IV

ENERGY

9

Weaponizing Energy Interdependence

EMILY MEIERDING

As oil prices collapsed in spring 2020, causing bankruptcies and mass unemployment in the American oil patch, energy analysts bemoaned the loss of American "energy dominance."[1] This concept, introduced by the 2017 U.S. National Security Strategy (NSS), refers to the geopolitical windfall that was purportedly conveyed by the dramatic increase in U.S. oil and natural gas production over the preceding decade.[2] In the heady, pre-price crash days, commentators asserted that the United States' surging output would bolster its energy security at home and its ability to defeat adversaries abroad.[3]

These commentaries conceptualized energy dominance in extremely narrow terms. By asserting that the United States' dominance rests on its energy production, the 2017 NSS implies that power in global energy networks is derived solely from market share: that the states that sell or buy the most energy resources—and, particularly, the most oil and gas resources—are the most powerful. In this conceptualization, as Henry Farrell and Abraham Newman note, "Power and vulnerability are characterized as the consequences of aggregate market size or bilateral interdependencies."[4]

This chapter, in contrast, observes that the global oil and gas sector consists of multiple, interrelated networks. It evaluates the

United States' dominance in three energy networks—trade, transportation, and financial transactions—using the concept of weaponized interdependence. It finds that the United States' energy dominance varies across the three energy networks. Ironically, even before the oil price crash, the United States was least dominant in the network that has been most emphasized by popular commentators and the NSS: energy trade.

In contrast, the United States is partially dominant in the energy transportation network. Although it cannot interrupt pipeline transportation, the United States' exceptional naval power, coupled with its ability to impose crippling secondary sanctions on private shipping and insurance companies, enables it to interrupt maritime energy shipments to and from most states. The United States is only truly energy dominant, however, in the energy financial transaction network. The historical pricing of oil in dollars, coupled with the dollar clearing system and countries' reliance on the Society for Worldwide Interbank Financial Telecommunications (SWIFT) messaging service, allows the United States to weaponize interdependence in this arena. The United States' energy dominance in this network is also likely to persist.

Energy Security, Independence, or Dominance?

Energy security, defined by the International Energy Agency as "the uninterrupted availability of energy sources at an affordable price," has been a core U.S. national security concern since at least 1945, when President Franklin D. Roosevelt established an "oil for security" pact with Saudi Arabia.[5] The United States' energy security concerns intensified in 1973, when Arab members of the Organization of the Petroleum Exporting Countries (OPEC) imposed a partial embargo on oil sales to the United States. The Iranian Revolution and Soviet invasion of Afghanistan heightened anxieties, especially because the United States was becoming increasingly dependent on Middle Eastern energy supplies.

To assuage these concerns, all American presidents since Richard Nixon have promoted the concept of "energy independence." At its extreme, energy independence implies that a state is entirely self-

sufficient in energy sources and engages in no international energy trade. In a milder version of energy independence, a state is a net exporter of energy resources but continues to trade with other countries.[6] Between the 1970s and the first decade of the 2000s, the United States achieved neither type of energy independence. The country's oil and gas consumption continued to rise, while domestic production continued to fall in what was perceived as an irreversible decline.

In the past decade, however, American energy independence became more viable. Advances in extractive technologies—specifically, improvements in hydraulic fracturing—precipitated the U.S. "shale revolution." American oil production doubled from 5 million barrels per day (MMb/d) in 2008 to over 10 MMb/d a decade later, making the United States the world's leading crude oil producer. In 2017, the United States became a net exporter of natural gas resources and, in late 2019, a net exporter of crude oil and petroleum products.[7] While the United States will never achieve the maximalist version of energy independence because it must import certain crudes to maintain the efficiency of its refineries, it had achieved the minimalist version.

