WHITHER THE ARABS:

The End of the Welfare State and the Start of a Journey into the Unknown

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Atlantic Council

Scowcroft Middle East Security Initiative

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ISBN-13: 978-1-61977-190-1

Cover image: Middle East and Eastern European lights as they look from space. Elements of this image are furnished by NASA. Source: wael alreweie/Alamy Stock Photo.

August 2021

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Executive Summary

Arab countries, rich and poor, large and small, are rapidly approaching a moment of reckoning. A confluence of anachronistic governance, economic mismanagement, and disruptive technology, which has changed the dynamics of both the supply and demand for hydrocarbon fuels and raw materials, are pushing the region to a tipping point known as a "Minsky moment."[1] The recent political turmoil in Jordan and Tunisia, whatever its political dimensions, has deep underpinnings of high unemployment and economic stress.[2] Many governments in the region, such as in Iraq and Lebanon, are teetering on the edge of bankruptcy, driven by corruption, mismanagement, and misallocation of resources.[3] As the employer of first and last resort, states' deteriorating finances threaten the minimal social safety nets that exist by slashing subsidies and social benefits, raising taxes, borrowing, and trimming spending. Together, these actions spell an end of the welfare state and an irreversible break in the social compact that has been in place for the past five decades. The COVID-19 pandemic is merely the canary in the coal mine that serves to expose the region's problems and inject further uncertainty into its economic future.

Mindful of their predicament, many Arab governments have devised plans for economic reform—some of which are in their second or third generation—that map out their visions for transitions into competitive economies. Saudi Arabia's Vision 2030, adopted in 2015, is the most visible example of such plans. While it is necessary and advocates an ambitious plan of action, it is ultimately insufficient because it still lacks key components for ensuring its success. These missing elements include priorities for implementation, a detailed program for reforming the judicial and educational systems, specific steps for improving labor productivity, enhanced innovation through competition, and land reform. The plan also grossly underestimates the capital resources required, as well as the fiscal and monetary headwinds the economy will face during the transition. Equally important is the bet on large projects centering on travel and tourism throughout the region, a bet that may come into question in the post-COVID-19 environment. Even if all such missing elements are eventually addressed in the plan, no reform can ever succeed without the three key predicates for reform: complete judicial, education, and governance systems overhauls. Despite impressive progress on social reforms, economic progress lags as budgetary constraints forced the imposition of fiscal austerity measures. Unfortunately, these measures run counter to accepted economic orthodoxy, which prescribes fiscal and monetary stimuli to counter economic slumps. As a result, new taxes and fees increasing state revenue from natural resources place most of the region's countries into the upper tiers of taxation across the world.[4]

The declining role of hydrocarbons in the global economy, along with the emergence of China and other countries in Asia as powerful global economic and political forces, has diminished the global importance of the Middle East region, and the United States has subsequently shifted its geopolitical strategy eastward. Viewing such shifts as existential, some countries in the region have been scrambling to secure new alliances as defensive, tactical means of survival against internal and external threats. Examples of this behavior include the "Abrahamic" accords between Israel and several Arab countries, led by the United Arab Emirates (UAE) in August 2020, and the end of the boycott of Qatar by Saudi Arabia, the UAE, Bahrain, and Egypt on the eve of the forty-first Gulf Cooperation Council (GCC) summit in Al Ula, Saudi Arabia in January 2021. In this context, the accords appear to have a transactional underpinning, and their durability will be tested by fundamentally changing economic and demographic landscapes in the years ahead.

Meanwhile, the Arab world's population will likely grow to an estimated 800 million in fifty years and may exceed one billion before the end of the century. Over this period, the region will need to generate over 600 million new jobs in an increasingly competitive global economy.[5] Additionally, as automation encroaches rapidly on manual labor, and as Artificial Intelligence (AI), 3D and 4D printing, robotics, and other disruptive technologies penetrate across all professions, the nature of jobs will be dramatically altered, and the

1 "Minsky's moment," *Economist*, July 30, 2016, *https://www.economist.com/schools-brief/2016/07/30/minskys-moment*.

2 Bruce Riedel, "Jordan in Turmoil," Brookings Institution, April 5, 2021, *https://www.brookings.edu/blog/order-from-chaos/2021/04/05/jordan-in-turmoil/*.

3 For example, Iraq's 2021 budget of $103 billion has a deficit of $43 billion, or over 17 percent of gross domestic product (GDP). Remarkably, this budget is pure spending with no allowance for infrastructure investments, a sector that has been allowed to deteriorate for over twenty years. This deteriorating fiscal situation forced Iraq's central bank to devalue the Iraqi Dinar by 26 percent in December 2020. Similarly, while the Lebanese pound exchange rate remains officially pegged at around 1,500 to the US Dollar since 1997, its market rate has been cut in half in the past year. Finally, Algeria, whose oil and gas revenues constitute 94 percent of its export earnings and 60 percent of its budget, has a perennial budget deficit around 10 percent of GDP. In 2020, Algeria cut public spending by 30 percent and abandoned most infrastructure projects.

4 Measured by the share of public revenues to GDP.

5 Author's projections. For more information, see: "Databank: Population estimates and projections," World Bank, accessed May 2021, *https://databank.worldbank.org/source/health-nutrition-and-population-statistics:-population-estimates-and-projections*.

Bahrain's Foreign Minister Abdullatif Al Zayani, Israel's then-Prime Minister Benjamin Netanyahu, and United Arab Emirates Foreign Minister Abdullah bin Zayed display their copies of signed agreements while then-US President Donald Trump looks on as they participate in the signing ceremony of the Abraham Accords at the White House, on September 15, 2020. *Source: Reuters/Tom Brenner/File Photo.*

level of skill required for the jobs of the future will be higher. Such bewildering demographic numbers can be either a blessing or a curse. A positive outcome is predicated on adopting a cogent new social compact with a strategy for an inclusive political, social, and economic system. Plans of action that do not adequately harness the positive potential of demographic change will have decidedly negative outcomes. Slow, insufficient reforms could force the youth of the region into a Thucydides Trap[6] and spur them to challenge authority, which would be destabilizing and disruptive. Social media could intensify such confrontation and spread it across cities and national boundaries.

Economist Mancur Olson argues in his seminal book *The Rise and Decline of Nations* that countries like Germany and Japan grew rapidly after the devastation of World War II because they pursued a process of creative destruction, discarding their old socio-economic and political models. Britain, as the winner of the war, did not feel compelled to make such a change and experienced extended stagnation.[7] The Arab world faces a similar pivotal moment. Despite Arab culture's tendency to surrender to destiny, neither future instability nor secular stagnation are foreordained for the region. A future economic model for small, rich countries should be predicated on capital-intensive growth, while the model for more populous countries should be based on their reservoirs of labor with capacity to learn new skills. For the former group, Singapore stands out as a model. The small island nation transformed itself in just one generation from one of the world's poorest countries to a wealthy nation with per capita income nearly triple that of Saudi Arabia. For the latter group, which includes Saudi Arabia, South Korea—which had a gross domestic product (GDP) below that of Egypt in the 1950s—stands out as a model to emulate. South Korea is also a good reference for the region because of its comparable tradition of

6 A reference to *The History of the Peloponnesian War* by Thucydides, 431 BC. In his narration, Thucydides describes the inevitability of a conflict between a rising power (Sparta) challenging an existing one (Athens).

7 Mancur Olson, *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities* (New York and London: Yale University Press, 1982).

family-dominated business culture (Chaebol). Both models hold the promise of rapid social and economic transformation through adoption of an inclusive meritocracy, rather than an extractive system.

Whichever course the countries of the region ultimately pursue, current dynamics indicate three possible scenarios for the future of the region: a Chinese "Han Scenario," involving social upheaval leading to some form of a rebirth or unification; a "European scenario," involving some form of coordination driven by enlightened self-interest; or a "Lemmings' scenario"[8] of collective violence. Either way, the status quo is unsustainable, and the region's current political and economic landscape, as well as any alliances forged, may not survive the test of time.

