WORKING PAPER

JANUARY 2022

Retain, Restructure, or Divest? Policy Options for Egypt's Military Economy

Yezid Sayigh

Retain, Restructure, or Divest? Policy Options for Egypt's Military Economy

Yezid Sayigh

© 2022 Carnegie Endowment for International Peace. All rights reserved.

Carnegie does not take institutional positions on public policy issues; the views represented herein are those of the author(s) and do not necessarily reflect the views of Carnegie, its staff, or its trustees.

No part of this publication may be reproduced or transmitted in any form or by any means without permission in writing from the Malcolm H. Kerr Carnegie Middle East Center or the Carnegie Endowment for International Peace. Please direct inquiries to:

Carnegie Endowment for International Peace Publications Department 1779 Massachusetts Avenue NW Washington, DC 20036 P: + 1 202 483 7600 F: + 1 202 483 1840 CarnegieEndowment.org

Malcolm H. Kerr Carnegie Middle East Center Emir Bechir Street, Lazarieh Tower Bldg. No. 2026 1210, 5th flr. Downtown Beirut, P.O.Box 11-1061 Riad El Solh, Lebanon P: + 961 1 99 15 91 F: + 961 1 99 15 91 Carnegie-MEC.org

This publication can be downloaded at no cost at Carnegie-MEC.org.

Contents

Introduction	1
A Cost-Benefit Analysis	4
Economic and Moral Hazards	12
Policy Options	15
Systemic Reforms	23
Conclusion: Politics and Profits	31
About the Author	35
Notes	37
Malcolm H. Kerr Carnegie Middle East Center	43

Introduction

The Egyptian military has been on a dramatic expansionary trajectory since seizing power in July 2013. Having previously been an economic backwater, the Egyptian Armed Forces (EAF) and other military agencies have spearheaded the enormous state-led investment strategy that President Abdel Fattah el-Sisi has pursued since he came to office in 2014.

The military controls a vast economic portfolio. It manages a significant share of the overall volume of publicly contracted infrastructure and housing. It builds industrial zones and produces capital goods, consumer durables, transport and heavy goods vehicles and parts, and information technology equipment. It undertakes associated retail, owns commercial media companies and hotels, and is rapidly increasing its stake in agriculture, fisheries, and mineral extraction. As of September 2021, the military even has a monopoly on the production of school meals. The Ministry of Defense (MOD) has formally controlled the use of state land by any civilian individual or entity, whether private or public, since 2001. The Ministry of Military Production (MOMP) is now one of two bodies that approves the import of foreign goods or services by government agencies. Military representatives sit on national boards, including for planning and sustainable development; feed into policy direction in several sectors, including the manufacturing industry, telecommunications, digital transformation, market development for electric vehicles, and rural development; and head major presidential initiatives, including the Long Live Egypt (Tahya Misr) development fund and the company responsible for constructing Egypt's new administrative capital. Plans are underway to increase the capitalization of military companies by inviting private investment through the Egyptian sovereign wealth fund. What I have called an "officers'

republic"—comprising thousands of senior EAF retirees embedded in government ministries and agencies, regulatory and operational economic authorities, local government, and stateowned enterprises—complements the formal military economy.¹

Military agencies and companies provide significant economic benefits. Military-managed public investment in transport infrastructure, for example, facilitates the movement of people and goods and expands access to external markets and investment opportunities. The construction of social housing for low-income groups addresses a serious shortage and assists government efforts to regenerate the informal settlements and slums where approximately one in seven Egyptians live. New industrial zones and extensive agricultural greenhouse projects attract investors, both domestic and foreign, contributing to economic growth and employment. And lower middle-class customers benefit from the expanding range of locally made consumer goods at affordable prices, alongside cheap meat and poultry imports, subsidized health services, and free food baskets for the poor.

Why, then, should Egypt reconsider the military's role in the economy?

Economic Rationale for Review and Revision

First, if claims that the military is positively contributing to the economy by creating opportunity for private actors are taken at face value, then the national authorities should be prepared to stand up civilian government agencies to resume this role—and subsequently to retire various aspects of the military economy. After all, civilian entities—both public and private—still provide an overwhelming share of public goods and services as well as output in almost all sectors of the Egyptian economy (barring, perhaps, the extraction of heavy metals). Then prime minister Ismail Sherif announced in October 2016 that the military would diminish its economic role over the coming two to three years.² Instead, the opposite has happened. The General Intelligence Directorate and agencies belonging to the Ministry of Interior have even followed the military's example, albeit on a vastly smaller scale. Nonetheless, presidential and government initiatives to modernize land and real estate registration, support small and medium enterprises, and expand the housing mortgage market all demonstrate why removing constraints on growth and unleashing economic potential could lessen the need—or justification—for using the military to spearhead development and private investment efforts.

Second, the actual economic utility of the military's public works, the cost-effectiveness of its manufacturing and assorted business and trade activities, and the net contribution to state revenue are all open to question. The fact that the military claims national security as a justification to keep the financial details of its civilian activities behind a firewall lends considerable weight to skepticism in a country that has a long history of hiding losses and bad debt in state-owned enterprises. The senior EAF retirees appointed throughout the state's civilian apparatus—especially at all levels of local government—have reproduced rather than repaired long-standing pathologies of favoritism, patronage, and the familiar inefficiencies of top-down economic planning and investment decisionmaking. The International Monetary Fund (IMF) recommended in December 2020 that the Egyptian state achieve "sustained progress on structural and governance reforms . . . including continued focus on enhancing the transparency of state-owned enterprises, ensuring a level playing field for all economic agents, and removing bureaucratic obstacles to private sector development."3 There is a strong argument to be made that the military economy should be included in those reforms.

Third, the enormous expansion of the military economy beyond its original mission of defense production justifies evaluating it by whether or not it contributes to mitigating Egypt's long-standing inability to generate domestic surplus capital. The lack of progress on increasing the volume of and diversifying exports remains a particular problem in this context. Egypt's economic recovery since 2017 has been driven by familiar nontradables items that it does not generally trade internationally. These include the construction sector and real estate development and their massive feeding industries—like cement, iron and steel, aluminium, bricks, and glass—in which the military is heavily invested. This kind of speculative growth fails to tackle the country's chronic balance of payments problem, as it neither increases exports nor limits imports. Nor has the trade balance improved, despite a substantial decline in imports resulting from the 50 percent devaluation of the Egyptian pound in 2016. The 2020 trade balance deficit was actually \$5 billion greater than in 2016, when the Egyptian government committed to a raft of fiscal measures as part of its \$12 billion loan agreement with the IMF.4

The much-touted strategy of localizing technology to reduce imports and to increase local content and value added in production is well and good. But in addition to the intrinsic obstacles, it will not generate the revenue needed to finance the import of commodities that the country depends on, such as wheat. To the contrary, the military economy exacerbates the contradictions inherent in Egypt's curious mix of neoliberal and market-oriented policies with a powerful statist reassertion. The government's ensuing dependence on domestic borrowing to finance its megaprojects further squeezes credit for the private sector, which remains in what economist Ishac Diwan describes as a "deep state of coma."⁵

These contradictions are illustrated by the largest military-managed project: building a new administrative capital at a first-phase cost of \$25 billion. There are legitimate questions about what financial or organizational value the military actually adds. The military-controlled Administrative Capital Urban Development Company, which was established to manage the project and designated to receive its future incomes, relies on major civilian real estate developers to attract customers and sell off-plan (preconstruction) units. The company, whose budget is not public due to its military status, finances the initial extension of utilities and infrastructure and then uses customers' down payments to fund actual construction. Yet the government plans to list the company on the Egyptian stock exchange and expects that it will control assets worth 3-4 trillion Egyptian pounds (\$190 billion-\$255 billion).

This foreshadows the primary argument for changing economic course: the capital-intensive state-led investment strategy spearheaded by the military has left the government increasingly reliant on inflows of foreign exchange, which it attracts by offering ever-higher interest rates coupled with a pegged currency and use of the central bank for so-called financial engineering.⁸ In both cases, this includes borrowing foreign exchange in its own right as an asset. This is precisely what led Lebanon into financial meltdown in 2019. Egypt has managed to stay afloat so far, not least following the huge global expansion of liquidity after the start of the COVID-19 pandemic in 2020. But this may change rapidly if interest rates rise in the United States and other leading global economies. Egypt's ease of access to foreign loans cannot be taken for granted. It is especially vulnerable to a liquidity crisis because the potential returns on its megaprojects are long term and could lead to recession or inflation or, as in the case of the 2014-15 expansion of the Suez Canal, may not materialize at all. Egypt's external partners in the West and the Gulf will work hard to ward it off, but looming "Lebanonization" could nonetheless force an emergency economic redirection in Egypt. If so, the military economy may be reined in—not because it is the main component of the national economy and finances, but because the entire economic strategy of which it is a part would have to be scrapped.

A Cost-Benefit Analysis

Three critical questions face the military economy:

- 1. Is it efficient? Does it generate net savings for the public purse?
- 2. Is it sustainable? Does it offer superior business practices and methods that ensure growth and enhance productivity in the civilian economy?
- 3. And does it generate economic opportunity (for civilian actors) and value added?

The complete opacity of the military's financial accounts prevents definitive answers. But the report on which this paper draws, "Owners of the Republic: An Anatomy of Egypt's Military Economy," provides extensive evidence that these are negative on balance. 10

Admittedly, much of the civilian activity undertaken by the military is assigned by the president spearheading his state-led investment strategy to attain economic growth and enhance revenue as well as serving his political agenda. 11 But the net savings that the military purports to achieve for the public purse are dubious and unverifiable. Its economic contribution is based on privileged access to factors of production and contracts, which distorts and limits private sector development. And its focus on massive engineering works has failed to resolve long-standing problems of low productivity, stagnant or declining investment, and limited technology transfer in the economy, as a result of which Egypt remains poorly integrated into global value chains.

The net benefits and costs of the military economy, as well as its economic sustainability and value added in production, vary according to sector: public works; civilian manufacturing; farming, extraction, and trade and supply; and defense industry.

Overall Savings

The military has routinely claimed, over the past two decades at least, that it delivers cheaper public goods and services than any civilian counterpart, whether private or public, Egyptian or foreign. But these claims overlook two main areas of cost: losses to the public purse due to the military's exemption from paying any taxes, customs, or transport tolls; and the military's access to hard currency at favorable rates, subsidized energy, free utilization of state land, and conscript labor, all of which help obscure real costs. Admittedly, tax revenue is very low across the board in Egypt: around two-thirds of corporate taxes come from the Suez Canal and petroleum authorities (governmental) and their affiliated companies, with the balance coming from private sector firms of all sizes, accounting for a mere 7 percent of total state revenue and a negligible percentage of domestic product (GDP). The military's tax advantage is minimal therefore, but its other exemptions, political clout, and privileged access to, or control of, other factors of production grant it a significant edge.

Relatively efficient military management provides money and time savings, but net savings are limited by the fact that it is private sector companies that deliver the actual work in public infrastructure and housing projects, as well as the bulk of civilian services undertaken by the defense industry. The military achieves net income for itself by leveraging its power to award—or withhold—contracts as a means of compelling private contractors to accept lower profit margins and sometimes incur net losses. In this way, the military extracts income as high as 25-30 percent of project budgets. Evidence also suggests that the military allows substantial arrears to subcontractors to accrue, which it may not settle at all—again hiding the true costs of the projects it manages.

Additionally, military agencies routinely use their tax and customs exemptions when importing commodities for sale to public entities or in domestic markets, retaining any net savings. One-quarter of the total number of military companies are registered as part of the so-called public business sector (state-owned enterprises that produce commodities), allowing them to transfer losses to the state treasury while withholding profits. The blanket nondisclosure of financial data relating to civilian goods and services provided by the military means that

the actual savings for the public purse cannot be verified. They are likely minimal, if not negative. The military's chilling effect on domestic and foreign investors—which is discussed in more depth later—also broadly impacts the state's overall financial position.

Public Works

The delivery of public infrastructure and housing is almost certainly the military's most significant area of involvement in Egypt's civilian economy, in terms of both overall financial outlay and net profit. According to official statements, the military managed 2,800 of a total 20,000 publicly funded projects (14 percent) in the six years up to June 30, 2020, accounting for 1.1 trillion Egyptian pounds of a total 4.5 trillion spent (nearly 25 percent).¹² (The dollar value of military-managed projects is difficult to calculate due to the 50 percent devaluation of the Egyptian pound in late 2016, but is likely at least \$66 billion.) The military extracts a profit margin from project budgets of at least 5 percent, though it can reportedly be as high as 25–30 percent. Depending on the exchange rate, the military may have taken the equivalent of anywhere between \$3 billion and \$20 billion in 2014-2020 or an average of between \$500 million and \$3.3 billion annually.¹³ This is compounded by the franchise fees it levies from civilian investors, thanks to its commercial usufruct over much of the publicly funded infrastructure under its management.