The concept of energy dominance goes further than energy independence or energy security. According to the NSS, energy dominance is "America's central position in the global energy system as the leading producer, consumer, and innovator." Although the NSS refers to a wide range of energy resources, its language of "leading producer, consumer, and innovator" suggests an oil and gas emphasis. The NSS claims that energy dominance will enhance U.S. energy security, economic growth, and power. Energy dominance will also "ensure that markets are free and U.S. infrastructure is resilient and secure." Finally, energy dominance will "help our allies and partners become more resilient against those that use energy to coerce," by diversifying global energy "supplies and routes."[8]

The NSS's version of energy dominance focuses on trade; it presents the United States as a buyer and seller of energy resources. In this conventional conceptualization, states exert power (or are coerced) purely through purchases and sales of energy resources. The United States was a victim of such coercion in 1973. However, it has also wielded the oil weapon against its adversaries—most prominently, against Japan before World War II.[9] The United States has also ex-

erted its market power as a consumer by refusing to purchase oil from certain producers, like Iran and Venezuela.

Trade is nonetheless only one vector through which a state can potentially exercise energy dominance. The energy sector consists of multiple interrelated networks that a state could attempt to weaponize. The next three sections present the topography of the three energy networks (trade, transportation, and financial transaction), identify how they could be weaponized, and evaluate the United States' ability to weaponize each. Like the NSS, this assessment focuses on oil and natural gas.

The Energy Trade Network

Over 70 percent of oil and almost 25 percent of natural gas resources are traded internationally rather than consumed by the countries that produce them.[10] The nodes in the global energy trade network are the actors that buy and sell oil and gas resources. On the supplier side, the nodes are private or state-owned energy companies. On the customer side, the main nodes are refineries (for crude oil) and electrical utilities (for gas). National governments are also customers when they import crude oil for their strategic petroleum reserves or to fuel their armed forces and federal installations. The network's ties are the contracts that suppliers and customers establish for oil and gas deliveries.

To weaponize this network, states exploit choke-point mechanisms to prevent suppliers and customers from establishing or fulfilling contracts. A state can interrupt resource purchases by embargoing energy sales, as the Roosevelt administration did when it blocked U.S. oil sales to Japan in 1941. Alternatively, a state can interrupt resource sales by sanctioning energy suppliers, as the Bill Clinton administration did by halting U.S. oil purchases from Iran in 1995. It is easier for governments to restrict energy trade when resource suppliers or customers are state-owned enterprises. However, as the U.S. examples demonstrate, governments are also capable of directing privately owned firms' trade decisions.

States' capacities to weaponize the energy trade network are uneven. In order for trade restrictions to harm a targeted country enough to compel it to change its behavior, states must block a large

portion of the target's resource sales or purchases. Accordingly, the only states that can effectively, unilaterally weaponize the energy trade network are major hubs in the system: globally dominant importers or exporters, or states that, for some other reason, monopolize energy trade with a targeted country.

The United States was historically capable of weaponizing the energy trade network. In 1940, it was responsible for over two-thirds of global oil production and was the dominant oil supplier for some countries. For example, before World War II, 80 percent of Japan's oil imports came from the United States. These positions gave the United States enormous coercive power. The 2017 NSS alludes to this era when it claims that the United States has become an energy-dominant state, "[f]or the first time in generations."[11]

The NSS gets history right, but the present wrong. Although the United States is currently the world's leading oil and gas producer, it is responsible for only 10 percent of global oil exports and 8 percent of global gas exports. Additionally, over three-quarters of U.S. gas exports flow to its North American neighbors, Canada and Mexico.[12] Thus, the United States is not a significant node in the global gas trading network outside of its immediate region. In the global oil trading network, the United States' reach is broader because it is an important supplier of crude oil and petroleum products to many countries in the Western Hemisphere, as well as a few countries outside of it. However, U.S. oil is not irreplaceable, especially during a glut. If the United States unilaterally places an embargo on a country, its customers can easily find alternative suppliers who will be eager to increase their resource sales. Accordingly, as an oil and gas exporter, the United States does not have a dominant position in most of its bilateral trade relationships, let alone the energy trade network as a whole.

The United States is also unable to dominate the energy trade network through its oil and gas imports. American customers obtain over 95 percent of their gas imports from Canada, so the United States cannot successfully, unilaterally sanction any other gas-exporting countries. American customers import oil from a larger number of states and consume a substantial share of the crude oil exports of some of them, including Canada, Mexico, Guatemala, Trinidad

and Tobago, Colombia, and Ecuador. These countries would lose a substantial amount of revenue if the United States blocked imports of their oil, especially because they would struggle to find alternative customers during an oil glut. That being said, exerting coercive power over a handful of states using conventional bilateral sanctions is different from weaponizing interdependence and does not qualify as energy dominance.