It is naïve to suggest that countries in the Arab world can quickly adopt or emulate the South Korea or Singapore models. The absence of independent judicial infrastructure, strong educational systems, and credible governance are major obstacles to creating an environment that enables growth. Equally, economic cycles, culture, and local and global politics are different today, as is the process of resource allocation to economic priorities. Particularly noteworthy, for example, is the diversion of scarce resources to military spending, which averages 4.15 percent of GDP for Arab countries, nearly twice the world average.[9] A 2 percent reduction in military budgets could redirect resources and create an estimated 1.2–1.5 million jobs a year.[10] Instead, these models are aspirational and worthy of study and emulation. Beyond economic progress, they also set important examples for education, transparency, good governance, and the rule of law. Fortunately, the demand for oil and gas will continue in the coming decade, and the discovery of large gas deposits in the East Mediterranean will give parts of the region extra time to make necessary adjustments. Unfortunately, access to capital markets for countries with weaker economic fundamentals will be far more restricted in the post COVID-19 environment if countries continue on current trajectories of complacency. At the same time, the age of the internal combustion engine, which has dominated the world's economy and propelled mobility since the industrial revolution, is nearing its end. The recent record heat waves in the United States, floods in Europe and China, Europe's ambitious environmental goal, and the new Biden administration efforts to tighten fuel efficiency standards and to have half of all new cars in the United States to be electric by 2030 will only accelerate this process.

The consequences for the region are serious, the implications for US national security loom large, and the window for action is narrow. The shocking mob attack on the US Capitol on January 6, 2021 shows how the Internet has become a powerful platform for galvanizing the feelings of disaffected people. For the Middle East region, the vicious circle of people's dependence on governments for life and livelihood, and the dependence of governments on oil, a resource with production, distribution, and price entirely dependent on external forces, is unsustainable. This analysis is intended to serve as a clarion call for action to stave off undesirable consequences. The people of the region aspire to a better future, one its highly connected youth deserve. If not now, when?

8 Lemmings make up a subfamily of rodents including voles, muskrats, rats, mice, hamsters, and gerbils. In popular culture, a longstanding myth holds that they jump off cliffs and commit mass suicide.

9 This number is based on data from the Stockholm International Peace Research Institute (SIPRI) from 2014. SIPRI has not estimated total military expenditure in the Middle East since 2015 because of a lack of data for Qatar, Syria, the UAE, and Yemen. See: Nan Tian, Alexandra Kuimova, Diego Lopes da Silva, Pieter D. Wezeman, and Siemon T. Wezeman, "Trends in World Military Expenditure, 2019," SIPRI, April 2020, *https://www.sipri.org/sites/default/files/2020-04/fs_2020_04_milex_0.pdf*.

10 Author's estimate: A two percent reduction in military expenditures could free up about $400 million of resources per year.

Disruptive Change

The recent normalization of relations between a few Arab countries and Israel has been hailed by proponents as a breakthrough, while opponents view the agreements with skepticism, if not outright cynicism. Equally, the sudden announcement of the end of the boycott of Qatar by an alliance of Saudi Arabia, the UAE, Egypt, and Bahrain hints at further intriguing shifts in regional alliances. Whatever their motivation, such developments appear to have a transactional underpinning driven by tactical calculus of a cocktail of regional threats, geopolitical shifts, and economic exigency. The sustainability of these alignments, however, will depend on the economic and demographic future of the region, of which technology will play an outsize role.

In January 2021, Apple Inc. reported a record $111.4 billion in quarterly revenues,[11] adding to its annual revenues in 2020 that topped $294 billion. This revenue is more than twice Saudi Arabia's 2020 oil export revenues[12] and over four times that of the UAE.[13] As of April 2021, the market capitalization of the five leading US technology companies (Apple, Microsoft, Amazon, Google, and Facebook), which hardly existed thirty years ago, was over $8.4 trillion.[14] Despite the lack of tangible physical assets, their collective market value exceeds ten times the GDP of Saudi Arabia and nearly twenty-five times that of the UAE, the two wealthiest countries of the region, and is over three times the combined GDP of the Arab world.[15] In other words, by one measure, 1.7 million workers in these high-tech companies produce three times the output of the entire Arab world population of 428 million.[16] Collectively, these numbers illustrate the quantum changes in the global economy, in which value added and intellectual property trumps natural resources and anachronistic and dystopian socio-political systems.

Simultaneous with Apple's earnings release, ExxonMobil, the venerable energy giant that once reigned supreme over the corporate world as the successor to Rockefeller's Standard Oil of New Jersey, reported a loss of $22.4 billion in 2020.[17] By contrast, Exxon's profits totaled $46 billion in 2008, more than three times that of Apple that same year.[18] In 1980, when Apple was a struggling startup and Amazon did not even exist as a dream, Exxon's employees worldwide exceeded 390,000.[19] Today, it plans to reduce further its 72,000-strong workforce.[20] The unceremonious removal of Exxon in August 2020 from the Dow Jones Index, of which it had been a part since 1928, indicates not only the end of the dominance of the company but also the inevitable decline of the oil sector.

The contrast between the falling fortunes of ExxonMobil and the rising tide for Apple is a real-life version of a "tale of two economies." Its narrative is symptomatic of the quantum change that has swept across the global economy in less than two generations, as the region watched from the sidelines. And it is highly relevant to the ephemeral rise of the oil

11 Eric J. Savitz, "Apple Earnings Crush Estimates and the Stock Moves to Fresh Highs," Barron's, January 27, 2021, *https://www.barrons.com/articles/apple-earnings-crush-estimates-and-the-stock-moves-to-fresh-highs-51611784762*.

12 "Saudi Arabia's 2021 Fiscal Budget," Jadwa Investment, December 2020, *https://tinyurl.com/hbbfk45c*

13 "Country Analysis: United Arab Emirates," US Energy Information Administration, May 6, 2020, *https://www.eia.gov/international/analysis/country/ARE*.

14 "Largest tech companies by market cap," Companies Market Cap, accessed April 29, 2021, *https://companiesmarketcap.com/tech/largest-tech-companies-by-market-cap/*; Jonathan Pancialno, "The World's Largest Technology Companies In 2021: Apple's Lead Widens As Coinbase, DoorDash Storm Into Ranks," *Forbes*, May 13, 2021, *https://tinyurl.com/ufh7s8h6*.

15 "Table 2. Nominal GDP," International Monetary Fund (IMF), accessed April 29, 2021, *https://data.imf.org/regular.aspx?key=63078818*.

16 Apple has 147,000 workers; Microsoft, 166,475 workers; Amazon, 1.2 million workers; Alphabet, 132,000 workers; and Facebook, 52,000 workers. See: "Form 10-K: Annual Report Pursuant to Section 13 or 15(d) of the securities exchange act of 1934," Apple Inc. and the US Securities and Exchange Commission, fiscal year 2020, *https://s2.q4cdn.com/470004039/files/doc_financials/2020/ar/_10-K-2020-(As-Filed).pdf*; "Facts About Microsoft," Microsoft, accessed May 2021, *https://news.microsoft.com/facts-about-microsoft/*; Karen Weise, "Pushed by Pandemic, Amazon Goes on a Hiring Spree Without Equal," *New York Times*, November 27, 2020, *https://www.nytimes.com/2020/11/27/technology/pushed-by-pandemic-amazon-goes-on-a-hiring-spree-without-equal.html*; "Form 10-Q: Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934," Alphabet, Inc. and the US Securities Exchange Commission, September 30, 2020, *https://abc.xyz/investor/static/pdf/20201030_alphabet_10Q.pdf?cache=4d557b4*; John Cook, "Facebook extends work from home option for employees until July 2021," Geek Wire, August 6, 2020, *https://tinyurl.com/7ca4zkc4*; and "Population, total - Arab World," the World Bank, accessed April 29, 2021, *https://data.worldbank.org/indicator/SP.POP.TOTL?locations=1A*.

17 Clifford Krauss, "Exxon Mobil lost $22 billion in 2020, its worst performance in four decades," *New York Times*, February 2, 2021, *https://www.nytimes.com/2021/02/02/business/exxon-mobil-lost-22-billion-in-2020-its-worst-performance-in-four-decades.html#*.

18 Steve Hargreaves, "Exxon 2008 profit: A record $45 billion," *CNN Money*, January 30, 2009, *https://money.cnn.com/2009/01/30/news/companies/exxon_earnings/index.htm*; and "Apple Gross Profit 2006-2020 | AAPL," accessed April 29, 2021, *https://tinyurl.com/2z6cc9ny*.