The construction of transport infrastructure unquestionably contributes to the economy. But the massive focus on highways and bridges—rather than rail and riverways, which together account for a mere 2 percent of domestic freight in Egypt—skews priorities, adds to fuel consumption and pollution, increases opportunity cost, and undermines sustainability. The Sisi administration has committed \$4.5 billion for the construction of a monorail line serving the new administrative capital and another \$23 billion for a high-speed train linking it with nine other up-market "smart" cities, increasing freight and passenger capacity but primarily benefiting affluent communities.¹⁴

Sisi's repeated insistence that projects be completed ahead of schedule also raises costs considerably; for example, his demand in 2014 that the expansion of the Suez Canal be accomplished in one year (rather than the three years that army engineers had estimated) inflated the bill from \$4 billion to over \$8 billion. The IMF has noted in other contexts that an excessive rush to execute investment programs lowers efficiency: it drove up the cost of road and metro construction in Algeria by 34 percent and 30 percent, respectively, compared to benchmark countries. When adjusted for labor costs, it increased costs by 250 percent compared to benchmark countries and 600 percent compared to the United States.¹⁵

Critically, the emphasis on megaprojects and accelerated timetables have forced the Sisi administration to borrow even more heavily from foreign and especially domestic sources. Egypt's national debt rose to around \$334 billion in 2020, with external debt reaching an all-time high of \$138 billion by the third quarter of 2021, placing it well ahead of other emerging markets in terms of maturing debt and fiscal deficit.¹⁶ Debt servicing amounted to 36 percent of the state budget, adding to the overall cost of state-led and military-managed projects. This again brings the sustainability of the president's growth strategy into question. 17

The single largest public investment, as it happens, is in housing. But although social housing for low-income groups is often cited, the bulk of investment is directed primarily at so-called smart cities aimed at upper middle class and expatriate Egyptians, and secondarily at non-Egyptian customers such as the Syrian and Yemeni business diasporas. In effect, real estate now fulfills the role that heavy industry played in the era of former president Gamal Abdel Nasser as the primary recipient of public investment and vehicle for generating revenue, driving economic growth, and attracting private investors. This is a major gamble. A long history of mostly unsuccessful desert cities underscores the risk of simply creating more dead capital and stranded assets, which divert investment and resources from other economic sectors. Similarly, the decades-old drive to reclaim large tracts of desert land for mostly agricultural use has led to enormous investments with at best middling results. Real costs—such as heavy dependence on expensive methods of water extraction and transport or the environmental impacts of extensive reliance on water desalination—are rarely included in feasibility studies or measured against actual return. The massive investment of financial resources (that Egypt does not have) in the new administrative capital, also being built under military management, further underlines the risks of financial overstretch, diminished economic return, and unsustainability.

Civilian Manufacturing

Several of Egypt's early defense factories were partially converted to civilian production starting in 1958. The number of military-owned companies has grown nearly fourfold since 1970 to around eighty today, almost all of which produce civilian goods and services. As of 2020, according to an exceedingly rare acknowledgment by the World Bank of the presence and role of military companies, they accounted for an appreciable proportion of all stateowned enterprises producing capital goods; consumer durables and apparel; materials; food, beverages, and tobacco; automobiles and components; retailing; media and entertainment; semiconductors and intelligent transportation system equipment; and technology hardware and equipment.¹⁸

Judging by its own media releases, the most recently established military company—Silo Foods, launched in August 2021—presents a laudable example of a modernized food industry offering economy of scale, quality control, automated operation, and efficient delivery.¹⁹ The MOMP, which owns most of Egypt's oldest defense factories, has also modernized many production lines and set up new ones. It claims to have reorganized procurement and marketing, upgraded managerial training, and pursued technology transfers from foreign

partners. It even plans its own National University for Sciences and Technology. But many military companies still operate at a loss, including the dozen or so that belong to the Arab Organization for Industrialization (AOI) and another handful owned by the MOD. Losses are especially concentrated in the manufacturing sector, which continues to suffer low local content and value added. Only in November 2017 did MOMP "profits exceed losses for the first time in eight years," revealed then minister Major General Mohamed al-Assar. A few months later, he also admitted that only six of the twenty companies owned by his ministry at the time had made a profit in the previous fiscal year.²⁰

The MOMP announced annual turnover of 15.5 billion Egyptian pounds in 2019–2020 and then 20.1 billion Egyptian pounds in 2020-2021, including defense and civilian production. This is a steady increase from 2014 when measured in Egyptian pounds, but it remained almost flat in terms of U.S. dollars because of the 2016 devaluation of the pound. This is particularly significant given the sector's reliance on imported factors of production including machinery, assembly kits, and intermediate goods, which require access to hard currency. It is unclear if increased turnover translated into net profits. The fact that the MOMP claimed year-on-year increases in total output of 30-48 percent between 2014-2015 and 2017–2018 (subsequently tapering to 13–18 percent) suggests it had a massive backlog of underutilized productive capacity, representing a significant loss.²¹ This was compounded by a high ratio of wages-to-total production costs and the loss of up to 25 percent of raw materials in production (instead of the standard 4-5 percent). Total costs and hard currency needs would have necessarily risen with increased production, again squeezing profitability. More importantly, these results do not obviously bear out the ministry's frequent claims of its superior business practices, efficient methods, and enhanced productivity.

When Assar took the unusual step of declaring a net profit of 235 million Egyptian pounds for the 2018–2019 fiscal year (\$14.1 million at the time), this may have resulted from the MOMP's engineering contracting and consulting arm—which accounted for 44 percent of its overall turnover between 2016 and 2019—rather than its manufacturing companies.²² Subtracting the ministry's defense output further brings down the contribution of civilian manufacturing to its total production of goods and services. Official data indicate that defense output has remained in the range of 2-3 billion Egyptian pounds since 2014–2015, when the ratio of defense to civilian output was 1:1. That ratio briefly rose to 2:1 in 2016-2017, but the data still indicate that civilian manufacturing represented a lower share than the figures for overall turnover suggest. Taken together, these ratios suggest that civilian manufacturing output was 4.6 billion Egyptian pounds (roughly \$300 million) in 2018-2019.

One major impediment is severe underinvestment in research and development (R&D) and technological innovation, which reflects Egypt's lack of an industrial strategy and growth model. This is a problem for the Egyptian economy as a whole. In 2019, it spent only 0.6 percent of its GDP on R&D; countries such as Malaysia and Brazil spent more than double that. In Egypt's nearest regional peer, Turkey, over seventy companies were already using

nanotechnology in their products by 2015. Turkish research centers and universities are given significant infrastructural support and incentives to work on nanotechnology projects.²³ Even in relation to the defense side of production, Egyptian military companies do not invest anywhere near as much as a country like China, for example, which in March 2021 announced an immediate 10.6 percent increase in spending on basic research and a 7 percent annual increase in R&D spending over the following five years.²⁴

Consequently, Egyptian military companies rarely exceed 45 percent local content in manufactured goods—the bare minimum required by the Ministry of Trade and Industry especially in more complex items. This is especially evident in the car industry: despite considerable publicity surrounding partnerships with foreign companies to assemble electric vehicles, Egyptian military companies lag far behind nearby Morocco, which earned \$10.5 billion from exporting approximately 400,000 cars in 2019 and attained local content of 60 percent—a ratio that remains merely aspirational in Egypt.²⁵ Despite operating "in 19 of the 24 industries of the Global Industry Classification Standards" according to the World Bank, the military economy does not contribute to Egyptian exports, with the exception of limited amounts of intermediate chemicals and cement. Nor does it increase participation in global value chains, although the World Bank has concluded that every increase proportionally raises per capita incomes.²⁶

The principal reason that MOMP and AOI companies have not fared far worse is that they have a captive market in the public sector, whose production of goods and services accounted for 30 percent of Egypt's GDP in 2017 (about two to three times the average in leading emerging economies). If the military competes at all, it is mainly by poaching government procurement contracts from civilian private and public firms rather than by outperforming them.²⁷ This helps explain the significant level of duplicate goods and services offered by the three main military conglomerates—the MOMP, the AOI, and the National Service Projects Organization (NSPO)—and their companies. Unlike Russian or Chinese defense companies that have been forced to innovate to compete for domestic and export markets, Egyptian defense companies instead capture guaranteed government contracts. Even then, the MOMP has delivered the bulk of its civilian services for public infrastructure and housing by acting as a broker for private contractors.²⁸

Similarly, military companies often act as purchasing or importing agents by acquiring rather than manufacturing goods from domestic and foreign suppliers on behalf of government customers. The NSPO's Silo Foods company offers a stark example: touted as the supplier of all meals in the public school system, an investigative report revealed that the bulk of products in fact come from other companies, and that Silo Foods provided only wafer biscuits in the various sample of meals reviewed.²⁹ Frequently, the main contribution of military companies to joint ventures, which are typically presented as mechanisms to transfer technology, is to secure the lease of state land and to navigate cumbersome government bureaucracy. Foreign partners provide the machinery, know-how, and more complex (and therefore high-value) components that their Egyptian counterparts may finally assemble.

The powerful political position of the military additionally ensures its companies and other agencies will be awarded public contracts on a no-bid basis (by direct order), which further disincentivizes innovation.

Last but not least, military companies are shielded by the fact that in 2020 Egypt, according to the World Bank, had the "second-most-protected economy in the world after Sudan" and one of the highest frequency indexes and coverage ratios of nontariff barriers to trade. 30 This appears to be why the military has invested heavily in buying or building new factories in the cement, steel, and quarrying sectors—which are already oversupplied but enjoy extensive trade protection—rather than helping develop weaker sectors for civilian investors.

Farming, Extraction, and Trade and Supply

Military companies and agencies have rapidly expanded and diversified their roles in other economic sectors since 2014. The NSPO has emerged as the lead vehicle for the president's ambitions to increase the area of land under cultivation, reduce the food gap, and generate greater revenue from the country's significant mineral wealth, as well as intervene in external trade and domestic supply to improve the efficiency of government spending and provide basic commodities for low-income groups at affordable prices. Along with the EAF's Engineering Authority, the MOD, and other military companies, the NSPO has contributed to Sisi's target of reclaiming 3.3 million feddans (about 3.4 million acres) of desert land. By increasing Egypt's total agricultural land to 9.7 million feddans (about 10 million acres), establishing massive greenhouse projects and fish farms, and building new factories to process marble and granite and to extract heavy metals from black sands, Sisi claims he will provide 10–15 percent of domestic market needs and increase the potential value of exports.³¹

These are laudable goals with some undeniable achievements. The problem, however, is that they are pursued in ways that largely replicate the rentier model of much of Egypt's political economy and tend to cost more than necessary. By relying on and intensifying the control of natural resources and bureaucratic gatekeeping as their principal means of deriving income—rather than adding value through technological and marketing innovation military companies and agencies use their privileged position to charge rent, literally, by acquiring sinecures they defend and expand. This is true of the NSPO's massive greenhouse projects, for example. Paradoxically, its major food venture is fish farming, in which Egypt already enjoys 77 percent self-sufficiency, followed at a considerable distance by egg and milk production, which are fully covered by private producers.³²

By assigning the military a mix of formal and de facto authority to award contracts, lease assets, and receive revenue on the state's behalf, Sisi has effectively revived a form of tax farming that goes back to the Ottoman era. But instead of auctioning taxation rights to the highest bidder and demanding the state's full share of revenue as the Ottomans did, the Egyptian president has granted the military the right to retain the latter in return for delivering projects he believes serve his economic goals and political interests. According to local contractors, having initially used its power to favor dozens of small and medium private businesses with contracts, the military has recently shifted to awarding its major projects to a few private contractors who now dominate this subcontracting market on its behalf.

The military's role as a commercially minded tax farmer is demonstrated by the manner in which it manages its agricultural projects. Typically, it acquires a share of the desert land it reclaims, which it then provides with infrastructure and leases to private investors. These are often large Gulf conglomerates.³³ It also leases greenhouses fully equipped with electricity, water, and workers, charging 60 percent of lessee income. In the extraction sector, the MOD must approve licenses to extract mineral wealth anywhere in Egypt (in accordance with the implementation statutes of the revised mining and quarries Law 198 of 2014); it additionally levies a fee on every truckload that exits mines and quarries. It has also established quasi-monopolies over marble quarrying, salt production, and commercial exploitation of sand since 2013. In 2016, it acquired control of Egypt's sole black sands site, which is expected to produce 3-5 percent of the world's total supply of titanium and zirconium, and a share of gold prospecting, accounting for 5–10 percent of the country's total exports. Two years later, the NSPO also formed a marketing venture with other state-owned companies that aims to act as the "exclusive commercial agent" of all Egyptian phosphate producers.

A similar model has been applied to the sale of commercial franchises along Egypt's so-called national roads. Sisi designated twenty-one principal intercity and interregional highways and a two-kilometer strip of land on either side as "strategic zones of military importance" in 2016, entitling the MOD to exploit them commercially.³⁴ (This is in addition to several other main national highways built by the military, from which they collect tolls.) The ministry rents to roadside services and other business franchises as well as billboard advertising, while also running two gas station chains (Wataniyyah and Chill-Out) and providing highway rescue services. Military agencies are heavily involved in the trade of livestock and meat, grain, and fodder from Sudan, as well as importing cut-price products such as frozen poultry. They also occupy an influential position in the central state committee that controls all medical procurement from abroad.

