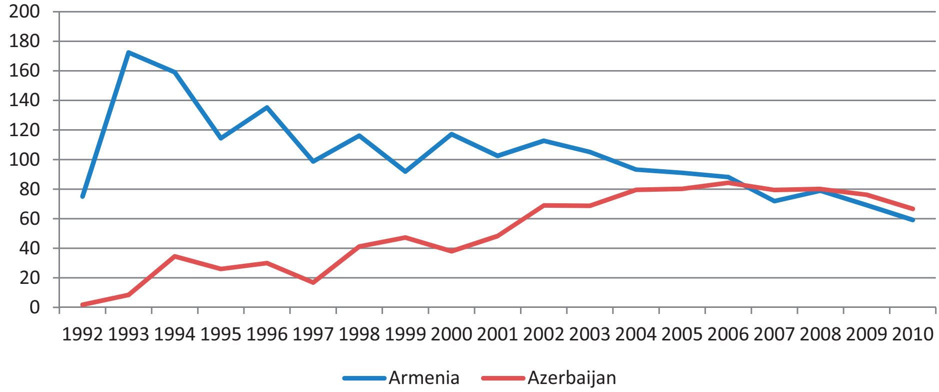

Figure 3. US Assistance to Armenia and Azerbaijan, 1992–2010 (million USD).[143]

(SOCAR)'s share in the highly-promising Azeri, Chirag, and Guneshli fields to Lukoil, a Russian company. Second, Aliyev opted for "state-ownership without control,"[139] an unusual practice for oil-rich authoritarian regimes who prefer firm control over rent flow, opacity of their finances, and power in personnel appointments. And yet, by creating an investment-friendly environment, this arrangement was what made Azeri oil industries more attractive for the international oil companies.[140] Third, the highly controversial pipeline routes accommodated competing preferences for the delivery of Azeri oil, which, as a landlocked country, could not reach major markets by itself. Committed to "offend no one" and a multidimensional foreign policy, Aliyev agreed to use a pipeline running north on the existing Russian pipeline system; a more controversial decision to build a pipeline linking Baku to Ceyhan was backed by US interests hoping to diversify the import source away from Russian oil and gas.[141]

In response to Azerbaijan's delivery of promise and benefits in oil security, the initial US neglect of Azerbaijan began to change. Oil was a key driver. President Bill Clinton pledged to "help Azerbaijan to prosper," thereby "diversifying [US] energy supply and the nation's security,"[142] during Aliyev's visit to the White House in 1997. The pledge was quickly translated into military support. Figure 3 shows Azerbaijan gradually overtaking Armenia in terms of US military assistance from 1990 to 2010. Russia also made a moderate change in its strategic stance. After securing

Lukoil's participation in the so-called Contract of the Century, Russia promptly reciprocated by sending large quantities of arms, including tanks and helicopters and more than 200 military advisors.

However, Russian and US security assistance amounted to no more than an ad hoc provision of arms, lacking any institutionalized format. For Moscow, the modest military interaction was never followed by any substantive shift in Russia's posture toward the region, defined by its general affinity toward Armenia. In Washington, Section 907 continued to face annual battles in the Congress to secure exemptions. The partial neutralization of a preexisting disadvantage hardly qualifies as institutionalization. It is true that the two states enjoyed the added military support and institutionalized cooperation over the Northern Distribution Network in the 2000s, but they were a consequence of the "War on Terror" and not of US pursuit to secure Baku oil's strategic significance.

Neglect to Ecuador

Ecuador's military cooperation with the United States existed—it was a recipient of substantial US military aid ($60 million in the 2000s) and a host of US military bases (lease period of 1999–2009).[144] Admittedly, the US foreign policy establishment sometimes refers to oil as its foreign policy interest with Ecuador. However, a closer examination of the bilateral relations reveals that oil plays almost no substantive role, and instead military relations focus exclusively on other non-oil issues, most notably human trafficking and counternarcotics operations. The Ecuadorian oil industry simply has little substance to offer. Its non-geostrategic location bars its oil from being strategically valuable for great powers' grand strategies. Its trivial market power similarly draws little market attention. Commercial opportunities in oil industry are also hard to secure because, unlike Azerbaijan, most of Ecuador's oil industrial activities are controlled by its national oil companies.[145]

On the other hand, China has been reported to have been emerging as a major trading partner and foreign investor in various economic industries, with oil and mining being the major ones.[146] However, the relations are largely defined by commercial and economic cooperation, with little evidence of them translating into security-for-oil relations.[147] In a hypothetical situation that China acquires projection capabilities to Latin America, a more intense petro-alignment dynamic may emerge, but such a scenario remains highly unlikely at this point.[148] Overall, unlike Azerbaijan, as a price-follower located in non-geostrategic Lain America, Ecuador and its oil effectively sit outside any substantive security interests of great powers.

Petro-Alignments and International Security

One consensus in the oil literature is that oil's effects are rarely absolute and instead are conditional.[149] Petro-alignment is no exception. Political compatibility between members of petro-alignment, for instance, could overturn the existing arrangement, as shown by how the 1979 overthrow of the Shah abruptly put an end to US-Iran petro-alignment relations. Petro-alignment is also nested under the larger strategic context; NATO membership defines Norway's military ties with the United States, not its oil reserves. Security guarantees were extended to non-price-stabilizers such as Iran under the Shah, as Iran offered additional strategic values acting as a militarily strong and politically stable partner in the Gulf, or Kuwait after the First Gulf War, which offered additional autonomy concessions by allowing access to US Navy ships, the storage of military equipment, and joint training and exercises.

However, oil's strategic indispensability means that no analysis about petro-alignment would hold without recognizing the individual oil states' ability to stabilize or disrupt global oil supply and their contributions to great power grand strategies. In making sense of the role of oil in forging petro-alignment, this paper shows that volume and location of oil production is fundamental in a great power's setting of an appropriate level of security commitment and oil states' making an alliance opportunity out of this crucial security asset.

This paper also contributes to larger theoretical debates. In coding petro-alignment, it offers new ways of differentiating the depth and nature of interstate security cooperative relations according to three criteria—material support, institutionalization, commitment. This continues the recent effort to move beyond the dichotomous coding prevailing in the alliance literature, and there is no a priori ground to rule out the generalizability of the criteria and classifications presented here.

More broadly, by being specifically situated at an intersection between oil-trade political economy and national security strategies, petro-alignment shows how flawed and untenable an entrenched divide between political economy and security studies is.[150] Great powers take macroeconomic stability at both domestic and global levels as key criteria in formulating their military posture and level of commitment across the globe. For others, some commodities of strategic value are potential security assets that open new external balancing opportunities. Overall, more efforts are needed to re-bridge these two deeply divided, but ultimately inseparable, fields.