19 Felix Salmon, "The fall of an empire," *Axios*, November 1, 2020, *https://tinyurl.com/ythes5w2*.

20 Pippa Stevens, "Exxon announces U.S. job cuts, global workforce could see 15% reduction," *CNBC*, October 29, 2020, *https://tinyurl.com/2n8mmdr8*.

The solar power plant Shams 1 at its official inauguration in Abu Dhabi on March 17, 2013. *Source: REUTERS/Ben Job.*

producers.[21] Absent an urgent and aggressive transformation of their economies, many heavily oil-dependent countries run the risk of becoming a smattering of gas stations masquerading as states.

The decline of the fossil fuels industry is hastened by disruptive technology that has also impacted other sectors, including retail, media, telecommunications, and finance.[22] And it will only continue to change the nature of the economy and jobs of the future.[23] The fossil fuels industry was hit by a triple whammy of increased supply (due to, for example, hydraulic fracturing,[24] horizontal drilling,[25] wind, solar, and improved batteries) and slowing growth in demand due to higher efficiency (e.g., quantum advances in material science, efficient lighting, electric and self-driving cars,[26] and tightened auto industry fuel standards[27]) and competition.[28]

21 This note addresses the economies of the Arab world, but focuses primarily on the GCC countries, particularly Saudi Arabia, whose GDP accounts for nearly half that of the GCC and a third of the roughly $2 trillion GDP of all Arab countries combined. Although the economies of Arab countries have vastly different populations, resource endowment, geography, climate, and forms of government, they share three main attributes: (1) their economies are sluggish, highly dominated by the public sector both as an employer and a driver of economic activity, and have a weak private sector; (2) most suffer from similar symptoms of low labor productivity, low labor participation rates, lack of global competitiveness, and high unemployment, both voluntary and involuntary, particularly among the fast-growing youth segment; and (3) despite common misconceptions, different structural and resource endowments, and the paucity of intraregional trade, these economies are still highly correlated. This correlation is due to several factors, including tourism, private investments, expatriate labor and labor remittances, and financial aid.

22 Disruptive technology has impacted all economic sectors and upended numerous conventional businesses. Two examples illustrate this impact. Consider photography, for example: even as we currently snap an estimated 1.2 trillion pictures a year, compared to 86 billion in 2000, Eastman Kodak Corporation, long an icon of the industry, has seen its share price drop to $8 from $75 in 2000. Similarly, disruptive technology's impact on the media industry has been equally devastating: In 1993, the New York Times Company acquired the *Boston Globe* newspaper for $1.1 billion and was forced to sell it in 2013 for $70 million, a 93 percent loss.

23 Disruptive Innovation describes a process by which a product or service initially takes root in simple applications at the bottom of a market—typically by being less expensive and more accessible—and then relentlessly moves upmarket, eventually displacing established competitors. See: Hani K. Findakly, "This Time Is Different: The Long-Term Implications of Disruptive Technology on the Future of Energy and the Arab Economies," presentation, (UCLA Center for Middle East Development Enriching the Middle East's Economic Future Conference, Doha, Qatar, October 2015).

24 Hydraulic fracturing, or "fracking," entails injecting a mix of water, sand, and chemicals into small cracks in the earth's crust to create microscopic fractures that allow the passage of gas and oil trapped in deep reservoirs of shale formation that may be a mile below the earth's surface. The depth of these formations and hard shale rock (comparable to diamond hardness) have been the major barriers to utilizing this practice, until recently.

25 Horizontal drilling allows the extension of traditional wells by several hundred feet, and occasionally a mile, to tap a wider pool of oil, which allows the extraction of about five times the oil extracted from traditional wells.

26 Electric cars, which have been growing at an annual pace of 40 percent, are expected to comprise 90 percent of all light vehicles on American roads by 2050. China has emerged as global leader, producing 50 percent of all electric cars in 2019.

27 Innovation in materials science has been accelerating at a breakneck speed. Such progress includes light bulbs using Tungsten filaments being replaced by light-emitting diodes (LED) that are more efficient and longer-lasting, consuming only 10 percent of the energy of traditional incandescent light bulbs. Another example is 3D and 4D printing enabling the instantaneous replacement of components, such as the "printing" of Boeing's fuel valves, as General Electric expects that 10,000 of its engine components will be "printed," delivering 15 percent fuel efficiency. Similarly, nanoparticles used in solar cells offer a quantum change in the viability and cost of solar energy. New composite materials and fiber optics also promise major changes in conventional usage, including the replacement of copper wire with fiber optics (a pound of silica made from sand replaces a ton of copper), and the use of composite materials for the fuselage of the Boeing 787, replacing aluminum. Finally, advances in battery technology are accelerating energy efficiency—the charging cost of a Lithium-ion battery has dropped by 90 percent since 2006, from $1,300 to $137 per kilowatt-hour (kwh) in 2020, and new generations of batteries promise even more efficiency. For more information, see: Kip Keen, "As battery costs plummet, lithium-ion innovation hits limits, experts say," S&P Global, May 14, 2020, *https://tinyurl.com/4wczznpd*.

28 Throughout the twentieth century, nearly 100 energy companies dominated US energy production. By 2015, however, the number of energy companies increased thirty-fold, to over 3,000, unleashing intense competition that drove major innovation, which increased US energy output by nearly 300 percent within a decade and upended long-held beliefs about peak oil. It serves as a lesson on the importance of competition in innovation.

Into Uncharted Waters

The impact of the declining role of hydrocarbons as both fuel and raw material in the global economy is hardly the only challenge for oil-producing states and the wider Arab world. The rise of China and other emerging economies has placed the region at a competitive disadvantage, as it is mired in regional conflicts. Such conflicts have not only slowed growth and job creation but also diverted scarce resources to massive spending on arms acquisition that absorbed over 4.15 percent of the region's GDP and a significant portion of public budgets.[29]

Against this backdrop, the Gulf countries have careened into troubled waters. The fossil fuel-rich nations have historically relied on oil and gas revenues to buttress their economies but have run aground when prices dropped. While prices have followed cyclical trends in the past, promising the comfort of an eventual rebound, this time is different in that technological disruptions have obviated a return to previous familiar cycles.[30] The economic impact from COVID-19 reduced global demand for liquid fuels by 9 percent in 2020.[31] Looking ahead, despite a potential rebound in demand in the coming months, the US Energy Information Administration predicts demand for oil will not fully return to pre-pandemic levels until 2022 and is expected to increase only marginally until 2030, when it will plateau or decline thereafter.[32] Indeed, the fundamental concept of urban transport is undergoing a radical and rapid change.[33] It clearly suggests that the end of rising demand for fossil fuels is nigh.

29 Nan Tian, Alexandra Kuimova, Diego Lopes da Silva, Pieter D. Wezeman, and Siemon T. Wezeman, *Trends in World Military Expenditure, 2019*, SIPRI, April 2020, *https://www.sipri.org/publications/2020/sipri-fact-sheets/trends-world-military-expenditure-2019*.

30 James Maniyka, Michael Chui, Jacques Bughin, Richard Dobbs, Peter Bisson, and Alex Marrs, *Disruptive Technologies: Advances that Will Transform life, Business, and the Global Economy*, McKinsey Global Institute, May 1, 2013, *https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/disruptive-technologies#*. Disruptive technologies have already had broad and game-changing impacts on industries including photography, news media, retail, communications, travel, computers, and energy.

31 "SHORT-TERM ENERGY OUTLOOK: Global Liquid Fuels," US Energy Information Administration, accessed April 29, 2021, *https://www.eia.gov/outlooks/steo/report/global_oil.php*.

32 "SHORT-TERM ENERGY OUTLOOK: U.S. Liquid Fuels," US Energy Information Administration, accessed April 29, 2021, *https://www.eia.gov/outlooks/steo/report/us_oil.php*.

33 "Rethinking Transportation 2020-2030, Disruption of Transportation, and the Collapse of the Internal Combustion Vehicle," RethinkX, May 2017, *https://static1.squarespace.com/static/585c3439be65942f022bbf9b/t/5a861efbe2c48333e83b3a54/1518739199779/RethinkX_Handout_062617.pdf*. RethinkX argues that we are on the cusp of the fastest and most consequential disruptions in transport history, as by 2030, 95 percent of US passenger miles are expected to be served by on-demand fleet-owned autonomous electric vehicles in a new business model named Transportation as a Service (TaaS). The study projects that $1 trillion new businesses and an equal amount of consumer savings will boost the economy, while negatively impacting internal combustion vehicle manufacturers and oil producers.