Defense Industry

Paradoxically for an industry born to produce combat equipment and consumables for the EAF, the factories that actually produce defense goods pale in comparison to the military's civilian manufacturing sector. Only the most technologically advanced defense industries around the world are financially self-sustaining, thanks to large domestic customers and major export markets. The Egyptian defense industry's problem is not that it fails to turn a profit. The deeper issue is that it is inefficient and technologically backward. Virtually its entire defense output remains confined to basic combat consumables and vintage technology (as a simple review of military hardware advertised on the official MOMP and AOI websites attests). It is unable to match the technological sophistication and manufacturing know-how of any comparable peer, let alone advanced global powers.

The sector's weaknesses are especially apparent in its inability to repair, maintain, and upgrade or adapt its imported defense equipment, which makes up almost all EAF inventories in every branch of service. The cost of supporting (let alone modifying) modern weapons over their full life cycle can exceed their initial purchase price, and the defense industry has seriously underachieved in providing this kind of support. The 15 percent of total U.S. foreign military financing (FMF) that is allocated for EAF maintenance and logistics has also been woefully underutilized, even though this funding was specifically intended to help the local defense industry develop these capabilities. The EAF's inability to keep its U.S.-made Apache helicopters in service when FMF was suspended between 2013 and 2015 underscores how this gap impacts its operational readiness.³⁵

The defense industry lacks clear and realizable goals as well as an appropriate strategy for lesson learning and development. As a result, it has never lived up to its ambitions and claims. Despite producing a number of systems under foreign license since the late 1970s including anti-tank missiles, helicopters, and the U.S. M1 main battle tank—it has failed to develop the kind of indigenous capabilities that East Asian defense producers did from the 1960s onward. This is due, in large measure, to wholly insufficient investment in R&D and the closed nature of the military economy, which impedes its ability to absorb and effectively utilize technology. Indeed, this is arguably why defense conversion to civilian production since the late 1950s, which made good sense in theory, has yielded anemic results in practice.

The problems that hobble the defense industry have largely been inherited by its civilian successor. But whereas the EAF buys relatively little of its combat needs locally, the military's shortcomings in civilian production are obscured thanks to its large captive market in the public sector. Although the MOMP has sought to promote exports by participating in a handful of foreign defense trade shows and hosting its own Egyptian Defense Expo (EDEX) since 2018, exports have ranged from nonexistent to, at most, \$22 million annually in 2000–2020.³⁶ The nascent defense industries of both the United Arab Emirates (UAE) and Jordan—to take the two nearest examples—have enjoyed more success as exporters. The EAF has even purchased precision-guided munitions from the UAE, and at least one of the two drones (unmanned aerial vehicles) presented at EDEX 2021 as original Egyptian designs is believed to be based on an Emirati system.³⁷ A third regional comparator, Turkey, has seen its turnover grow from \$1 billion dollars in 2002 to \$11 billion in 2020, making it the fourteenth-largest exporter of military equipment worldwide.³⁸

Economic and Moral Hazards

The military might not be directly responsible for the president's economic strategy, but it is a willing partner and clearly has a growing appetite for commercial activity. On the one hand, the military is party to white elephant schemes that assure it continuous income such as land reclamation projects—which target a highly unlikely 20 million feddans (about 20.8 million acres) in the next three years—and the construction of another thirty desert and smart cities that guarantee extensive real estate speculation.³⁹ This has a significant bearing on the patterns and distribution of investment by other actors across economic sectors, particularly the contribution and development of the private sector. On the other hand, as Transparency International confirmed in a survey of military-owned businesses worldwide, "military entrepreneurship, once started, takes on a life of its own. The initial intentions to create self-sufficiency programs often risk the development of a profit-driven internal economy."40 This, it added, also "compromises the professional integrity and cohesion of the military as an institution. . . . Corruption is highly likely to occur either at an institutional or an individual level."41

In the first instance, the military is likely to resist any moves to rethink the overarching economic strategy that is served by military involvement in the delivery of public contracts and the commercial exploitation of public infrastructure and natural resources. But an open discussion about the strategy is badly needed. As a World Bank book published in October 2021 notes, "premature deindustrialization and the spread of automation technologies associated with Industry 4.0" may mean that "the development model based on export-led manufacturing seen in East Asia will be harder for hitherto less industrialized countries to replicate in the future."42 This could certainly apply to Egypt, which may have missed the boat on this model. But the pattern of state-led investment spearheaded by the military since 2014 does little to bolster the alternative proposed by the World Bank of services-led development. This, too, requires factors of productivity growth such as international trade, scale economies, intersectoral linkages, and innovation. Crucially, services-led development requires technological change to enable growth opportunities in services that do not depend on a manufacturing base but have a potential for high productivity, while also enabling large-scale job creation for relatively low-skilled workers.

As significantly, the military economy has not spurred private investment in general, despite repeated claims that the military has opened up opportunities and is interested in partnering with the private sector. Prominent Egyptian businessman Naguib Sawiris presented a contrary assessment in November 2021 when he complained that "state interference in the private sector creates an unfair playing field."43 Prior to 2013, occasional concerns that the scope and scale of military economic activity would crowd out private businesses did not come to fruition. This has changed considerably since then. The military has driven its share of ownership of productive capacity in a few key sectors—most notably cement and steel manufacturing, marble and granite quarrying, and possibly farming in general—from next to nothing to 20-25 percent or more. Moreover, military-managed projects have effectively raised the price for inputs and goods in the private sector by restricting supply. The military has also dominated the markets for assembly manufacture of hybrid and electric vehicles and the retail chains that supply them (with conversion and charging stations), in parallel to government efforts to revive the ailing state-owned giant El Nasr Automotive Manufacturing Company.

Sisi's state-led economic strategy might not yet be crowding out private investment, but it is not "crowding it in" either. 44 Indeed, his strategy is not designed primarily to do so, even though the economy is operating at well-below capacity. The revised law on public-private partnerships in government-funded projects that was approved by parliament in October 2021 should improve opportunities for private sector involvement in all project phases, from design through implementation to follow-on operation and management. But it does not alter the military's prerogatives in relation to the civilian projects it manages, so the law may change little in practice. Military leeway remains undiminished in relation to practices such as dumping cheap imports in local markets, which damages private producers in, for example, the poultry sector.

Private firms rarely push back, due to the prevailing perception, according to a foreign investment analyst, that "nobody can go against the military, the military always wins." A World Bank report released in December 2020 noted that the private sector is impeded generally by the lack of a transparent, streamlined, and predictable regulatory environment; bottlenecks in adjudication and enforcement of judgments; and lengthy processes that lock assets in litigation and impede their productive use. Adverse effects, it added, include losses to both businesses and the economy, hindering the growth of smaller firms and weakening backward and forward linkages. 45 And although the private sector remains dominant in most sectors of the real economy and continues to account for around 70 percent of GDP, the sharp increase in public borrowing to fund megaprojects is squeezing access to domestic credit, which dropped by half between 2000 and 2019.46

As a result, private investment as a share of GDP "is at an all-time low . . . even lower than during Nasser's socialist period."47 Foreign direct investment has also been declining steadily since 2017, with 75 percent of it going to the energy sector, smaller amounts to real estate and tourism, and virtually none to other nonhydrocarbon sectors of the economy. Rather than alleviating these problems, military economic activity has compounded them.

In the second instance, as Transparency International warned, there is a real risk that the military's growing appetite will lead it to expand into additional sectors. The military has already attempted to enter the highly lucrative mobile telephone and internet service provision sectors, in both cases justifying its moves in the name of national security. Repeated anecdotal evidence that military agencies and retirees pressure start-ups to cede equity or board membership in return for receiving licenses and government credit suggests that this kind of dynamic is already taking new and predatory forms. Rather than give rise to entrepreneurship, privileged opportunities for rentierism and predation are more likely to result in the military economy overheating.

Even in the absence of new expansion and diversification or of clearly predatory practices, the military is well on its way to acquiring what amounts to a permanent exclusive economic zone. This encompasses parts of the Mediterranean coast and adjacent inshore lagoons and lakes; the entire Suez Canal and areas stretching up to several dozen kilometers inland on either bank; the Red Sea coast; and the gold-rich southernmost region stretching from

Aswan to the border with Sudan. The bulk of state investment in military-managed projects lies in these areas, which have been designated by successive presidents—up to and including Sisi—for military stewardship. At the same time, the military-controlled Administrative Capital Urban Development Company is being given prime real estate vacated by government ministries and agencies that are relocating from downtown Cairo to the new capital, itself constructed on military land. The military will battle any president or government that seeks to dilute its control over the income streams that it derives from these assets, if not the assets themselves, as it demonstrated when it defeated then president Mohamed Morsi's plans for a Suez Canal development authority attached to the presidency just months before his overthrow in 2013. The minister of defense underlined this yet again in November 2021 by transferring control of the government's National Authority for the Development of the Sinai Peninsula, which oversees projects worth up to 275 billion Egyptian pounds (\$15.4 billion), to his ministry's control.⁴⁸

The entrenchment of income-generation as a military activity threatens EAF professionalism and increases corruption risks. A novel sample survey of EAF personnel reveals that 30 percent of officers at the rank of second lieutenant and above hoped to work in a military-affiliated company upon retirement (versus 21 percent in government and 25 percent in the private sector). This underlines the widespread perception among EAF personnel of the military economy as a commercial opportunity. 49 Despite projecting a public image of integrity and probity—which is in fact justified when compared to mismanagement and corruption in the civilian government domain—the military is also at high risk. Indeed, Egypt is in the top category of countries where the risk of defense sector corruption is "critical" in every category measured in Transparency International's Government Defense Anticorruption Index.⁵⁰ The risk moreover applies not only in the formal military economy, as detailed in "Owners of the Republic: An Anatomy of Egypt's Military Economy," but also to the thousands of senior EAF retirees embedded throughout the state's civilian apparatus in government ministries and agencies, dozens of regulatory and operational economic authorities, the entire edifice of local government, and public business sector companies.⁵¹

Policy Options

The foremost issue is not necessarily whether to remove the military from the production of public goods and services altogether, but rather how to assert structures and modalities for effective civilian governance, ensure full disclosure and government control of financial data and resources, and restore (or, where needed, rehabilitate) the role of government agencies in planning, designing, and managing all state-funded activities intended for the civilian domain. This applies even in relation to the defense industry—the military naturally has a major interest in outcomes and should be a key party to consultations about operational needs and technical design, but it should not be a fiduciary or a financial stakeholder and

beneficiary. All options require military companies to comply with social insurance, health and safety, and other legislation and regulations governing the public business sector, including audits of their compliance. At an absolute minimum, military companies should undergo formal debt restructuring and renegotiation of their funding formula.

A range of options are available for dealing with military economic activities, companies, and assets: retain, restructure, or divest. The first option relates primarily to the defense industry, the second to public works and procurement services and to exploitation of national natural resources, and the third to the production of commodities for civilian markets. (A fourth challenge, which is not tackled here, is how to roll back and dismantle the underpinnings of the officers' republic of EAF retiree networks in the state apparatus who complement the formal military economy.) Given the extensive scale and diverse scope of the military economy, not to mention the high political stakes involved, certain questions immediately follow: Which parts of the military economy should be tackled first? Which can be deferred to later stages? And how can risks relating to such deferral be mitigated? Prioritization and sequencing are as much about where political resistance might be overcome as they are about economic and financial efficacy (that is, how stated goals can be achieved even better). On both counts, a hybrid approach combining a mix of options is almost certainly better suited than a one-size-fits-all approach.

Retain

Defense industries are costly. Egypt must accept this if it wants to retain an indigenous capacity. It must also face the fact that, at least until 2020, most of its defense companies and factories have remained loss-making despite converting a large part of their operations to civilian production (or adding new capacity for it). Privileged access to government contracts merely obscures their low cost-effectiveness. The long-standing argument that engaging in civilian production is what allows Egypt to preserve an indigenous defense production is easily falsifiable. The military's civilian enterprises offer few evident benefits for the defense industry or synergies with it; they neither provide superior technology and R&D, local content, and value added, nor do they deliver genuine net savings for the public purse to invest in developing the defense industry.

The EAF does not, in reality, depend on local defense production for much beyond combat consumables such as non-precision munitions, light armored transport and battle tanks assembled from kits, and personal gear. This is not inconsiderable; MOMP data indicated that defense-related output was valued between 1.95 billion Egyptian pounds (then \$234 million) in 2015–2016 and 2.8 billion Egyptian pounds (then \$180 million) in 2019–2020.⁵² The defense industry might opt simply to maintain this level of capacity, but it would have to bridge major gaps in capabilities, know-how, and investment if it is to achieve more ambitious goals.