The United States could attempt to weaponize the energy trade network multilaterally, by persuading other countries to join it in sanctioning or embargoing a targeted state. However, as Daniel Drezner's introduction to this volume observes, it is very difficult to implement effective multilateral trade restrictions. The limited panopticon opportunities in the energy trade network, in which contracts are notoriously secret, further inhibit international monitoring and punishment. Even with allied support, trade is no longer a realm of U.S. energy dominance.

The Energy Transportation Network

The global energy transportation network physically moves oil and gas resources from supplier states to customer states. It has two modalities: pipelines and seaborne transit. Most oil resources travel by sea; approximately 40 MMb/d of crude oil, as well as substantial amounts of refined petroleum products, are shipped daily.[13] Most gas travels by pipeline. However, the share of gas that travels by sea, in the form of liquified natural gas (LNG), is increasing annually.

Both transportation modes share a similar topography. Their nodes are the facilities through which energy resources exit supplier states and enter consumer states. In seaborne transportation, export and import terminals dispatch and receive energy resources. Pipelines' international exit and entry points may include pumping or monitoring stations. Both sets of nodes are owned and operated by private or state-owned companies.

The network's ties are the routes that energy resources travel between international exit and entry points. Some international pipeline routes, like the notorious Keystone XL oil pipeline between Canada and the United States, navigate only two states (cross-

border pipelines). Others navigate three or more, fully traversing at least one (transit pipelines). Prominent transit pipelines include the Baku–Tbilisi–Ceyhan (BTC) oil pipeline, traveling from Azerbaijan to Turkey via Georgia, and the Yamal gas pipeline, traveling from Russia to Western Europe via Belarus. Authority over oil and gas pipelines is shared by multiple actors: the companies that own and operate them, and the national governments that host them. International pipelines are geographically fixed and, due to the cost of constructing them, few in number. If one is shut down, regional oil or gas transportation is significantly disrupted.

Seaborne oil and gas resources travel by tanker along standard global sea routes. Portions of these routes traverse the high seas, which are outside any state's jurisdiction. Some pass through international straits, where all ships enjoy the right of innocent passage. The most significant international straits for oil and LNG transportation are the Strait of Hormuz and Strait of Malacca. Over 17 MMb/d of crude oil transit the Strait of Hormuz, while over 15 MMb/d of crude transit the Strait of Malacca.[14] Most maritime energy transportation routes are more flexible than pipeline transportation routes, because ships can change course. Nonetheless, there are exceptions—most prominently, the Strait of Hormuz. Deviating from other standard sea routes extends voyage lengths and marginally raises shipping costs.

Choke points are the key mechanism for weaponizing the energy transportation network. To choke off pipeline energy transportation, a state can physically suspend pipeline operations by activating shut-off valves and deactivating pumping stations. Only transit state governments are likely to attempt this maneuver, because energy suppliers' and customers' governments want to keep resources flowing. Transit state governments, in contrast, may want to increase transit fees or compel a supplier's or customer's government to change its behavior. To shut down pipeline transportation, a transit state government must wrest control from the pipeline's operator, unless the operator is a transit state-owned enterprise.

To choke off seaborne energy transportation, a state has two options. First, it can physically interdict oil and gas shipments, preventing tankers from completing their journey from exporting to

importing states. International straits are the most likely locale for implementing this strategy, but a state could alternatively implement a near blockade of the targeted state's export or import terminals. Second, a state can interrupt the energy transportation network through commercial choke-point mechanisms. Specifically, it can induce the private companies involved in oil and gas transportation to isolate a targeted state. For example, the coercer may persuade tanker companies to refuse shipments to or from the targeted state. Or, it may convince insurance companies to refuse to cover these shipments. For either of these commercial strategies to succeed, the coercer must possess very compelling arguments or the ability to punish any companies that fail to comply.