Why is Diversification so Difficult?

Oil producers have long been cognizant of the threats of primary dependence on oil and gas, and most have drawn up plans to deal with the eventual depletion of their supplies or a collapse in prices. These plans have generally rested on a two-pronged strategy: the creation of long-term savings and investment funds, and the development of plans for economic diversification. Early on, the Gulf states set rainy-day funds, pioneered by Kuwait[34] and replicated by the other states. Over time, these funds have grown substantially, which will allow the states to ride out difficult times. Both strategies are thoughtful and well-articulated, but are ultimately deficient in ways that reduce their overall efficacy.

"Plans for transforming the economies of the region away from resource and public sector dependence still hold long-term prospects for success. However, they have proven difficult to implement thus far."

These funds have resulted in a significant accumulation of savings over the years,[35] especially for the three small, well-endowed states of Kuwait, the UAE, and Qatar, both in absolute terms and on a per capita basis. For Saudi Arabia, its cumulative savings are comparable to the others, but are actually far smaller on a per capita basis. The main deficiency for these funds is the absence of formal and enforceable rules on deployment and withdrawal, which has been the cornerstone of others, like the Norwegian Oil Fund.[36] By contrast, the absence of transparency in governance means sovereign wealth funds in the Middle East run the risk of serving as ATMs and being depleted quickly.[37] Notwithstanding the many benefits of the savings strategy, it cannot serve to effectively transform economic models of the region that are best described as rentier economies, where there is no added value from labor or ideas, and thus do not indicate likely future diversification.

Plans for transforming the economies of the region away from resource and public sector dependence still hold long-term prospects for success. However, they have proven difficult to implement thus far.[38] Many such plans are in their second generation, as their predecessors fell short of their goals. The reasons for the failures of these transformation plans are complex. During difficult times of declining public revenues, governments have been hesitant to inflict further pain, while inertia and complacency obviated any sense of urgency during good times. But the real reason for these repeated failures is that the transformation plans focus on a tinkering at the edges and often fail to implement fundamental economic restructuring as the basis for creating an enabling environment. At a minimum, the enabling environment must include a modern education system, an effective judiciary, and a competitive business culture that is conducive to innovation. Without these solid foundations, attempted reform will continue to be merely cosmetic. In attempting to gain deeper insight into the failure of transforming the region's economy, it is useful to consider Saudi Vision 2030. It is an ambitious plan that has by far the most detailed targets, schedules, and key performance indicators (KPIs) of any of its predecessors. It sets an example for other countries in the region, but it also illustrates the pitfalls inherent in economic transformation.

As a well-structured plan, it includes several components necessary for the transformation process. Yet it lacks at least five critical elements for successful implementation. First, the plan relies on a well-trained, well-educated, and competitive workforce, but it lacks adequate details for a major overhaul of the educational and vocational training

34 Kuwait established its Kuwait Investment Authority in 1953 but accelerated its endowment after the oil shock of the 1970s, followed by Saudi Arabia's Public Investment Fund (1971), the Abu Dhabi Investment Authority (ADIA, 1976), Qatar Investment Authority (2005), Bahrain's Mumtalakat (2005), and Oman's Investment Fund (2006).

35 The UAE has total estimated funds of $812 billion (including ADIA and Mubadala), followed by Kuwait Investment Authority ($592 billion), Saudi Arabia Public Investment Fund ($320 billion, excluding the Saudi Central Bank's foreign exchange reserves), Qatar Investment Authority ($320 billion), Oman's General Reserve Fund ($22 billion), and Bahrain's Mumtalakat ($18 billion). Other Arab countries, including Egypt, Iraq, and Libya, also have similar, but much smaller, funds. Algeria's oil stabilization fund, which peaked at $73 billion in 2012, has been substantially depleted as it has served as an ATM to fund public deficits, which average 10 percent of GDP.

36 This fund, which was only set up in 1997 and contains over $1 trillion in assets, has highly defined rules and restrictive stipulations on withdrawal policies requiring legislative approval.

37 While the savings strategy has great merits and serves to cushion the temporary and cyclical shocks of fiscal imbalances, it better serves countries with smaller population that can sustain prolonged periods of deficits.

38 Saudi Arabia's Vision 2030 has been widely promoted since its introduction in 2015 as the blueprint for the future of the country. Similarly, Qatar, Bahrain, the UAE, Egypt, Morocco, and Iraq have offered their own versions of Vision 2030. Algeria (Vision 2035) and Oman (Vision 2040) announced plans with slightly different timelines.

systems that build the human capital foundation of modern economies.[39] Despite the impressive recent increase in female workforce participation, both productivity and labor participation rates lag behind Organisation for Economic Co-operation and Development (OECD) averages.[40] Second, the plan is transactional in nature, including the public listing of Saudi Aramco on the Saudi Tadawul stock exchange, but lacks emphasis on corporate governance, competition, and an effective legal system,[41] as the sine qua non of a competitive economy.[42] This explains the paucity of foreign direct investments (FDI) in Saudi Arabia, which have averaged well below $5 billion in the past fifty years[43] and are primarily focused on the energy sector. Third, Vision 2030 includes a list of preferences without a clear set of priorities and contingency plans that would focus action on what is necessary and achievable. Fourth, it lacks contingency plans for detrimental headwinds. Faced with recent growing deficits and sharply declining foreign exchange reserves, the government launched an aggressive fiscal program that involved slashing projects,[44] reducing subsidies, and imposing value added taxes[45] and fees to plug fiscal deficits. It also borrowed heavily both at home and abroad. From an accounting perspective, these measures helped stabilize fiscal deficits,[46] but they also significantly slowed the pace of economic reform as the government siphoned funds off an already struggling private market. Indeed, these procyclical measures ran counter to conventional precepts of economic orthodoxy.[47]

Worse, most GCC countries are constrained from countering the depressive effects of the COVID-19 crisis by enacting major stimulative measures. These constraints, both monetary and fiscal, stem from their currencies' rigid link to the US dollar.[48] This peg for most GCC currencies has been in place since the 1970s and has served the region reasonably well over the years by acting as an anchor of

39 An important component of job creation is specialized vocational training institutions for well-paying blue-collar work, such as mechanical and electrical jobs, as well as two-year community college systems that prepare young people for intermediate-level careers.

40 Hani K. Findakly, "This Time Is Different: The Long-Term Implications of Disruptive Technology on the Future of Energy and the Arab Economies," presentation, (UCLA Center for Middle East Development Enriching the Middle East's Economic Future Conference, Doha, Qatar, October 2015.) Labor productivity in countries of the region is less than half of the averages for Organisation for Economic Co-operation and Development (OECD) economies. To understand how this policy focus impacts income and productivity, consider industrial workers in Egypt, who earn an average of $2,000 a year while producing about $6,000 of value-added goods. By contrast, Turkish workers earn about four times more, justifying their higher pay by producing $33,000 of value-added goods, or 5.5 times the output of their Egyptian counterparts. This helps explain why low pay does not translate into export competitiveness and why productivity is central to economic performance and wage growth: while Egypt's economy extracts a net value of $4,100 per manufacturing worker, Turkey generates $25,000.

41 There is a recent proposal for judicial reforms in Saudi Arabia. Although details are scant, the proposed reforms appear to introduce a parallel legal code for commercial transactions and a legal code for general cases. This is a promising development that appears to codify and fill gaps in the legal system. Still, the proposed changes raise three key questions: will there be different enforcement mechanisms for court decisions, how would such mechanisms work, and under what jurisdiction would they be? However, the proposal does not go as far as creating an independent judiciary. See: Marwa Rashad, "Saudi Arabia announces new judicial reforms in a move towards codified law," Reuters, February 8, 2021, *https://www.reuters.com/world/saudi-arabia-announces-new-judicial-reforms-move-towards-codified-law-2021-02-08/*.

42 A public listing of Saudi Aramco, or any public company where the government owns the bulk of the shares, does not ensure better governance, enhanced efficiency, or higher accountability.