In order to make retention at any level viable, let alone allow for upgrades and specialization, the defense industry must undertake several principal steps. First, as signaled above, it should redefine its goals: Which of the EAF's needs can or does it seek to deliver? What activities offer opportunities for building or improving indigenous capabilities—producing weapon or combat support systems, for example, or developing services such as the ability to repair, maintain, adapt, and upgrade these systems? The cost of maintaining major weapon systems over their operational lives can equal or exceed their purchase cost, so the latter approach promises significant savings while enhancing technical know-how and technology transfer. More generally, the defense industry should undertake a comprehensive review in order to identify how best it can offer military, industrial, and technological value added.

Second, the defense industry should redesign its strategy for attaining these goals. Investing much more heavily in R&D is a no-brainer, but it should identify an appropriate balance between developing an indigenous technological base versus relying on technology imports from foreign partners. As a first step, it would do well to focus on developing local capability to integrate new technologies operationally rather than produce them. Egypt might leverage its global status as a leading arms importer to expand its production under foreign licenses into a major component of its industrial and technological development strategy, even if it also has the will and resources to incur the higher costs of developing indigenous capability. Keeping costs down while anticipating exponential leaps in global military technology might be achieved by investing in gaming and modeling rather than manufacture or acquisitions, for example.

In the meantime, the sector might focus its R&D effort on select areas, as well as potential export opportunities. An example that is already being followed is to develop infantry transport and fighting vehicles such as the MOMP's ST-100 and ST-500 mine-resistant, ambush-protected wheeled vehicles and the Sinai 200 tracked vehicle, and the Temsah series battle vans and electronic warfare vehicles produced by the EAF's Vehicle Engineering Industrial Complex based on Nissan and Toyota chassis.⁵³ Drones and a two-dimensional air defense radar shown at EDEX 2021 may also signal a similar approach to developing systems of direct utility for the EAF, with a secondary objective of generating export opportunities.⁵⁴ These developments must be integrated into an overall strategy with clear goals, however, if their sum is to be greater than its parts.

Third, the defense industry should redesign its relationship with the civilian sector. On one hand, hiving off the civilian side of its operations would allow the defense industry to specialize and raise its contribution to EAF capabilities. On the other hand, the defense industry needs better integration with civilian counterparts to expand the scope for innovation and quality increases while spreading the cost of investment and risk. Based on their own public announcements, military manufacturers partner with private sector feeder industries and contractors. It is unclear, though, how much of this, if any, relates specifically to defense-related output, where they apparently prefer in-house production. And while this

preference may be viable for low- or vintage technology items like vehicle batteries, tires, or unguided munitions, it is insufficient progress for producing electronic components or advanced machine tools (let alone robotics or other components necessary for constructing the "All Domain Command and Control" battle networks of the future). Synergies and spin-offs may also be found by expanding into maintenance, repair, and other areas in which civilian contractors can contribute.

In all cases, qualitative shifts on the order indicated above require opening up to civilian partners. As defense analysts Simona R. Soare and Fabrice Pothier argue in their review of leading global powers, defense innovation requires "redesigning and implementing a new relationship between defense establishments and societies, particularly expert communities in private industry and academia."55 Evidence from other Arab states is no less instructive. The local defense industries of the UAE and Jordan are in their infancy compared to Egypt's, yet the integration of civilians has raised their ability to absorb and utilize partnerships with foreign—especially U.S.—defense manufacturers and move higher up the technology ladder.

Last but not least, the defense industry needs a formal restructuring of debt and negotiation of a new funding formula if it is to implement any of the above options. This is a challenge even for major defense producers such as Russia, which addressed it by writing off onethird of the sector's debt in 2020.⁵⁶ Whatever approach is chosen, it will have immediate implications for both the state budget and the MOD's special funds, in which it keeps all incomes from its civilian activities. It may also have knock-on effects for the banking system. To improve predictability and planning, allow higher returns on partnerships with civilian or foreign counterparts, and avoid a return to hidden or unsustainable debt, the defense industry's financing should be brought within the state budget and subject to an agreed form of evaluation for cost-effectiveness.

Restructure

Military involvement in managing state-led investment in public works, fulfilling government procurement, and commercial exploitation of the country's natural resources raises two distinct issues. First is the need to mitigate the rentier nature of such activities by bringing them all under unambiguous civilian oversight and, even more importantly, within a transparent financial framework. This is to allow effective economic cost-benefit analysis as much as to ensure financial propriety. Second is the need to rethink the economic growth strategy behind these activities, since much of what the military actually does is capture and reallocate rent or, at best, expand rent-seeking opportunities through real estate speculation rather than generate new value by driving productivity in the real economy or open up sectors for other economic actors. Even when it provides value-adding facilities such as industrial, services, and trade hubs, it acts as a permanent leaseholder and retains their incomes.

Restructuring, in the context of the military economy, refers to shifts in institutional arrangements and, as a result, in both the sectoral and the spatial distribution of specialized services and production, capital flows, and informal work.

In the first instance, there is value in drawing on military engineering and management skills—and on military equipment, facilities, and manpower where relevant—to contribute to national development projects, but the current rentier model for much of the military economy should be rolled back. Transferring responsibility for planning, oversight, and management wholly back to civilian hands is not a sure-fire solution to rent-seeking, but it should be the ultimate goal. There is considerable validity to the publicly stated view of Sisi and of senior EAF officers that the state's massive civilian bureaucracy suffers from poor delivery rates and mismanagement of funds and resources. The fact remains, though, that government agencies manage the larger share by far of public works and procurement under his administration. To the extent that burden-sharing with the military is warranted, it should go hand in hand with a broader effort to upgrade and stand up civilian agencies to design, manage, and deliver works and other contracts, and, in parallel, to wind down the military role within a defined time frame.

Sisi has already engaged for several years in an uphill struggle to reform the state's bureaucratic machinery. His focus has mainly been on increasing administrative efficiency across the board and reducing the public wage bill. However, replacing military with civilian management should be relatively straightforward in activities such as land reclamation and the construction of new housing and cities. On the one hand, civilian agencies have considerable cumulative experience in both sectors. On the other hand, the massive land reclamation and city construction schemes under military management from 1954 and 1977, respectively, have enjoyed limited success. More often than not, they failed. Furthermore, military-managed projects in these sectors are undertaken jointly with agencies such as the General Authority for Reconstruction Projects and Agricultural Development, the Holding Company for Land Reclamation, and the Ministry of Housing's Central Construction Agency and New Urban Communities Authority, all of which are headed by and heavily staffed with EAF retirees. If the military truly has the superior managerial and organizational skills it claims, then these are already well represented in government bureaucracy.

More generally, since the official line is that the military is just one of several state agencies with responsibility for implementing national development goals set by the presidency and government, there is no reason why the processes for setting project priorities and technical specifications, issuing tenders, evaluating bids, and conducting audits should not follow standard government procurement rules and inspection. At present, the military undertakes these processes separately, either on its own or in partnership with the military-dominated Administrative Monitoring Authority (AMA). It moreover negotiates its profit margins with the private contractors delivering the actual work instead of following a clear,

government-mandated fee structure. And it retains these profits, as well as future fees from the many projects that remain under its management post-delivery, rather than pass them on to the state treasury.

Consolidating cost and fee structures is necessary, as is full disclosure of their amounts and of any net incomes or savings from project budgets. Furthermore, leases and commercial usufruct for projects delivered using state funds—such as highways and greenhouses—can and should be transferred to pertinent government agencies. The argument that the military is entitled to recoup its investment in these projects by using them as a franchise entirely overlooks the fact that they are almost wholly funded by the government to begin with, that the military is a state agency whose basic costs are provided through the state budget, and that any discretionary funds or incomes it accrues are derived from withholding tax and customs payments or from commercial use of state assets and diverting their income from the public purse. Military management of publicly funded projects should not automatically grant the military a lease over them. At a minimum, the military should work to formalize build-operate-transfer (or build-lease-operate) contracts, the details of which should be published and subject to public debate.

Similarly, civilian agencies are competent enough to take full control of external trade and domestic supply and to license the extraction and marketing of mineral wealth. The argument that these are vulnerable to corruption just means they should be better policed; the assumption that their military counterparts are, and will remain, immune is unfounded. Civilian agencies should moreover be in a position to undertake full economic costing and environmental audits of all state-funded projects. There is simply no technical reason or professional necessity for the military to place its management of civilian projects behind an informational firewall, let alone hold the associated financial books so closely to its chest.

Revisions in October 2021 of Law 67 of 2010 enhancing the ability of the private sector to partner with the public sector in delivering all phases of government-funded works may provide a basis for modifying how the military manages projects assigned to it. Public procurement remains a major source of patronage and cronyism even in other countries that have good legal and regulatory frameworks. But unifying Egypt's myriad procurement regulations into a single, standardized law as the IMF wants—and as the Egyptian government agreed to do under a 2016 agreement—would still represent a major step forward.

As important is requiring that economic feasibility studies for all schemes—preferably past as well as present—be conducted and publicly released to allow cost-benefit analysis and guide future investments. For the same reason, new megaprojects should be piloted whenever practicable to test their design and marketing assumptions before scaling up. Even though Sisi remains attached to massive edifice projects, in August 2021 he banned the sale of units in new housing projects until 30 percent are actually built—an implicit admission of the risks of oversupplying and overheating the real estate market. It is not the norm to consult

with local communities and independent planners about balancing public investment in roads with rail and river transport for freight, for example, or locations and access for new housing, production sites, and markets for low-income groups, but this should be promoted.

Divest

While export-led manufacturing might not be the model for Egypt to follow, as noted previously, this does not rule out the need to make its military manufacturing and commodity sectors more efficient and useful. Converting defense to civilian production or to so-called integrated enterprises that deliver both military and civilian goods has mostly failed, in part because, similar to Russia's experience in the 1990s, enterprise managers "still relied upon their military privileges and resources," resulting in the latter case in major losses and debts.⁵⁷

Russian defense companies are still being exhorted "to diversify product portfolios by developing competitive high-technology civilian goods capable of meeting domestic and export demands," but this is less feasible for Egyptian companies that lack the same levels of industrialization and scientific and technological infrastructure in the wider economy.⁵⁸ The latter are moreover a far cry from Chinese military businesses that were exporting nearly \$4 billion of goods by the mid-1990s and contributing more than half their profits to the national government and civilian economy.⁵⁹ Also, as the experience of Vietnamese military businesses shows, efforts by the MOMP and other Egyptian entities to restructure military-run enterprises as a means of reducing running costs and waste and increasing income and benefits should not preclude bankruptcy and liquidation as an option. Indeed, Turkish military pensions fund OYAK has shown what can be done by going to the opposite extreme: its ninety-odd civilian businesses, which had combined group assets amounting to 157 billion Turkish lira (\$22.8 billion) as of 2020, are successful precisely because they are entirely civilian-managed and fully subject to the same legal and regulatory framework as their civilian competitors.⁶⁰

Sisi's twin drives to achieve efficiencies in the public sector and attract private investment in military companies offer both a justification and an opportunity for Egypt to emulate the reform process that China launched in 1998, which transformed a majority of businesses managed by the People's Liberation Army into state-owned enterprises. 61 Two potential routes suggest themselves: (1) to move all military companies (possibly in stages) into a single holding structure loosely resembling Turkey's OYAK or Pakistan's Fauji Foundation, or (2) to open them up to private investment and at least partial private ownership.⁶²

The first route converges broadly with the IMF's call in July 2021 for "centralizing state ownership in a single entity" in Egypt, which could be taken to encompass the transfer of restructured military companies to the public business sector.⁶³ It also corresponds with the Egyptian government's push since 2018 to restructure loss-making public business sector

companies through mergers, liquidation, and the sale of equity to private investors. This would moreover be in line with Sisi's strategy of monetizing state-owned assets by offering investors "a stable, bond-like return in entities that are already up and running" and relieving them of dealing with government bureaucracy, to cite a policy announced by the Indian government in August 2021 with regard to its core infrastructure.⁶⁴ Indeed, the Egyptian government also approved legislation in November 2021 permitting state-owned providers of services and utilities (including electricity, water, gas, communications, roads, subways, trains, health, education, and housing) to "monetize and trade their future revenues for sale to investors."65

The second route builds directly on another centerpiece of the Sisi administration's approach: consolidating and marketing state assets by placing them under the control of Tharaa, Egypt's sovereign wealth fund, and in some cases through partial offerings on the Egyptian stock market (EGX). Sisi has actively promoted capitalizing military companies in this way since August 2018, giving this strategy necessary political endorsement. In February 2020, Tharaa and the MOD agreed to prepare ten NSPO companies for up to 100 percent private ownership. Consolidation of military companies in a single entity, as proposed under the first route, could also happen through Tharaa. However, the need to protect minority shareholders may be an argument in favor of floating military companies through the EGX, which has a relatively good record in this regard compared to other markets in the region.