The United States can partially weaponize the energy transportation network. Its ability to weaponize the pipeline transportation network is limited by geography; it is not a transit state. The U.S. government's interests in this network are therefore aligned with those of its customers and suppliers. Also, if the U.S. government wanted to restrict energy trade with Mexico or Canada, it would be far more likely to impose trade restrictions than to seize control over privately operated pipelines.

The United States can, however, weaponize much of the seaborne energy transportation network. Physically, the United States possesses the world's dominant navy. Its tonnage is at least twice that of China's, despite the latter's recent building spree, and far exceeds any other country's forces.[15] Since World War II, the United States has also developed a global naval presence as the self-designated protector of international sea lanes.[16] Although the United States has generally used these capabilities to facilitate the free flow of maritime transportation, it can also employ them to physically interdict oil and gas shipments traveling to or from targeted states. The U.S. Navy can also exploit panopticon opportunities in the maritime transportation network, since the International Maritime Organization requires all tankers to be equipped with transponder systems and thus, their locations can be tracked. Even if tankers go dark, most of them can be traced using satellite imagery.

Commercially, the United States can block maritime energy shipments by dissuading tanker companies from accepting cargo destined

to or originating from targeted states, or by discouraging insurance companies from covering these shipments. These strategies are likely to succeed if the United States threatens secondary sanctions against tanker or insurance companies that do not comply. The prospect of losing access to the U.S. financial system is sufficient to induce private companies to refuse even the most lucrative oil and LNG shipments, as the United States demonstrated when it targeted Iran's maritime oil transportation system over the last decade.[17]

When it comes to China, however, the United States' ability to weaponize the maritime energy transportation network is circumscribed. Over the last fifteen years, China has built a sizeable domestic tanker fleet. If it imports oil and LNG using these ships, and insures them through state-owned insurance companies, China can neutralize the United States' commercial network weaponization capabilities.[18]

The obstacles to physically interdicting China-bound energy shipments are also considerable, even for the U.S. Navy. The United States' ability to implement a distant blockade, intercepting ships as they travel through choke points like the Strait of Malacca, is impeded by limitations to the network's panopticon opportunities. Although it is usually possible to determine tankers' origins using tracking systems, these methods cannot ascertain their destinations—nor can direct visual contact. Consequently, American sailors would need to board every tanker traveling through the choke point and consult its documentation to determine which ones to seize. All oil and LNG tankers are required to carry bills of lading, stating their origin and destination. However, documents can be forged or resource cargoes can be resold during transit, legitimately changing their destination after they pass through a U.S. blockade.[19]

Tankers can also attempt to evade a distant blockade by rerouting or by resisting U.S. interdiction. If Beijing ordered its domestic tanker fleet to run a blockade, American sailors would need to forcefully board or sink Chinese ships, significantly raising the blockade's enforcement and environmental costs.[20] Moreover, while the Chinese military currently lacks the capacity to respond directly to a distant blockade, it can retaliate in other ways, including attacking targets closer to home.[21] Finally, a U.S. attempt to block China's energy

supplies would prompt widespread international opprobrium and resistance.

A near blockade implemented close to China's oil import terminals would eliminate the panopticon problems mentioned above. From that location, it would be easy to determine where tankers are headed. Some analysts also claim that the United States' attack submarine advantage would enable it to intercept energy shipments while evading China's anti-access/area-denial (A2AD) systems, if the U.S. Navy were willing to sink tankers rather than seize them.[22] However, the escalation risks associated with that strategy are evident. For this reason, while analysts disagree about the physical viability of blockading Chinese energy shipments, most of them assume that the United States would only attempt a near or distant blockade in the context of a larger Sino-American conflict. The United States cannot physically weaponize the maritime energy transportation network against China without precipitating a broader war.

In sum, while the United States is energy dominant against most countries in the maritime energy transportation network, its coercive power against China is limited.

The Energy Financial Transaction Network

To buy foreign oil and gas resources, energy customers must be able to pay energy suppliers. Historically, an enormous amount of money has changed hands in these transactions, due to the volume and value of international energy sales. In 2018, OPEC's net oil export revenues alone were valued at $711 billion.[23] The total value of global oil exports was likely over $3 trillion.[24] International gas sales raise the figure even higher.