43 *World Investment Report: International Production Beyond the Pandemic*, United Nations Conference on Trade and Development, 2020, *https://unctad.org/system/files/official-document/wir2020_en.pdf*; "World Development Indicators: Global Private Financial Flows," World Bank, 2019, *http://wdi.worldbank.org/table/6.9*. FDI into Saudi Arabia has ranged between $8.5 billion and -$8.2 billion and has rarely exceeded $3 billion annually.

44 Davide Barbuscia and Saeed Azha, "Saudi Arabia puts financing for Riyadh airport expansion on hold," Reuters, January 12, 2021, *https://www.reuters.com/article/saudi-airport-financing/saudi-arabia-puts-financing-for-riyadh-airport-expansion-on-hold-sources-idUSL8N2JM3A6*. Many important infrastructure projects have been shelved or abandoned. For example, it was announced in January 2021 that the planned expansion of Riyadh's King Khalid International Airport, which has not seen a major facelift since its construction in 1983, has been postponed.

45 The myth that GCC economies are low-tax countries is not supported by facts. Although GCC countries do not impose direct income tax, they control all the resources and receive all the revenues from the extraction and sale of these resources, i.e., 100 percent tax. As a result, the total revenues that these governments receive, estimated by the author, are relatively high. For example, US federal taxes in 2019 amounted to about $3.3 trillion, or 17 percent of GDP. By comparison, taxes in the GCC region are significantly higher in terms of public revenues as a percent of GDP: Saudi Arabia (26.4 percent), the UAE (28.8 percent), Oman (31.3 percent), Iraq (35.7 percent), and Kuwait (41.8 percent). These figures are more than a measure of the public sector dominant and distortive role in the economy and its dependence on oil export revenues. That is why these "low tax" countries are high taxers in disguise. It is worth noting that Oman announced plans in November 2020 to impose new income taxes on high-income earners, which may be a harbinger for others to follow. *World Development Report 2019: Changing the Nature of Work*, World Bank, June 2019, *http://documents1.worldbank.org/curated/en/816281518818814423/pdf/2019-WDR-Report.pdf*.

46 As taxes and other revenues rose in the past two years, as a percentage of public revenues, the government conflated the diversification of revenues with the diversification of the economy by incorrectly attributing the increase in non-oil revenues as proof of economic diversity. In fact, overall revenues were lower, as no tangible private investments or jobs were created in new economic sectors.

47 Notwithstanding the necessity of cutting unproductive spending, Keynesian economic orthodoxy has been the hallmark of economic management in the past seven decades and has recently been implemented in full force across the world during COVID-19 crisis. It calls, among other things, for a temporary increase in public spending, an enhanced social safety net, and lower taxes. By contrast, GCC countries reached a collective agreement for a 5 percent value added tax (VAT), but both Qatar and Kuwait decided to defer its imposition until 2021.

48 This dollar peg limits the government's ability to print money to stimulate the economy in the manner that the United States, Europe, China, and others did to counter the economic slowdown in 2020. Instead, GCC countries used a combination of debt and a draw-down of foreign exchange reserves to buttress their economies.

monetary stability. However, its results are now mixed as it severely limits policy flexibility in responding to economic challenges, such as the COVID-19 crisis, or transitioning the region's economy. Furthermore, while decoupling currency from the US dollar can create problems by fueling inflation and eroding investors' confidence, it can offer certain benefits, including reducing the real value of public payroll[49] and workers' remittances.[50]

Finally, a major obstacle to implementing Vision 2030 is that it grossly underestimates the resources required to achieve diversification goals. When adding up all the investments envisioned in the plans[51] for the country's long-term commitments for the military[52] and other sectors, the combined funds needed equal ten years of the country's total oil export revenues.[53] To finance such massive undertakings, Saudi Arabia must depend, therefore, on enlisting large domestic and foreign private investments. However, the track record for FDI in the region is not reassuring. For an economy that has averaged $5 billion of annual FDI, it is a tall order to expect a sudden inflow of $100 billion per year.[54]

Beyond the scarcity of capital, oil producers in the region face various headwinds. First, their economies will remain heavily dependent on oil export revenues for the foreseeable future, as economic performance will continue to swing in tandem with oil prices. Second, regional tensions necessitate large spending on security that will keep down other investments in the near term.[55] Third, even with a moderate economic rebound in the coming years, the annual population growth of 1.8 percent[56] will dampen growth in real per capita income, requiring larger public spending to maintain an adequate social safety net. Under these circumstances, Saudi Arabia, for example, needs to tweak its current plan if it is to achieve sustainable growth. First, it must focus on building human capital so that Saudis can replace the expatriate labor that drains 30 percent of oil export earnings.[57] Second, it must undertake major judiciary and land reform,[58] both absolute necessities for building investor confidence. Third, it must ensure competitive, simple, and transparent tax treatment and incentives for investment that affect all investments equally regardless of source. This obviates the need for special economic zones (SEZs) that have dubious economic benefits, including for job creation.[59] Fourth, it must support the formation of small and start-up businesses, including the establishment of a small business administration and the promotion of venture capital to seed new businesses. A main untapped source

49 In most GCC countries, public employees' wages and benefits constitute about 60 percent of public budgets. A 25 percent currency devaluation creates a quick reduction of 15 percent in public spending. While this action will be painful to employees, it will apply more equitably among employees and is less painful that direct job cuts.

50 GCC countries are among the top source of workers' remittances, averaging about $93 billion annually, of which India ($36 billion), Egypt ($13 billion), the Philippines ($10 billion), Pakistan ($8.7 billion), and Bangladesh ($7.3 billion) are the largest recipients. A 25 percent currency devaluation would stem the foreign exchange hemorrhage by over $23 billion. Given the region's slowing demand for labor in the coming years, some attrition in expatriate labor is desirable. For more information, see: "World Bank Briefing to the Board of Directors," World Bank, September 26, 2019, *https://www.knomad.org/publication/leveraging-economic-migration-development-briefing-world-bank-board*.

51 Including the massive $450 billion NEOM project, a futuristic region in northwest Saudi Arabia along the Red Sea.

52 "Trends in World Military Expenditure, 2019," SIPRI, April 2020, *https://www.sipri.org/sites/default/files/2020-04/fs_2020_04_milex_0.pdf*. While data on military spending are somewhat opaque, publicly available figures show that military spending by Arab countries averages 4.15 percent of GDP, nearly twice the 2.2 percent world average. Some countries including Oman, Saudi Arabia, the UAE, and Algeria spend far more. Since 2010, for example, Saudi Arabia's annual defense expenditures averaged $69 billion, about 10% percent of GDP and nearly half of its oil export revenues. When incorporating other spending and a $132 billion import bill, the overall budget rises to nearly $300 billion, 70 percent of which is wages and benefits. With oil export revenues averaging $120 billion recently, the fiscal gap can only be plugged if oil prices double from current levels.

53 Leaving nothing for salaries, pensions, education, healthcare, the social safety net, and imports.

54 This will prove even more challenging in the post-COVID-19 global environment, where competition for capital will intensify to fund the massive debts that have flooded global capital markets in 2020.

55 Vivid evidence of the heyday of large iconic investments that have stalled is the Jeddah Tower, which began construction in April 2013 as the putative tallest building in the world, dwarfing Dubai's Burj Khalifa, is now a partially abandoned skeleton after construction stopped at the sixtieth floor.

56 Average growth rates for 2014–2019. See: "Population growth (annual %) - Middle East & North Africa," World Bank Data, accessed April 29, 2021, *https://data.worldbank.org/indicator/SP.POP.GROW?locations=ZQ*.

57 Annual remittances of expatriate workers in Saudi Arabia averaged $37.5 billion in the past five years. The government has announced plans to levy taxes on such transfers, but it workers may find loopholes to avoid them.

58 Land reform, largely missing from the transformation plans, is critical for the entire region, especially in countries like Saudi Arabia where the rising real estate prices have restricted affordability, and where real estate ownership is often confusing due to the lack of a centralized registry system. A land policy that targets distribution of public lands at nominal prices is low-lying fruit that serves the dual purpose of narrowing the wealth gap and of creating large housing and related infrastructure construction boom and tens of thousands of jobs. Singapore has set a good example of limiting speculation and expanding housing accessibility, which has contributed to a lower wealth gap and dampened the type of speculation that gripped places like Hong Kong and caused social unrest.