The transfer of military enterprises to civilian control need not entail privatization, although this may be a valid option for some companies and activities. A foremost candidate is the swath of media production and broadcasting companies that the Military Intelligence and Reconnaissance Administration (and the General Intelligence Directorate) have acquired through front agencies since 2014. Extensive anecdotal evidence indicates these suffer mismanagement, overstaffing, and insolvency, casting doubt on military claims of business efficiency. But the IMF's call for the Egyptian government to identify specific economic sectors in which civilian state-owned companies or agencies can play a role, and to exit other sectors completely, should be applied to military companies and public works too. The Council of Ministers adopted this approach in November 2021 by recommending a set of modalities for empowering the private sector that included designating principal economic sectors that the state will exit and others it will eventually sell once profitable.⁶⁶ Whether this will be put into practice remains to be seen. But as economist Amr Adly argues, its impact would be considerably more significant if it encompasses government-funded infrastructure and facilities and not only tradable commodity-producing enterprises.⁶⁷ Extending this government strategy to military companies would enhance their long-term viability; ideally, it would also extend to include military-managed public works.

Both the presidency and the government increasingly promote public-private partnerships. But without undertaking key reforms, these should not be used simply as a means for keeping problematic military companies afloat with injections of private capital. The MOD's Alexandria Shipyard and the AOI's railway manufacturing company have a long history of especially poor productivity and value added under both civilian and military management,

for example, and would be likely candidates for privatization or liquidation. Egypt is fortunate that its military companies are neither owned by cooperatives (as in Indonesia) nor by foundations (as in Iran and Pakistan), making it easier to identify ownership and make policy decisions that affect their future. As importantly, civilian counterparts exist in most or all sectors in which military enterprises operate in Egypt, answering the question "will there be any buyers for those assets?" that has plagued their Iranian counterparts. 68

A path of least resistance would be to start with the MOMP, whose companies are formally registered as part of the public business sector. This should make it simpler to bring them fully in line with the sector's laws and regulations as a first step and then to transfer them to the relevant civilian ministries. A similar path could be taken with the AOI, which would have the additional advantage of resolving its anomalous legal status as an international organization (rather than a state-owned enterprise) governed by its own bylaws rather than government regulations. Determining which companies or production lines to split or merge, liquidate, or privatize would be based on standard market metrics and conform to the overall parameters set by the president and government—most recently in public sector Law 185 of 2020.⁶⁹ Once the framework has been set up and tested, it should then be extended to the commodity-producing companies of the NSPO, with the added requirement of establishing a clear legal and regulatory framework for its use of conscript labor.

The routes discussed above can only succeed if the means are in place to ensure genuine commercial viability and to prevent capitalization from becoming a scheme to milk investors and keep inefficient military-owned companies afloat. The example of OYAK demonstrates the importance of bringing military-owned commercial assets under full and unambiguous civilian legal and regulatory frameworks in order to ensure compliance with disclosure and reporting obligations and verifiable nonpreferential treatment (in access to factors of production and award of contracts). Even if military companies are not brought under a single, government-controlled entity as the IMF recommends, they should have a single legal and governance framework and comply with the IMF's call for expanded financial reporting to include all public sector companies and joint ventures with details of "fiscal revenues (taxes, dividends) and costs (subsidies, equity injections, direct loans from budget, on-lending support and loan guarantees)."70 In all cases, clear rules regarding divestiture and real oversight are necessary in order to ensure that closures do not result in the military profiting from the sale of assets or undervaluation (selling to cronies at bargain basement prices).⁷¹

Systemic Reforms

The effectiveness and sustainability of revisions to the military economy will depend on amending the legal and regulatory frameworks that govern public procurement, financial management, and defense policy and spending. Amendments may be introduced as precursors to military economic reform or restructuring, whether in parallel or at later stages of the process. But comparative international experience strongly suggests that meaningful military economic reform or restructuring is unlikely unless it coincides with, or is an integral part of, a strategic economic reorientation and accompanying legal reforms that reshape state-led investment and major defense modernization and transformation initiatives.

The claim that the Egyptian military economy achieves high levels of efficiency and integrity in a wider national context characterized by severe impediments to productivity, innovation, investment, and savings has always been dubious at best. Even if true, maintaining superior performance indefinitely under such adverse conditions is improbable. To take one measure, Egypt ranked 121 among 126 countries in the 2019 Rule of Law Index generated by the World Justice Project, which considers "constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice."72

Without complementary amendments to the legal, regulatory, judicial, financial, and defense frameworks, it will be harder both to dislodge resistance to change in the military economy and to prevent the migration of its more problematic aspects to other state agencies or economic sectors. A broader approach to reform or restructuring has the potential to unlock greater gains across the economy by widening participation, generating sustainable growth, and increasing state revenue while also offering the EAF clear gains for its core mission. In each domain, policymakers leading reform or restructuring of the military economy should set attainment milestones and timetables so as to evaluate their progress and obstacles and adjust their targets and approach.

Legal, Regulatory, and Judicial Frameworks

Any reform or restructuring of the military economy must start with the laws and regulations that enable the military's special economic privileges and financial exceptions, grant it commercial advantage, and shield its civilian activities from independent evaluation. A general goal is to ensure what the IMF calls "competitive neutrality"—a level playing field for private and public sector companies with regards to business laws, taxation and customs, access to finance and land, and the resort to direct award procurement.⁷³

The first cluster of laws and regulations require clarifying amendments that would limit their scope in order to withdraw the preferential treatment of military agencies undertaking activities in the civilian domain. Foremost of these are Prime Ministerial Decree 263 of 1956, Law 204 of 1957, and their subsequent amendments, which exempt defense stores and armament contracts from civilian inspection and audit, taxes and customs, and standard financial regulations. Their interpretation has since expanded to include everything the military does or owns in the civilian domain. The same applies to Article 80.a.4 of the Penal Code (as amended in November 2021), which makes it a punishable offence "to collect questionnaires or statistics or conduct studies of any information or data relating to the armed forces or to

their missions or to serving and retired personnel because of their functions without written consent from the Ministry of Defense."74 The article's sweeping scope may easily be used to block review of military businesses or military-managed public contracts, impeding meaningful cost-benefit analysis.

A series of laws issued between 1981 and 2001 required MOD approval for all applications to use or purchase state land—representing up to 95 percent of Egypt's total surface area by any civilian individual or entity, private or public, domestic or foreign. The MOD also has the discretion to declare any area of so-called desert land as military, without documentary proof, and demand compensation for granting its supposed change of use. Both the World Bank and the IMF regard the military's grip on state land as a critical obstacle to private sector development in Egypt and have lobbied consistently against it. The president's power to designate "strategic zones of military importance" at will further compounds the problem: state land in these zones may be leased from the MOD (but not purchased), which additionally has the right of usufruct. Strategic zones now encompass swaths of the country's Mediterranean and Red Sea coasts, its land border regions with Libya and Sudan, the whole of the Suez Canal zone and Sinai Peninsula, and a majority of national highways.

In both the above cases, these and other laws and decrees in question should be revised to clearly demarcate genuine national defense needs, and to eliminate the discretionary powers that enable the military to act as a gatekeeper of public assets and resources. Given the legacy of the past seven decades and the manner of legal interpretation that regards anything not specifically prohibited as permissible, explicit safeguards should additionally be built into all pertinent legislation to prevent abuse or encroachment beyond the strict boundaries of the defense domain. Certain laws should moreover be repealed entirely—a foremost example being Presidential Decree 127 of 2015, which permits military (and other state) agencies to establish commercial companies under public business sector legislation.

A second cluster of laws and regulations relate to the public sector as a whole but grant special powers or exceptions that also enable the military economy. Chief among these is the general framework for public procurement. The main legal instrument here currently is Law 182 of 2018, which allows government ministers and other officials to award public contracts for goods and services up to certain values on a no-bid, noncompetitive basis. It extends similar powers to the MOD and MOMP, with the principal difference being that no thresholds are set for the value of contracts they may issue by direct award. The Council of Ministers has routinely surpassed its own thresholds by awarding the military huge contracts worth hundreds of millions of dollars.

The government had committed to producing a unified procurement law as part of its \$12 billion loan agreement with the IMF in 2016. But despite issuing Law 182 to replace the previous Law 89 of 1998 on regulating bids and tenders, the IMF noted in July 2021 that Egyptian state-owned enterprises continue to "operate under multiple laws for incorporation and ownership, and different governance and procurement regulations."75 Indeed, Law 182 has greatly extended these discretionary powers. It would be difficult for the military

economy to remain intact were Egypt to fulfill its commitment to the IMF on public procurement, so this should be a primary focus of efforts to reform it. At a minimum, the provisions of Law 182 should be made to apply to the military only with respect to defense contracts; even then, they should be made subject to clearly stated MOD rules and procedures.

Another part of this cluster are laws and regulations that give the military leverage—in some cases amounting to monopolistic control—over natural resources and economic access and opportunity. After use of state land, the most obvious case in point is the legal requirement for MOD approval of licenses to extract mineral wealth anywhere in Egypt. A different example is the expanding remit of military agencies that regulate other government bodies, as highlighted by the prime ministerial decree requiring the approval of the MOMP (or one other authorized agency) before procuring imported goods or services.⁷⁶ The MOMP and AOI were also appointed as the central procurement hub for the presidential developmental initiative Haya Karima (Decent Life), a quasi-governmental agency involving twenty government ministries focused on rural areas.⁷⁷ This conflicts with the IMF's view that the "roles of regulator and market player should be separated to address potential conflicts of interest."

The IMF's recommendation for "enhancing the independence of regulatory authorities, reducing the scope for conflict of interest within the regulatory functions and ensuring a level playing field for all economic actors" should be extended to specifically include the military's activities in the civilian domain.⁷⁸ As importantly, military production of goods and services should be brought formally within the jurisdiction of the Central Accounting Organization, which evaluates the performance and cost-effectiveness of public entities, and of the AMA, which excludes the military from its audits of individuals and entities (private and public).

Judicial jurisdiction is an important third leg of the military economy. The blanket exclusion of all military personnel and agencies—including companies—from the jurisdiction of civilian laws and courts means that all their economic and commercial activities take place in a legal gray zone. Conversely, a widening scope of civilian affairs are being referred to military courts. This includes civilians involved in traffic violations, accidents, and offenses against public and private facilities along highways that have been designated as military zones. It also includes civilian parties accused of unlicensed encroachments on state land and Nile riverbanks. Military jurisdiction was entrenched further in November 2021 when Presidential Decree 136 of 2014, which originally had a fixed duration and had to be renewed periodically, was amended to empower the EAF permanently to protect energy and transport infrastructure—among other public facilities—and refer civilians accused of violating these facilities to military trial.

The military penal code tackles financial impropriety by EAF personnel, but it does not cover business or other activity in the civilian domain in any meaningful sense.⁷⁹ This discourages private investors who have no legal recourse or no hope of winning a case against the military when it is an implementing agency, business partner, or has issued the contracts. It moreover leaves foreign companies dependent on the goodwill of military counterparts or

on high-level political connections, deterring them from investing in Egypt. Larger foreign companies have the leverage to insist on writing recourse to international tribunals into their contracts in Egypt. Otherwise, though, the military insists on the primacy of domestic law, which automatically shields it. Other foreign companies have left the country or filed for arbitration due to the military's grip, as Vicat and HeidelbergCement did in July and November 2021, respectively.80

In addition to denying civilian parties the possibility of going to court, military immunity imposes severe disadvantages on them when negotiating contracts, seeking payment of arrears, or posing third-party challenges. Even the largest domestic companies and major multinationals face pressures that are resolvable but "not for the faint-hearted," in the words of a board member of a leading foreign investor in Egypt. The result is lengthy delays in reaching agreement on public investment ventures or the withdrawal of foreign partners. Military immunity moreover exacerbates Egypt's poor global ranking for enforcement of contracts through the courts generally, scoring a low 40 points out of 100 on the World Bank scale.⁸¹ Redressing the judicial jurisdiction issue and strengthening enforcement is essential for economic growth. It would also mitigate the ethical and social corporate responsibility concerns that are of growing importance internationally and, by the same measure, lower the risk of future sanctions for foreign companies that ignore these concerns.

A stopgap measure until military agencies and companies cease their current role as contractors and business partners would be to subject all business contracts and disputes involving the military to the jurisdiction of civilian courts. Failing that, special legal provisions covering these needs should be issued. The military penal code could also be amended to clarify conditions under which EAF personnel may be tried in civilian courts in relation to business activities and financial dealings in the civilian domain. A May 2011 amendment to the Military Justice Law by then acting president Field Marshal Hussein Tantawi raised this possibility by empowering military prosecutors to determine whether to refer accusations against officers to military or civilian courts; this could be made statutory rather than discretionary.

Financial Transparency

Possibly the single most important prerequisite for assessing the efficiency and utility of the military economy—and therefore for making the case for one policy option or another—is financial transparency. This is a sine qua non to demonstrate its viability and justify the Sisi administration's continued reliance on the military to spearhead its state-led investment strategy. The claim that military management provides net marginal gains must be measurable. Clarifying the capitalization of military companies would also allow Egypt to apply IMF and World Bank recommendations for bankruptcy frameworks to help prevent debt overhangs from weighing on investment for prolonged periods.⁸² The Sisi administration has already approved Law 185 of 2020 requiring liquidation of public business sector companies if their losses exceed 50 percent of capital, so a clear benchmark has already been set.