Banks are the nodes in the energy financial transaction network. They include suppliers' banks, where oil companies collect payments for oil and gas sales, and customers' banks, where these payments originate. The financial transaction network also includes intermediary banks, which are essential to the network's functions. The vast majority of international oil sales are denominated in dollars, regardless of where the resources originate. Consequently, for resource

payments to clear, they must pass through the U.S. financial system—either through branches of the suppliers' and customers' banks in the United States, or through these institutions' U.S. correspondent banks. It is extremely difficult for dollar-denominated energy sales to bypass the U.S. system, because offshore dollar clearing facilities usually lack the liquidity to reliably handle transactions of this scale. Accordingly, almost all oil and gas transactions eventually pass through the United States, at which point they fall under U.S. jurisdiction.[25]

The ties in the energy financial transaction network are the messages sent between the suppliers', customers', and intermediary banks. Although no dollars physically move in these transactions, each bank must be able to instruct others to debit or credit their customers' and suppliers' accounts. As Newman and Farrell observe, the Belgium-based SWIFT system handles the lion's share of this interbank messaging.[26]

A state that aims to weaponize the energy financial transaction network can therefore exploit two choke points: the SWIFT messaging system and the U.S. dollar clearing system.[27] In both, the actor prevents oil and gas customers from paying suppliers. A state can weaponize the financial messaging system by inducing SWIFT's managers to block targeted banks' access to its services. Alternatively, a government can weaponize the dollar clearing system by compelling U.S. financial institutions that handle energy transactions to refuse to do business with targeted banks. Either choke point is likely to be highly effective at blocking energy sales and purchases.

The United States is the only country in the world that can weaponize the energy financial transaction network, giving it unquestioned energy dominance in this arena. It can prohibit U.S. banks from conducting business with an adversary's banks, as it did against Iran in the last decade.[28] Blocking targeted banks' access to the U.S. financial system severely restricts their ability to buy or sell oil, because they lose the ability to clear dollar-denominated transactions. States without access to the dollar clearing system can only buy or sell energy resources by finding suppliers or customers that are willing to denominate transactions in other currencies, or to trade oil and gas on a barter basis. However, the United States can also discourage

these trades by threatening secondary sanctions against the actors that conduct them. Finally, the United States has demonstrated that it can persuade SWIFT's managers to block targeted banks' access to its messaging system.

Conclusion: Sustaining Energy Dominance

The global oil and gas sector is not a single network. Instead, it is comprised of at least three interrelated networks, and the United States' ability to weaponize interdependence varies across them. Contrary to the NSS's intimations, the United States cannot unilaterally weaponize the energy trade network. It does not supply sufficient shares of most countries' energy imports, or purchase sufficient shares of most countries' energy exports, for unilateral trade restrictions to affect the global network or harm most targeted countries. The United States could attempt to weaponize the energy trade network multilaterally. However, multilateral trade restrictions often fail.

In contrast, the United States can partially weaponize the global energy transportation network. Although its geographic location prevents it from effectively interfering with international pipeline transportation, it can impede most countries' maritime energy transportation by deploying the U.S. Navy or by compelling tanker and insurance companies to shun shipments to or from targeted states. However, the United States' ability to choke off energy transportation to China, its major adversary, is uncertain. The one arena in which the United States can reliably weaponize interdependence is the energy financial transaction network. By blocking targets' access to the U.S. dollar clearing system or to the SWIFT financial messaging service, the United States can prevent them from buying or selling energy resources.

Claims of U.S. energy dominance were therefore exaggerated, even before the 2020 oil price crash. Despite the massive increase in U.S. oil and gas production over the past decade, the United States cannot fulfill many of the energy-related promises articulated by the 2017 NSS. The United States does not export enough oil or gas to protect its allies and partners against coercion by energy producers. Nor, as recent events have shown, does U.S. energy output ensure

national economic growth. That being said, the United States can interrupt most countries' maritime energy shipments and restrict all countries' access to the energy financial transaction network.