59 An extensive survey by PriceWaterhouseCoopers shows that special economic zones, a legacy of the 1950s protectionist and socialist economies have proliferated over the years, where over 54,000 such zones exist in 147 markets, including ninety-seven in the GCC and nearby countries of Egypt and Jordan. An extensive study by the United Nations Conference on Trade and Development (UNCTAD) has shown that only 35 percent of such zones have been utilized, and most have not delivered intended results. For more information, see: Amr Goussous, Olaf Schirmer, Alexandre Sawaya, and Mohamad Basma, *Rebirth of Special Economic Zones (SEZ) in the GCC*, PwC, 2020, *https://www.pwc.com/m1/en/publications/re-birth-special-economic-zones-gcc.html*; *World Investment Report, Special Economic Zones*, United Nations Conference on Trade and Development, 2019, *https://unctad.org/en/PublicationChapters/WIR2019_CH4.pdf*.

General view of Aramco tanks and oil pipe at Saudi Aramco's Ras Tanura oil refinery and oil terminal in Saudi Arabia, on May 21, 2018. *Source: Reuters/Ahmed Jadallah.*

for risk capital is the large Islamic trusts (Awqaf)[60] that can support entrepreneurship, drive innovation, and stimulate job creation. Fourth, it must limit large investments to those that: (1) create jobs; (2) build on the country's comparative advantages; (3) add value to its resource endowment; and (4) have a multiplier effect on the economy, i.e., those that stimulate other investments. Fifth, it must promote competition and foster a culture of governance and reliance on best practices in both public and private enterprises as the drivers of innovation, efficiency, and transparency. Finally, as the implementation of Vision 2030 has been stymied by the COVID-19 pandemic, some of the underlying strategies that were predicated on the global economy in the pre-COVID-19 period, including heavy investments in travel and tourism,[61] may need to be revisited. Should a return to normalcy be slow or should post-COVID-19 conditions bring about major changes in the global economy, it may become necessary to re-designate the strategy as "Vision 2040."

60 Awqaf are Islamic trusts of various forms that act as endowments for charity, for the most part, some of which are more specific than others. They exist in many places around the world, from Asia, including China, Hong Kong, Indonesia, Singapore, Malaysia, India, and Pakistan, to the Middle East and Africa. Most of them are in the form of land, but other forms of assets exist. They also vary in size, but collectively they are estimated to account for over $1.5 trillion, including well over $100 billion in Saudi Arabia and the GCC countries, and over $200 billion in the Arab countries combined. Since there is a dearth of risk capital to support small business and startups, these trusts, which have been hitherto dead assets, can be liquified and used as a key source of risk capital for development. After all, dead owners would not be overly concerned about the risk of a loss of their investments.

61 Two new airports in Dubai and Abu Dhabi, 57 miles apart; the existing Dubai airport; three relatively new airports in Doha, Jeddah, and Muscat; and a planned airport in Kuwait have combined capacity approaching 300 million passengers per year. In addition, large infrastructure investments that have been made for Dubai Expo 2020, Doha's World Cup 2022, and the Saudi NEOM project are predicated on a quick return to normalcy and mobility in the post COVID-19 global economy. Even excluding the assumption of a rapid return to normalcy, such big projects are generally of questionable economic value and lasting benefits.

Powerful Demographics

Based on current growth rates, the Arab world's population of 428 million could nearly double in forty years to 740 million and may even exceed one billion before the end of this century.[62] Economic policies in the region are dominated by the state—which control all the resources, serve as employer of first and last resort, and direct all economic activities. In other words: a classic rentier economic system. Meanwhile, population growth, stagnant economies, and declining public resources have resulted in slashed subsidies, reduced benefits, and higher taxes, which in turn caused stagnating real per capita income and slower overall growth. Unemployment, especially among the youth, remains in double digits throughout the region.[63]

Based on the demographic changes mentioned above, the region sorely needs to adopt policies that can create over 600 million new jobs over the next eighty years. This will be particularly challenging in the years ahead, as increased automation and the encroachment of AI and other technology into all aspects of life will change the scope and nature of new jobs.[64] Many of the diversification plans address near-term needs but face major challenges over the long term. The challenge of creating an average of 7.5 million jobs annually,[65] just to keep the already high unemployment rate from rising, requires a major overhaul of economic and socio-political systems.[66] Although the change will be imperceptible in the short term, its cumulative effect will push the system to a tipping point, possibly by an unforeseen or even trivial event leading to a "Minsky moment,"[67] or social and political turbulence that can spill across national borders. To avoid such an undesirable outcome, the region's economies need a fundamental transformation that focuses on competitiveness by rebuilding their educational systems and dealing with economic anomalies[68] to unleash the talents and increase the productivity of its people.[69] Such anomalies contribute to lower productivity and growing income disparities.

"The challenge of creating an average of 7.5 million jobs annually, just to keep the already high unemployment rate from rising, requires a major overhaul of economic and socio-political systems."

62 Averaging about 1.8 percent annually, on a population-weighted basis.

63 Except for GCC countries like the UAE, Qatar, and Kuwait, unemployment rates among Arab countries range from 9–10 percent (Egypt and Morocco) to 12 percent (Iraq and Algeria) to over 16 percent (Sudan and Tunisia). Most have likely risen substantially in 2020. Even in oil-rich GCC countries, there is anecdotal evidence of "voluntary unemployment," where youth prefer to receive generous handouts from the state in lieu of gainful employment.

64 Carl Benidkt Frey and Michael A. Osborne, "The Future of Employment: How Susceptible Are Jobs to Computerization?," Engineering Sciences Department and the Oxford Martin Programme on the Future of Technology, Oxford University, September 2013, *http://www.fhi.ox.ac.uk/wp-content/uploads/The-Future-of-Employment-How-Susceptible-Are-Jobs-to-Computerization.pdf*. An analysis of the vulnerability of over 700 jobs to automation.

65 Based on population growth rates. See: footnote 61.

66 If countries like Iraq or Algeria struggle to offer jobs for their respective 40 million populations, financed almost entirely from oil exports, how can they provide for 80 million in forty years or 150 million people by century's end?

67 Named after economist Hyman Minsky, it describes economic cycles where asset prices collapse or cannot generate an adequate income to sustain their value. At that point, most economic activities freeze. Examples of Minsky's cycles include the 1928 Great Depression, Mexico's 1982 debt crisis, Japan's 1990 crisis, 1997 Asian crisis, the 1998 Russian financial crisis, the US housing debt crisis of 2007–2008, and the 2020 COVID-19 crisis.

68 Such asymmetries include the misallocation of labor and resources into unproductive sectors. In Iraq, for example, 21.6 percent of its labor is engaged in agriculture, which contributes to only 3.3 percent of GDP. Similarly, the 39 percent of Morocco's workforce in agriculture contributes only 14 percent to its GDP, while Egypt's farm workers, who comprise 25.8 percent of its total workforce, contribute a mere 11.7 percent to GDP. In Saudi Arabia, 71.9 percent of its labor force is engaged in services, which produces 53.2 percent of GDP. See: "The World Factbook: Iraq," CIA, June 15, 2021, *https://www.cia.gov/the-world-factbook/countries/iraq/#economy*; "The World Factbook: Morocco," CIA, June 10, 2021, *https://www.cia.gov/the-world-factbook/countries/morocco/#economy*; "The World Factbook: Egypt," CIA, June 14, 2021, *https://www.cia.gov/the-world-factbook/countries/egypt/#economy*; and "The World Factbook: Saudi Arabia," CIA, June 9, 2021, *https://www.cia.gov/the-world-factbook/countries/saudi-arabia/#economy*.