Routine and timely financial disclosure and reporting on all production of civilian goods and services by the military is crucial. This should encompass all incomings and outgoings, including itemized fiscal revenues such as taxes and dividends, as well as costs and liabilities such as subsidies, injections of equity, loans and loan guarantees, arrears or losses, and surpluses carried forward from one fiscal year to the next. Transparency is also crucial for improving efficiency and cost-effectiveness—for example, by making it possible to measure the maximum use of plants and machinery, the loss of materials due to poor production or storage methods, the disposal of assets including real estate, and acquisitions. For the same reasons, scales of all pay, pensions, and bonuses charged to the budgets of military companies operating in the civilian domain should also be disclosed—if not in public then certainly to relevant government agencies.

Implementation of transparency might start with select parts of the military economy. One place to start could be joint ventures and other partnerships with nonmilitary firms. Another could be companies belonging to the MOMP (and possibly the AOI) since their existing status as public business sector companies should make it considerably easier for them to comply. But these basic principles could just as easily apply to all military-managed civilian construction, especially as the AMA has been reviewing tenders and bids alongside EAF implementing agencies since late 2015. Achieving full transparency in the NSPO could be achieved in stages, but the fact that up to ten of its companies are being prepared for flotation through Egypt's sovereign wealth fund suggests that at least the principle of some public scrutiny of their finances is already accepted by the Sisi administration.

The preceding conforms with IMF recommendations for the Egyptian public sector as a whole. The IMF included military companies specifically within this scope for the first time in its July 2021 review, having previously skirted around the subject.⁸³ By the same measure, the budgets of all military companies operating in the civilian domain should be reported in a verifiable manner and show contributions from the state treasury. These budgets should moreover be included in the general state budget or, at least, in the separate budget that Egypt maintains for its so-called general authorities that operate and finance public investments in various economic sectors.

The state budget has listed the budgets of the MOMP and its implementing arm, the National Authority for Military Production, since 2011 (albeit erratically), but the modest scale of the published figures suggests that they cover central personnel and costs only. Their budgets should additionally list their affiliate or subsidiary companies in full—the MOMP regularly issues contradictory information about their number and changing turnover figures—and provide detailed breakdowns of assets, loans, and acquisitions, as well as distinguish between debts and arrears. As in other respects, parliamentary approval in November 2021 of a unified public finances bill combining the general budget and government accounting laws provides a structure that could be readily extended to include these military agencies (and the AOI).84

Last but not least, the autonomy of Egypt's principal audit authorities should be restored. Since 2014, Sisi has marginalized the Central Accounting Organization; reviving its status would assist efforts to conduct cost-benefit analyses and enhance the efficiency of military production of goods and services. In contrast, Sisi has empowered the AMA even further, while bringing it even more closely under presidential control. Law 207 of 2017, which formalized the long-standing de facto exclusion of the military from the AMA's remit by specifically limiting it to civilian persons and entities, should be revised to include at least the military's activities in the civilian domain.

Defense Transformation and Spending

Although global examples of reform or restructuring of military economies are few and far between, two elements stand out as critical for success: that reform or restructuring be part of a broad defense modernization and transformation initiative, and that they be accompanied by a major review of defense spending. This approach is intended to provide both the incentives for defense managers to accept a reduction, reorientation, or dismantling of their civilian enterprises and the associated income streams, and the means of funding of defense needs afterward, possibly even at an increased level.

The EAF cannot realistically expect to modernize and upgrade its capabilities and equipment, let alone keep pace with the advances of warfare in an information- and communications-intensive environment without a comprehensive overhaul of its doctrine, organization, and approach to force building. The latter, in particular, reveals the enduring attachment of many armies to "incrementally better versions" or, at best, the next generation "of the same platforms they had relied upon for decades—tanks, manned short-range aircraft, big satellites, and bigger ships," as explained by Todd Harrison. 85 Sisi has invested considerably in purchasing major weapons systems and building new air and naval bases and other military infrastructure, but this does not automatically translate into more effective or secure systems of command and control, battle management, and intelligence, surveillance, and reconnaissance (including space-based assets) that are collectively at the heart of what the United States calls "joint all-domain operations."86

The EAF has started to consider these transformative changes, but it must become a slimmer force to prepare for them and improve its overall combat readiness. This necessarily means pivoting away from its economic role generally and significantly reducing, if not eliminating entirely, its commercial activities. Prioritizing defense modernization and transformation was both a main driver of military business divestment in China, and an incentive for the People's Liberation Army to cooperate. Its latest five-year-plan published in March 2021 linked "army building" to "strengthening the army through politics, reform, science and technology, talent and rule of law," as explained by the researchers Fenella McGerty and

Meia Nouwens.⁸⁷ Defense officials in Vietnam similarly justified divestment by arguing that "the aim of the structural reorganisation of the military is to meet the requirements of building a refined, compact and potent organization, improving its combat readiness."88

Egypt could address these issues by undertaking a national defense review. As part of this, it could additionally conduct a white paper process on the defense industry, if not also on military-owned civilian manufacturing and commodity production. There are numerous models to follow, including China's five-year plan noted above. Another is Japan's defense white paper released in August 2021, which advocated for greater civil-military integration to drive national research and development in defense technologies.⁸⁹ Other models for structuring a defense review with more limited goals are the 2030 Vision currently in development by the Tunisian Ministry of Defense, and the Capabilities Development Framework of the Lebanese Armed Forces that is now in its third five-year iteration. 90 Both of these are moreover supported by Egypt's leading provider of security assistance, the United States, and other partners, which arguably should make it more comfortable for the EAF and the country's two defense-related ministries to embark on a similar exercise.

As all the above examples confirm, defense modernization and transformation almost necessarily entails an initial bump in spending. Savings may subsequently be made on material costs, but global evidence suggests that rises in personnel costs resulting from increased specialization and higher career expectations may lead to a sustained upward curve in overall defense spending.⁹¹ Military business divestment in China, Vietnam, and Indonesia was accompanied by increases in defense budgets, for example, which helped incentivize cooperation by their respective armed forces. That said, the Chinese example also showed that cutting down on defense spending and demanding greater innovation and efficiency from the People's Liberation Army was also a key driver to its transformation after 1998.92 In all cases, a national defense review must include careful discussion of implications for the defense budget.

Given that the standard justification for the Egyptian military's income-generating activities starts from the need to finance EAF needs that are not met by the defense budget, "adequate on-budget funding must be a centerpiece of the drive to reform the military."93 If the government is to respond to this challenge, then an essential step is to bring all defense spending under a single budget. Besides the importance of budgetary unity, defense funds should derive directly from the state; the military argues that it meets this requirement by default since it is a state institution, but the autonomy and discretionary use of military finances are so extensive as to undermine this principle.

Egypt is a long distance from subjecting defense spending to this kind of review or control, but there are some steps that the MOD and MOMP can take in the interim. The first is to integrate planning for their companies and commercial activities more closely with government plans for the public business sector. This would enhance the impact of efforts such as the one launched by the Ministry of Enterprise Sector in 2018 to streamline the state-owned companies, whether through mergers, partial sell-offs, or liquidation. Inclusion of military

companies and assets would moreover increase budget efficiency across the board. A second step could be to set clear targets and limits for military companies producing civilian goods and services, with the purpose of preventing further mission creep under the much-cited guise of "utilizing spare capacity," which has led to a fourfold increase in the number of these companies since the late 1970s. Spare capacity might still be used selectively to support government delivery of some basic services, such as public health campaigns, but this should be brought under a single civilian management roof to ensure impact and efficiency.

Conclusion: Politics and Profits

On current trends, the military will inevitably push back on proposals to alter ownership, governance arrangements, and financial management of its business and other activities in the civilian domain. Its defense will focus on its contributions to the national economy, financial integrity, and the returns it brings for the state, as well as highlight ongoing improvements intended to reduce running costs and raise efficiency, productivity, and income in military enterprises. This has been the thrust of military resistance to restructuring and divestment in Vietnam, for example, but even there the military accepted the bankruptcy of its least efficient companies and reduced the number of military-run companies by a staggering 70 percent, from 300 to 88 by 2017.94 There is no inherent reason for the Egyptian military not to follow a similar path based on proven economic feasibility and actual financial return.

Continued expansion and diversification of the military's business portfolio, along with consolidation of its stake in public infrastructure and state-led real estate development, pose significant risks. There are clear signs of uncontrolled growth and diminishing returns, and of over-heating in the military economy as profit-seeking officers seek a share of commercial opportunities. According to a sample of EAF personnel surveyed in 2021, around 14 percent of respondents spent an average of one-quarter of their time working for military companies, while 30 percent of officers (all ranks) hoped to work for one upon retirement (and 25 percent for private companies). 95 Failure to start dismantling EAF retiree networks in the state's civilian apparatus and economic authorities and companies further compounds these trends and risks.

Ishac Diwan's argument about the inherent limits on the ability of officers to manage the economy in comparison to civilian cronies is highly relevant here. 96 People in both categories rely entirely on political connectedness to secure contracts and ensure income streams, but the military is substantially less capable of generating adequate economic growth than the crony-dominated economy was under former president Hosni Mubarak. Officers have the means, opportunity, and incentive to monopolize markets and resources more than civilian cronies, and demonstrably have done so. Yet military companies are less efficient even than

large crony-owned ones, they scare off private investors, and political concerns shape their economic and activities and investments more heavily, accentuating their predisposition to centralized, top-down decisionmaking.

The Egyptian military has no reason to cede ground in the absence of clear instruction from the president. A turning point may come if and when Sisi concludes that the military economy is adversely affecting his goals of generating growth and, especially, revenue. In theory, he can rein in significant parts of the military economy virtually at will, but this may become increasingly difficult as various military actors entrench their acquired interests. Scaling back military management of public works, which provide the military with secure income streams, or curtailing the reach of EAF retiree networks, through which senior officers in the different branches of service are assured of sinecures across government bureaucracy and the public business sector, may prompt the military to protect its stake more assertively.

Political leadership is central to determining the trajectory and outcomes. But as powerful as Sisi is, he must also appease the military, as well as balance distinct interests within it. Yet he may have to act, whether sooner or later. This means securing military buy-in, just as political leaders did in China and Vietnam. 97 The EAF may itself be divided at that time. So-called "institutionalists" who have preferred historically to keep the EAF above the political fray, and who counterbalanced Sisi to some degree after 2013, may come to regard retrenchment in the military economy as necessary in order to enhance professional military development and prepare the EAF better to confront evolving challenges of force building.98 This might not extend to full-scale restructuring, let alone divestment, but could lead to acceptance of a complete separation between defense-related and profit-driven commercial enterprises and to more willing cooperation with the president regarding retrenchment of military involvement in public works and procurement.

External actors lack the leverage to do much even if they have the will, which is no less doubtful. But they can do enough to affect perceptions and prompt at least some behavioral changes. The normally reticent World Bank and IMF have at last started to refer openly to the role and impacts of military businesses in the civilian economy, and should recognize more explicitly how this discourages both domestic and foreign investors. They and other international finance and development agencies should insist that all implementing agencies, contractors, and subcontractors managing or receiving income from projects they fund are fully transparent financially and verifiably compliant with Egypt's domestic and international obligations regarding labor rights and social and environmental governance.⁹⁹ This should include military-managed projects. The IMF and other external actors should also be considerably more assertive in demanding fulfilment of pledges to unify public procurement rules, and should lobby much harder for the facilitation of access to state land for civilian persons and entities and for an end to the legal gray zone affecting business contracts involving military partners. If applied and sustained, nonpunitive pressure of this kind may reduce incentives to maintain business-as-usual in the military economy, and encourage incremental shifts to new behavior.

Much is said about the robustness of Egypt's macroeconomic indicators and its ability to borrow heavily in domestic and international markets. This is feasible in the medium term, but the real question is whether long-term economic viability and transformation can be achieved through the state-led investment strategy pursued by Sisi and, in particular, his deployment of the military as a principal implementing agency that is specifically beyond the purview of economic cost-benefit analysis. Nearly a decade after it was launched on its current expansionary trajectory, the military economy has yet to prove an ability to help generate gains in productivity and value added, domestic savings and surplus capital, private sector investment and development, and social inclusion and profitability. This leaves Egypt permanently on a knife edge: vulnerable to external shocks and chronically dependent on politically motivated inflows of capital from sympathetic external actors.

About the Author

Yezid Sayigh is a senior fellow at the Malcolm H. Kerr Carnegie Middle East Center in Beirut, where his work focuses on the Syrian conflict, the political role of Arab armies, security sector transformation in Arab transitions, and the reinvention of authoritarianism.