If the United States continues to aggressively exploit these capabilities, however, its energy dominance may degrade even further. Prospective targets are already taking steps to protect themselves against energy networks' weaponization. Beijing is checking the United States' ability to physically and commercially interrupt China-bound energy shipments by constructing a domestic tanker fleet, expanding its blue-water navy, and enhancing its A2AD capabilities. The United States is likely to lose this point of leverage in the near future, if it has not already.

Foreign governments are also attempting to undercut the United States' dominance in the energy financial transaction network. Some are trying to bypass SWIFT by establishing their own financial messaging systems. In September 2019, Russia and Iran announced that they were linking their domestic messaging systems, SPFS and SEPAM, to facilitate bilateral financial communications.[29] Russian state media has also claimed that Moscow is establishing alternative messaging systems with Turkey and China.[30]

Other states are attempting to bypass the dollar clearing system in their energy transactions. Rosneft, Russia's leading national oil company, announced in August 2019 that it would denominate all oil export contracts in euro rather than in dollars.[31] Chinese customers have paid for some Russian, Venezuelan, and Iranian resource shipments in yuan.[32] Other states, including Iran, have developed barter-based systems for trading energy resources.[33] Venezuela has been supplying oil to China in exchange for food staples.[34]

Displacing the dollar in international energy transactions will nonetheless be an uphill battle. In January 2019, over 99 percent of crude oil payments were still conducted in dollars, and most suppliers and customers have no incentive to move away from this system.[35] Oil has historically been traded in dollars because they are abundant and reliable. No other currency—including the yuan or ruble—can compete in terms of liquidity and stability. Accordingly, only countries that expect to be targeted by the United States are likely to seek alternatives. While these countries may be able to de-dollarize some

of their resource sales and purchases, it is unlikely that they can de-dollarize all of them.

The United States will therefore sustain some degree of energy dominance over the coming decades. However, it will look very different from what current national security documents and commentators have imagined. Moreover, as Bruce Jentleson's contribution to this volume perceptively notes, weaponizing a network does not guarantee successful coercion. If states like Iran continue to resist U.S. demands despite energy network weaponization, claims of energy dominance will ring even hollower.

Notes

1. Gregory Brew, "Energy Dominated: Why the Price Shock Shatters the Myth of American Oil Independence," *Responsible Statecraft*, March 13, 2020, https://responsiblestatecraft.org/2020/03/13/why-the-price-shock-shatters-the-myth-of-american-oil-independence/.

2. White House, *National Security Strategy of the United States*, December 2017, pp. 22–23.

3. Meaghan L. O'Sullivan, *Windfall: How the New Energy Abundance Upends Global Politics and Strengthens America's Power* (New York: Simon and Schuster, 2017).

4. Henry Farrell and Abraham L. Newman, "Weaponized Interdependence," *International Security* 44, no. 1 (2019), p. 43.

5. International Energy Security (IEA), "Energy Security," www.iea.org/topics/energy-security.

6. O'Sullivan, *Windfall*, pp. 90–95.

7. Unless otherwise stated, all oil and gas data are from the U.S. Energy Information Agency (EIA).

8. White House, *National Security Strategy of the United States*, p. 22.

9. Emily Meierding, *The Oil Wars Myth: Petroleum and the Causes of International Conflict* (Cornell University Press, 2020), chapter 7.

10. Data from BP, *Statistical Review of World Energy*, 68th edition, 2019, www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html.

11. White House, *National Security Strategy of the United States*, p. 22.

12. BP, *Statistical Review of World Energy*.

13. UN Conference on Trade and Development (UNCTAD), "World Seaborne Trade by Types of Cargo and by Group of Economies, Annual," https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx.

14. EIA, "More than 30% of Global Maritime Crude Oil Trade Moves through the South China Sea," August 27, 2018, www.eia.gov/todayinenergy/

detail.php?id=36952; EIA, "The Strait of Hormuz Is the World's Most Important Oil Transit Chokepoint," June 20, 2019, www.eia.gov/today inenergy/detail.php?id=39932.