69 Measured by spending on education, Arab countries rank well internationally, both as a share of public budgets and as a share of GDP. If public spending per pupil was a true yardstick, Sudan would rank third in the world. Yet output, both in quality and skills produced, has been disproportionately low. In global comparisons, Arab students at K-12 levels consistently rank near the bottom, and, worse, the recent trends show deterioration. Dropout rates among primary and secondary enrollment are close to 50 percent. Despite rising literacy rates, both anecdotal and empirical evidence shows that higher youth unemployment and dropout rates are the result of a dysfunctional education system. A TIMSS 2019 report indicates that six Arab countries consistently rank at the bottom ten of international tables. Worse, unemployment in many Arab countries, such as Egypt, Iraq, and Jordan, is higher among college graduates. Few Arab universities appear on global lists of the top 300 universities. Even where educational excellence is achieved, the cost is enormous. For example, Saudi Arabia's well-regarded King Abdullah University for Science and Technology (KAUST), established in 2009 at an initial cost $23 billion and endowment of $30 billion, ranked number 152 among global universities in 2019. It is well regarded for the quality of its faculty and facilities. Yet, with an estimated annual budget of $1 billion, it costs about $628,00 per student per year, and $2.18 million per Saudi student. This is over ten times the cost of leading universities, such as the number 1 ranked MIT or the number 8 ranked Imperial College in the same year. See: *TIMSS 2019 International Results in Mathematics and Science*, TIMSS, 2019, *https://timss2019.org/reports/download-center/*; *QS World University Rankings*, QS Quacquarelli Symonds, 2021, *https://www.topuniversities.com/university-rankings/world-university-rankings/2021*.

It is an overarching system too rigid and entrenched to respond to marginal tinkering—it can only be reformed by a radical transformation through creative destruction, as argued by Joseph Schumpeter.[70] A major component of such wholesale change is a fundamental alteration in the economic structure from an extractive system, where opportunities are highly restricted, to an inclusive system that offers broader growth opportunities.[71]

70 Joseph A. Schumpeter, *Theory of Economic Development* (New Brunswick: Transaction Publishers, 1983); and Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy*, (New York: Harper Perennial, 1950). Schumpeter argued that the best strategy for economic renewal is to rebuild the economy de novo through successive processes of creative destruction to adjust for disruptive change.

71 Daron Acemoglu and James A. Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, (New York: Crown Business, 2012).

Whither the Arabs: Lemmings, Hans, or Europeans?

While the focus of this piece is primarily economic, no comprehensive analysis of the challenges and opportunities in the region is possible in the absence of the social and geopolitical perspectives outlined earlier. The decline in the role of hydrocarbons in the global economy, brought about in large part by a sharp rise in US shale production, along with the rise of China as an economic and geopolitical force, has profound implications for the region—economic, political, social, and geopolitical.

The United States' interests in the region have existed since World War II, when the need for energy security was integral to the Allies' victory. This policy stretched into the Cold War for rhyming reasons, and, as the United Kingdom reduced its presence, the United States filled the void and engaged in two major kinetic wars and several political interventions to preserve its role as protector and eminent power in the region. But US strategic priorities—both economic and geopolitical—have changed dramatically in recent years, shifting its primary focus to China as a geopolitical and economic threat, and to Asia as the home of two-thirds of the world's population, trade, and economic power in the coming decades.

The September 2019 drone attacks on Saudi Aramco oil facilities, as well on shipping and other infrastructure in the Gulf region and Red Sea, have exposed the vulnerability of GCC countries to crippling attacks on the power and water desalination installations that dot their shores. Moreover, the COVID-19 pandemic may be the canary in the coal mine for exposing the gaps in economic infrastructure. Until recently, GCC's decision making has been premised on two assumptions. First, the United States will always bolster its regional allies with a de facto form of security guarantee. Second, oil revenues will sustain their economies until a robust private sector emerges. Unfortunately, both assumptions have come into question in recent years.

Anxiety over a shifted US focus has created a sense of abandonment and seems to have led traditionally passive states into a proactive, if hyperactive, posture, searching for new alliances to counter perceived threats. This includes the recent normalization agreements the UAE, Bahrain, and others have made with Israel, as well as the resolution of hostilities between Saudi Arabia, the UAE, Bahrain, and Egypt on one side, and Qatar on the other. Whatever the motives for the normalization and the positive consequences of peace in the region, there is no escaping the transactional nature of the processes, and the heavy-handed US underwriting.[72] Furthermore, the region's dynamics may bring into question the durability of these developments, for three reasons. First, the normalization process was undertaken by countries that have no borders with Israel and some, including the UAE and Bahrain as the leaders of normalization, did not exist as independent states at the time of the formation of Israel in 1948.[73] Second, these countries are small—together, they have two million citizens, or 0.5 percent of the Arab world's population. Third, while GCC countries have gained geopolitical prominence in the past two decades due to a confluence of possibly transient factors,[74] it is an open question whether future trends will create new regional dynamics. Such shifts, occurring in the context of a rising population and economic stress, could lead to three possible long-term scenarios for the region, all of which involve potential social and political upheaval.

"Small wealthy countries will focus on an economic strategy based on a capital-intensive economic structure, while the more populous Arab countries will favor job creation and higher productivity."

The first, called the Lemmings Scenario, entails the continuation of the status quo ante of a failure of effective reforms. This scenario could lead to political upheaval stemming from economic pressure and the breakdown of the social compact that has been broadly in effect for the past five decades. Under this scenario, governments would close ranks and crack down on demands for change, and economic reforms would slow down, leading to violent confrontations

72 The UAE allegedly received a commitment of advanced weapons, including F-35 fighter jets; Sudan was promised sanctions would be removed; Morocco was to receive a Balfour-style US recognition over its claims on the Western Sahara; and Bahrain may have received possible security assurances and financial help.

73 Both Bahrain and the UAE became independent in 1971.

74 These factors include filling a large void left by the diminishing roles of the regional powers Egypt, Iraq, and Syria, which have previously dominated Arab politics, education, and culture. The rapidly rising wealth of the GCC countries also allowed them to play a disproportionately larger role in regional politics.

Saudi defense ministry spokesman Colonel Turki Al-Malik displays on a screen drones that the Saudi government says attacked an Aramco oil facility, during a news conference in Riyadh, Saudi Arabia, on September 18, 2019. *Source: Reuters/Hamad I Mohammed.*

that would keep the region suppressed for generations. Hence the collective suicide implied by its name. Although unsustainable and more costly in the end, it is reasonably likely in the short term, given the region's history in the past few centuries.

The second is a China, or Han, scenario, whereby scarce economic opportunities and perceived humiliation under an anachronistic and extractive economic system push a well-connected Internet generation to demand faster reform and more participation. This is a Thucydides version of confrontation as a rising youth would challenge the existing power elite. How change could happen in this scenario would depend in part on the response and wisdom of the ruling elite in preempting popular, militant change. Notwithstanding varying social and economic conditions among Arab countries, their youth may find common cause in language, culture, and religion to act in a synchronized fashion, as they did during the Arab Spring. China's experience is instructive in drawing parallels with the Great March Forward, which followed a century of humiliation, occupation, and division. Just as China paid a major price in blood and treasure for three decades after the revolution, the road to reform, unity, and an inclusive system under this scenario, however promising, may be rocky and turbulent.

A third, and perhaps more plausible, scenario for the future is the European option. After centuries of conflict and dispute over borders, politics, and religion, Europeans found more value in peace and more strength in unity, however tenuous. Under this scenario, a form of convergence and coordination could emerge to bring both rulers and the ruled into consensus for a new and more viable social compact. This convergence could help restore social and economic stability and enable the region to use its large consumer power and numerical advantage to its collective benefit, just as Europe emerged an economic and geopolitical power. It is a plausible scenario because it builds on the complementarity among these countries: capital-finding outlets for investments in labor rich countries, food-producing countries supplying nutrition to an arid region, and a base of users of services offered by capital-rich economies, all within a region of generally homogeneous culture, language, and history.

And it offers a strategic depth and collective security for all, especially the small but rich countries.

In pursuit of any of the above scenarios, demographics and natural and human resource endowments will be critical in shaping economic and social transformation. Small wealthy countries will focus on an economic strategy based on a capital-intensive economic structure, while the more populous Arab countries will favor job creation and higher productivity. Fortunately, the success of several countries in recent decades offers hope for the Arab world.