Previously, Sayigh held teaching and research positions at King's College London, University of Cambridge, and University of Oxford. He is the author of numerous publications, including most recently "Praetorian Spearhead: The Role of the Military in the Evolution of Egypt's State Capitalism 3.0" (2021); "Owners of the Republic: An Anatomy of Egypt's Military Economy" (2019); "Dilemmas of Reform: Policing in Arab Transitions" (March 2016); "Crumbling States: Security Sector Reform in Libya and Yemen" (June 2015); "Missed Opportunity: The Politics of Police Reform in Egypt and Tunisia" (March 2015); "Militaries, Civilians and the Crisis of the Arab State" (December 2014); "The Syrian Opposition's Leadership Problem" (April 2013); "Above the State: The Officers' Republic in Egypt" (August 2012); "We Serve the People": Hamas Policing in Gaza (2011); and "Policing the People, Building the State: Authoritarian Transformation in the West Bank and Gaza" (2011).

Acknowledgments

The author thanks Ishac Diwan, Bessma Moumani, Robert Springborg, and two other reviewers who must remain anonymous for their valuable feedback on an earlier draft of this paper.

Notes

- 1 Discussed in detail in Yezid Sayigh, "Above the State: The Officers' Republic in Egypt," Carnegie Middle East Center, August 2012, https://bit.ly/3H4fVGC.
- 2 "Egyptian Military's Role in Economy Likely to Be Reduced After 2-3 years PM," Reuters, October 24, 2016, https://reut.rs/3Fo4IzY.
- 3 "IMF Executive Board Completes First Review Under the Stand-By Arrangement (SBA) for the Arab Republic of Egypt," IMF, Press Release, December 18, 2020, https://bit.ly/32e4lKi.
- Balance of trade figures from "Egypt: Trade Balance From 2010 to 2020," Statista, accessed November 30, 2021, https://bit.ly/30OM5pU. On IMF agreement, "IMF Executive Board Approves US\$12 Billion Extended Arrangement Under the Extended Fund Facility for Egypt," IMF, Press Release, November 11, 2016, https://bit.ly/3FxPzw0.
- 5 Email correspondence with Ishac Diwan, November 23, 2021.
- According to Sisi, cited in "New Administrative Capital Costs LE380 Billion Over 7 Years, Says Sisi," *Egypt Independent*, September 27, 2020, https://bit.ly/3qg9bP3. And Aidan Lewis and Mohamed Abdellah, "Egypt Prepares to Start Move to New Capital, Away From the Chaos of Cairo," Reuters, March 17, 2021, https://reut.rs/3elQXG4.
- 7 From a speech by Sisi on August 14, 2021, posted here: https://bit.ly/3qfhM4B. And an interview with company head Major General Ahmed Zaki Abdeen cited in Mirette Magdy, "Egypt Readies What May Be Its Biggest IPO as Capital Emerges," Bloomberg, August 15, 2021 (revised August 16, 2021), https://bloom.bg/3egFI20.
- 8 Robert Springborg, "Follow the Money to the Truth about Al-Sisi's Egypt," Snapshot, Project on Middle East Democracy, January 7, 2022, https://bit.ly/3F3G2Mh.
- 9 This draws on email correspondence with Ishac Diwan, November 23, 2021.
- 10 Yezid Sayigh, "Owners of the Republic: An Anatomy of Egypt's Military Economy," Carnegie Middle East Center, November 2019, https://bit.ly/3pk5EA3.
- 11 For a fuller discussion of Sisi's state-led investment strategy, Yezid Sayigh, "Praetorian Spearhead: The Role of the Military in the Evolution of Egypt's State Capitalism 3.0," London School of Economics, Middle East Centre paper no. 43, January 2021, https://bit.ly/3Ekti3u.

- 12 According to Prime Minister Mostafa Madbouly and the head of the EAF's Engineering Authority, Major General Ihab Al-Far, cited in Noha El Tawil, "President Sisi Inaugurates Sphinx, New Administrative Capital Airports," Egypt Today, June 29, 2020, https://bit.ly/3smpLzs. Al-Far also in Sarah El-Sheikh, "My Goal Is to Provide Decent Standard of Living for Egyptians: Al-Sisi," Daily News Egypt, June 29, 2020, https:// bit.ly/3H9ByFv.
- Senior insiders estimate the profit extracted by the military at a minimum of 5 percent, while Mohamed Ali, the fugitive owner of Amlaak Holdings, a medium-size private contractor to the military, claimed in August 2019 that it routinely takes 25-30 percent of project budgets. His video on YouTube and a feature run by Al Jazeera Mubasher television on September 4, 2019, have since been deleted.
- 14 Monorail cost cited in "Egypt's Sisi Looks to New Desert Capital to Cement Legacy," RFI, November 14, 2021, https://bit.ly/3H30Ip8. The high-speed train network cost cited in "Egypt Says Reviewing \$23 Billion High-Speed Train Network With Siemens," Reuters, January 13, 2021, https://reut.rs/3eii9pi.
- "Algeria: Selected Issues," IMF, Country Report No. 18/169, June 2018, 8, https://bit.ly/3qcXKrk.
- 16 On national debt, "Egypt Total External Debt," Trading Economics, accessed December 22, 2021, https:// bit.ly/3eiMvYI. On external debt, "Egypt: National Debt From 2016 to 2026," Statista, accessed December 22, 2021, https://bit.ly/3Ep9XhE. On comparison to emerging markets, Jonathan Wheatley, "Developing Nations Squeezed as Virus Fuels Public Spending," Financial Times, July 19, 2020, https:// on.ft.com/3egT5Pv.
- On debt servicing cost to budget, Rene Vollgraaff, "Seven Charts Show Egypt's Debt Dilemma Ahead of Fed Tapering," Bloomberg, September 30, 2021, https://bloom.bg/3Jc2CFN. Finance Minister Mohamed Maiet confirmed that the government's external borrowing is going into "national projects," cited in Maged Tamraz, "Finance Minister: Egypt Spent 15 Years Taking Out Loans to Pay for Food and Drink, but Now for National Projects," Youm7, August 29, 2020, https://bit.ly/3pkre7B.
- "Creating Markets in Egypt: Realizing the Full Potential of a Productive Private Sector," International Finance Corporation, December 2020, Fig. 2.7 (Number of SOEs by Industry Group), 52, https:// bit.ly/3J7elWl.
- Silo Foods was announced in August 2021 by Major General Waleed Abul-Magd, director general of the National Service Projects Organization (Ministry of Defense). Cited in Samir Hosna, "National Service Organization: Silo Foods Comprises 10 Factories With a Production Capacity of 470 Thousand Tons," Youm7, August 3, 2021, https://bit.ly/3J4gRMO.
- First quote from Abdel-Rahim Abu Shameh, "Minister of Military Production: 10 Billion Pounds Increase in Ministry's Activity Compared to Last Year," al-Wafd, November 20, 2017, https://bit.ly/2JoS357. Second quote from Nour Ali, "Minister of Military Production: Our Income Was 8.9 Billion Pounds and We Aim for 12 Billion Pounds in 2018," Youm7, March 5, 2018, https://bit.ly/3spGy4H.
- The rate of increase slowed to 13 percent and 18 percent in 2018–2019 and 2019–2020, according to MOMP statements.
- All figures given by Assar. Profit figure cited in Ahmed al-Lahouni, "235 Million Pounds Profits for Military Production Companies Last Year," al-Mal, February 17, 2020, https://bit.ly/3pjuj7K. Percentage of contracting and consulting income cited in Ahmed Hasan, "Minister of Military Production: The Ministry Contributes Works Worth 15 Billion Pounds to Local Contracting Sector," Youm7, June 16, 2019, https:// bit.ly/3mtqATn.
- 23 Ayhan Aydogdu, Serhat Burmaoglu, Ozcan Saritas, Serhat Cakir, "A Nanotechnology Roadmapping Study for the Turkish Defense Industry," Foresight: The Journal of Futures Studies, Strategic Thinking and Policy 19, no. 4 (2017), 354-75, https://bit.ly/3JdBbLE.
- Fenella McGerty and Meia Nouwens, "China's New Five-Year Plan and 2021 Budget: What Do They Mean for Defence?," International Institute for Strategic Studies, March 8, 2021, https://bit.ly/3H8dJxU.
- David Pilling, "How Morocco Transformed Itself Into a Carmaking Hub," Financial Times, October 11, 2021, https://on.ft.com/33VewUB. On Egyptian aspiration, Ahmed al-Lahouni, "Military Production

- Minister: We Aspire to Increase Percentage of Local Component in the Auto Industry to 60%," al-Mal, December 20, 2020, https://bit.ly/3Ejbkyw.
- On military operation in industrial sectors, "Creating Markets in Egypt," International Finance Corporation, 52. On the relationship between participation in global value chains and per capita income, "The New Order of Trade," Economist, October 6, 2021 edition, https://econ.st/3sxz7bP.
- Figure on public sector share of GDP from "Arab Republic of Egypt: Selected Issues," IMF, Country Report No. 18/15, January 22, 2018, 10, https://bit.ly/3H3rjlP.
- Then minister Assar confirmed partnering with private contractors, cited in Ahmed al-Lahouni, "Al-Assar: We Implemented Projects Worth 25 Billion Pounds in Partnership With the Private Sector in Six Years," al-Mal, February 17, 2020, https://bit.ly/3JaOUTw.
- Omaima Ismail, "A New School Meal System: What Has Really Changed?," Mada Masr, December 22, 2021, https://bit.ly/3sqbmCl.
- "Creating Markets in Egypt," International Finance Corporation, 42 and 43.
- Cited in Mohsen Samikah, "Sisi at the Greenhouses Project: "We Will Not Side With Merchants Against the People," al-Masry al-Youm, August 17, 2019, accessed October 18, 2021, https://bit.ly/3yOEXq4.
- The Central Agency for Public Mobilization and Statistics published a detailed survey of Egypt's critical food gap in March 2021 (accessed on November 8, 2021), https://bit.ly/3pmiTQs. On fish farming, Mostafa Hosny, "Big Fish in a Shrinking Pond: How an Armed Forces Company Is Building a Fish Farming Monopoly," Mada Masr, April 15, 2021, https://bit.ly/3qlB346.
- Nada Arafat and Saker El Nour, "How Egypt's Water Feeds the Gulf," Mada Masr, May 15, 2019, https:// www.madamasr.com/en/2019/05/15/feature/politics/how-egypts-water-feeds-the-gulf/.
- For a map of these roads, see Sayigh, "Owners of the Republic," map 7 (National Roads Built or Controlled by the Military), 260.
- This passage draws on Sayigh, "Owners of the Republic," 131.
- Arms exports figures generated from the Stockholm International Peace Research Institute's "Importer/ Exporter Trend Indicator Values Tables" of arms exports from Egypt, 2000-2019, accessed October 16, 2021, https://bit.ly/3yUhjsj.
- Guy Martin, "Egyptian Air Force F-16s, Mirage 2000s Fitted With Al Tariq PGMs," defenceWeb, October 14, 2021, https://bit.ly/3FkuoxG. On the Emirati-based Egyptian drone, Agnes Helou, "Egypt Unveils Locally Made Drones at EDEX 2021," DefenseNews, November 30, 2021, https://bit.ly/3FpqjZ8.
- Émile Bouvier, "Turkey. The Arms Industry on the Fast Track to Autonomy," Orient XXI, October 27, 2021, https://bit.ly/33R1bfT.
- Land reclamation target and number of new cities according to Prime Minister Mostafa Madbouly, cited in Mohamed Abdel-Nasser, "5.8 Trillion Pounds for 31 Thousand Projects: How Many Figures Did Madbouly Cite at the Inauguration of the Fayrouz Project?," Masrawy, January 23, 2021, https://bit.ly/3FnLGd1.
- Kevin Goh and Julia Muravska, "Military-Owned Businesses: Corruption & Risk Reform," Transparency International Defence & Security, January 2012, 5, https://bit.ly/3mqK0bq.
- Ibid. 41
- Gaurav Nayyar, Mary Hallward-Driemeier, and Elwyn Davies, At Your Service? The Promise of Services-Led Development (Washington, DC: World Bank, 2021), https://bit.ly/3FqcedO.
- Sawiris was speaking during a televized interview with Agence France Presse that can be seen at: https://bit. ly/33QBSdU.
- This draws on "Should Governments in Emerging Economies Worry About Their Debt?," Economist, February 11, 2021, https://econ.st/3mt3H2q.
- "Creating Markets in Egypt," International Finance Corporation, 14.