15. Ian Livingston and Michael O'Hanlon, "Why China Isn't Ahead of the U.S. Navy, Even with More Ships," *Brookings*, September 10, 2018, www .brookings.edu/blog/order-from-chaos/2018/09/10/why-china-isnt-ahead-of -the-us-navy-even-with-more-ships/.

16. Joshua Rovner and Caitlin Talmadge, "Hegemony, Force Posture, and the Provision of Public Goods: The Once and Future Role of Outside Powers in Securing Persian Gulf Oil," *Security Studies* 23, no. 3 (2014), pp. 548–81.

17. Juan Zarate, *Treasury's War: The Unleashing of a New Era of Financial Warfare* (New York: Public Affairs, 2015), pp. 304–05, 329–30, 334, 339.

18. Jennifer Lind and Daryl G. Press, "Markets or Mercantilism? How China Secures its Energy Supplies," *International Security* 42, no. 4 (2018), pp. 170–204.

19. Gabriel B. Collins and William S. Murray, "No Oil for the Lamps of China," *Naval War College Review* 61, no. 2 (2008), pp. 21–22.

20. Lind and Press, "Markets or Mercantilism?" p. 198.

21. Collins and Murray, "No Oil for the Lamps of China," p. 89.

22. Llewelyn Hughes and Austin Long, "Is There an Oil Weapon? Security Implications of Changes in the Structure of the International Oil Market," *International Security* 39, no. 3 (2015), p. 180.

23. EIA, "OPEC Revenues Fact Sheet," updated August 20, 2019, www. eia.gov/international/analysis/special-topics/OPEC_Revenues_Fact_Sheet.

24. Calculation based on the information that OPEC supplied approximately 32 percent of global oil exports in 2018. Alex Lawler, "OPEC's Market Share Sinks—and No Sign of Wavering on Supply Cuts," Reuters, August 22, 2019, www.reuters.com/article/us-oil-opec-graphic/opecs-market -share-sinks-and-no-sign-of-wavering-on-supply-cuts-idUSKCN1VC0U4.

25. Zarate, *Treasury's War*, p. 25.

26. Farrell and Newman, "Weaponized Interdependence."

27. For details, see Thomas Oatley, "Weaponizing International Financial Interdependence," chapter 6 in this volume.

28. Suzanne Katzenstein, "Dollar Unilateralism: The New Frontline of National Security," *Indiana Law Journal* 90 (2015), pp. 293–351.

29. "Russia & Iran to Switch to SWIFT-Free Banking System," RT, September 17, 2019, www.rt.com/business/469007-russia-iran-swift-alterna tive/.

30. Alan Rappeport and Katie Rogers, "Trump's Embrace of Sanctions Irks Allies and Prompts Efforts to Evade Measures," *New York Times*, November 15, 2019, www.nytimes.com/2019/11/15/us/politics/trump-iran -sanctions.html.

31. Elliot Smith, "Russia's Bid to Ditch the U.S. Dollar Is Slowly Working, But Obstacles Remain," CNBC, September 27, 2019, www.cnbc.com/2019/09/27/russias-bid-to-ditch-the-us-dollar-is-slowly-working-but-obstacles-remain.html.

32. Maha Kamel and Hongying Wang, "Petro-RMB? The Oil Trade and the Internationalization of the Renminbi," *International Affairs* 95, no. 5 (2019), pp. 1131–48.

33. Zarate, *Treasury's War*, pp. 341, 371.

34. Corina Pons and Mayela Armas, "Exclusive: Venezuela in Talks with China over Support amid Pandemic, Oil Price Drop—Sources," Reuters, March 25, 2020,

www.reuters.com/article/us-health-coronavirus-venezuela-china-ex/exclusive-venezuela-in-talks-with-china-over-support-amid-pandemic-oil-price-drop-sources-idUSKBN21C2LB.

35. David Dollar and Samantha Gross, "China's Currency Displacing the Dollar in Global Oil Trade? Don't Count on It," *Brookings*, April 19, 2018, www.brookings.edu/blog/order-from-chaos/2018/04/19/chinas-currency-displacing-the-dollar-in-global-oil-trade-dont-count-on-it/.