One such example is Singapore, a small nation that was one of the world's poorest countries when it gained independence in 1965 and became one of the richest in just one generation.[75] Despite its lack of natural resources, it built its economy on human capital and a socially inclusive system.[76] Today, it boasts a strong education system, an independent judiciary, an effective land reform program that bridges income and wealth gaps, and a competitive system that allocates resources efficiently to productive economic sectors. Moreover, it promotes merit-based political and business governance, unrelated to lineage or connection, and it subjects governance to strict accountability measures with severe penalties for corruption. Singapore's reputation as the least corrupt country in Asia[77] has allowed it to position itself as a center for commerce and banking where businesses compete to locate. It also ranks near the top in such key criteria as ease of doing business and effectiveness of settling disputes. As such, Singapore should serve as a role model for the Arab world, if only in aspirational terms. While Dubai is often favorably compared to Singapore due to physical similarities, it is important to note that Singapore's system is a merit-based, inclusive system built entirely on the rule of law.

Similarly, South Korea offers another example for Arab countries to emulate. After recovering from a devastating war in the 1950s, its economy, which was smaller than Egypt's in 1960, rose to become the tenth largest economy in the world—boasting nearly twice the GDP of Saudi Arabia and over five times that of Egypt.[78] South Korea's economy was built both along similar lines and during the same period as Singapore's. Its rigorous educational system and merit-based governance have been the foundation of its economic performance. South Korea also shares with the Arab world a family-based business culture, the Chaebol, which copied Japan's family conglomerates "Zaibatsu," the vertically integrated businesses, and "Keiretsu," the closely interlinked business. South Korea's legal system and its adherence to excellence in business and anti-corruption practices have earned it top spots in the World Bank's rankings of ease of doing business and judicial integrity.[79]

While there are many other examples of success,[80] Singapore and South Korea offer emulative models for the Arab world. Despite many differences from each other and from the region, they share important common attributes. They are both located in regions of instability and change, they share similar economic and political starting points, and, most importantly, they achieved rapid transformation. In considering reforms, policy makers must be cognizant that there are no short cuts or silver bullets. A top policy priority, investment in human capital is the surest path to prosperity that a nation can take. Since disruptive technology will play a critical role in shaping the forces of change, it is a key determinant in influencing the future. Automation will impact the number and type of jobs, while social media and smart phones[81] will deepen connectivity and drive commerce. Among others, AI, robotics, 3D and 4D printing,[82] and sensor technology will impact all aspects of life, including healthcare, transport, education, security, banking, law, business, housing, and communication. Indeed, there is no aspect of life that will escape the effects of advances in technology, and it will be driven primarily by the youth.

75 "Singapore GDP Per Capita 1960-2021," World Bank, accessed June 5, 2021, *https://www.macrotrends.net/countries/SGP/singapore/gdp-per-capita*.

76 Acemoglu and Robinson, *Why Nations Fail: The Origins 0f Power, Prosperity and Poverty*. In their seminal book, the two MIT scholars trace the origins of underdevelopment to two related issues: strong institutions (education, judiciary, healthcare, civil society, etc.) and an inclusive economic and political system, compared to an extractive system that places both economic and political power asymmetrically in the hands of the few. The authors debunk the notion of ethnic, racial, geographic, or religious factors as fundamental drivers of in development.

77 Transparency International consistently ranks Singapore at the top tier of the least corrupt countries in the world, ranking third in 2018. Prison sentences are routinely handed down to officials for corruption and embezzlement.

78 "South Korea GDP," Trading Economics, accessed June 2021, *https://tradingeconomics.com/south-korea/gdp*; "Egypt GDP," Trading Economics, accessed June 2021, *https://tradingeconomics.com/egypt/gdp*. In 1960, South Korea's GDP per capita, $158, was only a quarter of Egypt's $578. By 2019, South Korea's per capita GDP per capita was $31,762, 12.6 times that of Egypt's $2,500. South Korea's GDP in 2020 was $63 billion, compared to Egypt's GDP of $303 billion.

79 In 2017, President Park Guen-hye was arrested, tried, and sentenced to twenty-five years in prison, later increased by eight years on charges of bribery, abuse of power, and related criminal behavior. In 2018, her predecessor, President Lee Myung-bak was arrested, tried, and sentenced to fifteen years on charges of bribery, embezzlement, and tax evasion. In 2016, Korea's most powerful business leader, Samsung Chief Lee Jae-yong, was sentenced to five years. The scandal led to the collapse of the government and the conviction of the president.

80 Joe Studwell, *How Asia Works: Success and Failure in the World's Most Dynamic Region* (New York: Grove Press, 2013).

81 Smart phones came into existence only twelve years ago, as Apple released its iPhone 12 in 2020. It is remarkable how smart phones have so quickly penetrated and integrated into our personal and business lives.

82 3D printing technology enables the production of objects, while 4D printed objects can transform themselves.

Compounding the Middle East's challenges is the adverse impact of climate change. Increasing water scarcity and global warning combine to make life difficult or, in some cases, impossible.[83]

Of the scenarios posited above, an amalgam or a hybrid reality is entirely possible. It is also possible, but somewhat less likely, that the ruling elite could preempt the process by proactively combining accelerated economic reform with enhanced governance and political participation. In each of the latter two scenarios, a region with over a billion people would be a formidable economic and geopolitical force. As such, it would be able to craft a relationship with the rest of the world in accordance with its own collective self-interest, as it tackles growing challenges like climate change and shifting geopolitical alliances.

In the meantime, it will be a difficult road ahead.

83 Though largely ignored in the MENA region, climate change poses major challenges. The IPCC has identified MENA as a hotspot for future temperature changes due to aridity. The region is expected to experience extreme temperatures during summer, which will be amplified by reductions in rainfall and the depletion of soil moisture, limiting evaporative cooling. As a result, heat extremes will increase significantly in both frequency and intensity across the region. A 2016 study by the Max Planck Institute for Chemistry indicates that the number of extremely hot days in the region has doubled since the 1970s and further projects that heat waves will occur eighty days a year by 2050 and 118 days per year by 2100. Combined with increased sandstorms and longer drought periods, the predicted temperature rises would render large parts of the region uninhabitable. See: Jos Lelieveld, Yiannis Proestos, Panos Hadjinicolaou, Meryem Tanarhte, Evangelos Tyrlis und Georgios Zittis, "Strongly increasing heat extremes in the Middle East and North Africa (MENA) in the 21st century," *Climatic Change* 137, 245–260, April 23, 2016, *https://doi.org/10.1007/s10584-016-1665-6*; *AR6 Climate Change 2021: The Physical Science Basis*, UN Intergovernmental Panel on Climate Change, July 2021, *https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/*.

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Dr. Hani Findakly, an investment banker, is vice chairman of the Clinton Group Inc. in New York. He has held senior financial positions, including group head of international capital markets, Drexel Burnham Lambert; managing director, Global Risk Management, PaineWeber Inc.; CEO, Potomac Babson Inc.; and chairman, Dillon Read Capital Management. Prior to Wall Street, Dr. Findakly was the director of investments and chief investment officer of the World Bank Group. His early career was in academia as a member of the faculty at MIT, and as Organization of American States visiting professor at the Catholic University in Rio de Janeiro, Brazil. He received his PhD and MS from the Masschusetts Institute of Technology, and his BS from Baghdad University. Dr. Findakly serves on several corporate boards, including the Clinton Group, Inc. (NY) and Sedco Capital (Jeddah, Saudi Arabia). He also serves on several public boards, including the US Department of State Advisory Committee on International Economic Policy; International Board, Peking University; International Advisory Board, American University of Cairo; Selection Committee, University of Maryland; International Board, Center for Middle East Studies, Harvard University; Board of Overseers, Sultan Qaboos Cultural Center; and the International Advisory Board, UCLA. He is also a Trustee of Sichuan University, and a Trustee of Sir Magdi Yakoub MYASWAN Foundation. He has served as president of the Arab Bankers Association of North America, a governor of the Middle East Institute, a director of the Arab American Bank, a trustee of the UN International School, and a member of the UNDP Committee on Private Finance for Development. of Technology.

Kevin Findakly holds a BA in psychology from the Catholic University of America in Washington, DC. Mr. Findakly is a recent graduate of Peking University, Beijing, China, with an MA in Arab studies, where his international affairs studies and research focused on Chinese-Arab relations. Mr. Findakly's dissertation, titled "Foreign Policy History of the United Arab Emirates," focused on the history and political economy of the UAE. Mr. Findakly is fluent in Mandarin, having studied Chinese at an advanced level at Peking University's School of Chinese as a second language.

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