- 46 Ishac Diwan, Nadim Houry, and Yezid Sayigh, "Egypt After the Coronavirus: Back to Square One," Arab Reform Initiative, August 2020, Figure 1: Debt and credit, 5, https://bit.ly/3pjSxP9.
- Diwan, Houry, and Sayigh, "Egypt After the Coronavirus," 11.
- "Sinai Development Agency Joined to Armed Forces' Entities," al-Manassa, November 30, 2021, https:// bit.ly/3mqBzg8. On the value of projects in Sinai, Menna A. Farouk, "Egypt Announces Massive Budget to Develop Sinai," Al-Monitor, September 4, 2018, https://bit.ly/3swDtQf.
- "Measuring the Egyptian Military's Business Influence," Tawazun Blog, Tawazun, November 9, 2021, https://bit.lv/3GZFDfc.
- "Egypt," Transparency International Defence & Security, accessed December 16, 2021, https://ti-defence. org/gdi/countries/egypt/.
- Discussed in detail in Yezid Sayigh, "Above the State."
- 52 Figure for 2015/2016 cited in Karim al-Khatib, "Ministry of Military Production in 2016: Manufacturing, Agriculture, Mining, Supply, and Health, a Year of Hard Labor on National Projects," Sada el-Balad, December 30, 2016, https://bit.ly/3pjTalv. Figure for 2019-2020 cited in Zaki el-Qady, "Ministry of Military Production Achievements in 2019/2020 in the Area of Developing Defense Production," Youm7, December 22, 2020, https://bit.ly/3qd0Pro.
- On ST-100 and ST-500 vehicles, Darek Liam, "Egypt Begins Mass Production of Homemade Sinai-200 and ST-500 Armoured Vehicles," African Military Blog, June 28, 2021, https://bit.ly/3qgbD8d. Sinai 200 reported in Naim Amin, "Minister of Military Production: We Have Acquired the Technology to Manufacture Armored Steel, and Aspire to Smart Munitions," al-Watan, December 3, 2021, https:// bit.ly/3pjUpaN.
- "Egypt Discloses Two-Dimensional Radar at EDEX 2021 Exhibition," al-Ain, December 1, 2021, https:// bit.ly/3EiTnzZ.
- "Leading Edge: Defence Innovation and the Future of Operational Advantage," International Institute for Strategic Studies, November 2021, https://bit.ly/32cR1px.
- Roger McDermott, "Putin Agrees to Major Write-Off of Russia's Defense Industry Debt," Eurasia Daily Monitor 17, no. 22 (February 19, 2020), https://bit.ly/32kD1dh.
- Dongmin Lee, "Swords to Ploughshares: China's Defence Conversion Policy," Defence Studies 11, no. 1 (March 2011), 8, https://bit.ly/3qpqSMi.
- "Russia's Military Modernisation: An Assessment," International Institute for Strategic Studies, September 2020, 164, https://bit.ly/3FoVoMl. President Vladimir Putin has been urging defense companies to diversify product portfolios by developing competitive high-technology civilian goods capable of meeting domestic and export demands.
- Frank O. Mora and Quintan Wiktorowicz, "Economic Reform and the Military: China, Cuba, and Syria in Comparative Perspective," International Journal of Comparative Sociology, April 2003, 93, https:// bit.ly/3yOIrc8.
- "OYAK Group and Its Subsidiaries," OYAK Group Insurance, accessed December 1, 2021, https:// bit.lv/3FluKnv.
- 61 Dongmin Lee, "Chinese Civil-Military Relations: The Divestiture of People's Liberation Army Business Holdings," Armed Forces & Society 32, no. 3, April 2006, 439, https://bit.ly/3pkECZm.
- 62 OYAK describes itself as a "a complementary professional pension fund" for "members of the Turkish Armed Forces, the Gendarmerie General Command, the Coast Guard Command and the employees who would like to join therein on their own volition including the civilians as specified in the Law," from https://bit. ly/3yPyO4Z, accessed December 22, 2021. For an assessment see Zeinab Abul-Magd, İsmet Akca, and Shana Marshall, "Two Paths to Dominance: Military Businesses in Turkey and Egypt," Carnegie Middle East Center, June 2020, https://bit.ly/3yRPa5b. The Fauji Foundation (also known as Fauji Group) describes itself as "amongst the largest business conglomerate [sic] in Pakistan which 'Earns To Serve' the interests of

- ex-servicemen," and as "basically a Charitable Trust founded . . . for the welfare of the ex-servicemen and their dependents," from https://bit.ly/3H6w7XS, accessed December 22, 2021. For an assessment see Ayesha Siddiga, Military Inc.: Inside Pakistan's Military Economy, rev. ed. (London: Pluto Press, 2016).
- "Arab Republic of Egypt: 2021 Article IV Consultation, Second Review Under the Stand-By Arrangement-Press Release; Staff Report; and Statement by the Executive Director for the Arab Republic of Egypt," IMF, Country Report No. 21/163, July 22, 2021, Box 1, item i, 19, https://bit.ly/32jHuNh.
- Quotation from "India's Government Wants to Monetise State-Owned Assets," Economist, August 28, 2021, https://econ.st/33GNJuQ.
- Kareem Hasan, "The Government Approves Amending Capital Market Law," al-Ahram, November 24, 2021, https://gate.ahram.org.eg/News/3156111.aspx. Also see analysis of the amendments in "New Bill Proposes Financialization of Public Utilities Providers," Mada Masr, May 20, 2021, https://bit.ly/3ehsQIO.
- According to a statement from the presidency of the Council of Ministers reporting a study by the Center for Information and Support for Decision-Making, available at https://bit.ly/3qprQrU, accessed December
- Quoted in Beesan Kassab and Mada Masr, "IMF-Inspired Government Plan to Empower the Private Sector: Will the Privatization Train Return to the 1990s?," Mada Masr, November 16, 2021, https://
- Bijan Khajehpour, "Will Iran's Military Really Divest From Business Holdings?," Al-Monitor, January 30, 2018, https://bit.ly/3piKnXb.
- Mohamed al-Gali, "Sisi Ratifies Amendment of Some Articles of the Public Business Sector Companies Law," Youm7, September 13, 2020, https://bit.ly/32nZOVo.
- "Arab Republic of Egypt: 2021 Article IV Consultation," IMF, Box 1, item ii, 19.
- See, for example, "'Unkept Promise': Failure to End Military Business Activity in Indonesia," Human Rights Watch, January 11, 2010, 6, https://bit.ly/3FlwixP; and Goh and Muravska, "Military-Owned Businesses: Corruption & Risk Reform," 23.
- "Egypt, Arab Rep. Overall Score, 2021," accessed October 29, 2021, https://worldjusticeproject.org/ rule-of-law-index/country/2021/Egypt%2C%20Arab%20Rep/.
- "Arab Republic of Egypt: 2021 Article IV Consultation," IMF, 19.
- Nour Ali, "Parliament Gives Final Approval to Penal Code Amendment," Youm7, November 1, 2021, https://bit.ly/32jIfpB.
- "Arab Republic of Egypt: 2021 Article IV Consultation," IMF, Box 1, 18.
- 76 Eman Ali, "Government Plan to Raise Spending Efficiency and Increase Revenue by 10 Points," Youm7, June 25, 2020, https://bit.ly/3H36lng.
- On role of MOMP and AOI, Ahmed 'Ajaj, "Military Production, Arab Industrialization Collaborated to Provide Requirements for Hayah Karima Initiative," al-Shorouk, March 6, 2021, https://bit.ly/3qlt1Z1. The Haya Karima website can be accessed here: https://bit.ly/32e9ulA.
- "Arab Republic of Egypt: 2021 Article IV Consultation," IMF, 17.
- A World Bank report states that "specialized military courts oversee military-affiliated companies. These courts have jurisdiction over any unjust enrichment and illicit earnings for active servicemen." "Creating Markets in Egypt," International Finance Corporation, Fig. 2.7 (Number of SOEs by Industry Group), endnote 40, 139. However, there is no evidence that such courts exist, nor that the military penal code has been adjusted to deal with such challenges. The report appears to confuse this with a legislative decree issued by the then ruling Supreme Council of the Armed Forces in May 2011 that transferred the authority to determine whether EAF officers accused of illicit gains should be tried in military or civilian courts to MOD prosecutors. See text of Law by Decree 45 of 2011 Amending Some Articles of Military Justice Law 25 of 1966 at: https://bit.ly/32s5Q74.
- "Faced With Cairo's Military Grip on Industry, HeidelbergCement Files for Arbitration," Africa Intelligence, November 9, 2021, https://bit.ly/32o0HgG.

- 81 "Creating Markets in Egypt," International Finance Corporation, 13.
- As noted in M. Ayhan Kose, Peter Nagle, Franziska Ohnsorge, and Naotaka Sugawara, "Global Waves of Debt: Causes and Consequences," World Bank, 2021, https://bit.ly/3H8ll3s.
- The IMF Board was urged to mention military explicitly in an official joint letter submitted to it by Human Rights Watch, Cairo Institute for Human Rights Studies, and The Freedom Initiative. See "Letter to IMF Executive Board Re: Transparency for Egypt's Military Firms," Human Rights Watch, November 30, 2020, https://bit.ly/3msPZMR.
- Safaa Isam-el-Din and Ahmed Oweiss, "Parliament Approves Unified Public Finances in Principle," al-Shorouk, November 2, 2021, https://bit.ly/3eiVtVS.
- Quote from Todd Harrison, "Battle Networks and the Future Force Part 1: A Framework for Debate," Center for Strategic and International Studies, CSIS Briefs, August 5, 2021, 2, https://bit.ly/3ssm1fG. Harrison notes that attachment to the same platforms is typical of U.S. services.
- This borrows from Anthony Cordesman, "Security Assistance and the Changing MENA Region," in Hicham Alaoui and Robert Springborg, eds., Security Assistance in the Middle East: Challenges and the Need for Change (Boulder, CO: Lynne Rienner, forthcoming 2022). Cited with permission.
- Fenella McGerty and Meia Nouwens, "China's New Five-Year Plan and 2021 Budget: What Do They Mean for Defence?," IISS Blog, International Institute for Strategic Studies, March 8, 2021, https://bit.ly/3mt6d8F.
- Viet Tuan, "Defense Ministry Cuts Back on Business Activities," VNEpress, October 11, 2018, https://bit.ly/3JajGMo.
- Yuka Koshino, "Is Japan Ready for Civil-Military 'Integration'?," IISS Blog, International Institute for Strategic Studies, August 3, 2021, https://bit.ly/3mqWvnl.
- Information on Tunisia comes from a defense analyst, name withheld on request, over email. On Lebanon, Aram Nerguizian, "The Five Wildcards of Lebanese Military Capability Development," Tawazun Blog, Tawazun, April 20, 2021, https://bit.ly/3FnSLdB.
- A detailed discussion of this trend in the case of the U.S. military is Seamus P. Daniels, "Assessing Trends in Military Personnel Costs," Defense Budget Analysis Program, Center for Strategic and International Studies, September 2021, https://bit.ly/3eeUvdt.
- 92 Kristina Mani, "Militaries in Business: State-Making and Entrepreneurship in the Developing World," Armed Forces & Society 33, no. 4, July 2007, 604, https://bit.ly/3H6K7AG.
- Quote from the evaluation of military divestment in Indonesia, "Too High a Price: The Human Rights Cost of the Indonesian Military's Economic Activities," Human Rights Watch, 2006, 131, https://bit.ly/3qbAbza.
- Nguyen The Phuong, "Can Vietnam's Military Really Mind Its Own Businesses?," The Diplomat, July 20, 2017, https://bit.ly/3yPD1Od.
- Robert Kubinec, "Measuring the Egyptian Military's Business influence," Tawazun Blog, Tawazun, November 9, 2021, https://bit.ly/3ehwHWi.
- Ishac Diwan, "Armed Forces in Power and in Business," Carnegie Middle East Center, October 26, 2020, https://bit.ly/3Fp0CYt.
- Goh and Muravska, "Military-Owned Businesses: Corruption & Risk Reform," 24.
- 98 For a discussion of EAF institutionalists, see Stephan Roll, "Managing Change: How Egypt's Military Leadership Shaped the Transformation," Mediterranean Politics 21, no. 1, October 2015, 23-43, https://bit.ly/3FnPkDM.
- Examples of social and environmental governance regulations for investment are "Amplifying the 'S' in ESG: Investor Myth Buster," Thomson Reuters Foundation, accessed November 6, 2021, https://tmsnrt. rs/3JbSQUc. And "Human Rights Impact Assessment Guidance and Toolbox," Danish Institute for Human Rights, August 25, 2020, https://bit.ly/3qbBf68.

Malcolm H. Kerr Carnegie Middle East Center

Founded in 2006, the Malcolm H. Kerr Carnegie Middle East Center, based in Beirut, Lebanon, draws on top regional experts to provide in-depth analysis of political, socioeconomic, and security issues in the Middle East and North Africa. The center seeks to cultivate a deeper understanding of the region by offering insights into the challenges faced by states and citizens and by addressing long-term trends. As freedom of expression has been increasingly curbed, the center has served as a space for individuals to express their views on the region and reflect on solutions.

Carnegie Endowment for International Peace

The Carnegie Endowment for International Peace is a unique global network of policy research centers in Russia, China, Europe, the Middle East, India, and the United States. Our mission, dating back more than a century, is to advance peace through analysis and development of fresh policy ideas and direct engagement and collaboration with decision-makers in government, business, and civil society. Working together, our centers bring the inestimable benefit of multiple national viewpoints to bilateral, regional, and global issues.

