

Chapter 3 Industrial Policy in MENA: Lessons from East Asia

Efforts to stimulate private sector growth and jobs in MENA have often taken the form of active industrial policies with, however, limited evidence of success and many instances where policies have been captured by only a few firms. This chapter reviews these policies over the past decades and compares them with the experiences of East Asian countries. Several critical differences in policy design and implementation that underpin the success of industrial policies in East Asian countries compared to MENA countries are highlighted. These differences point to a list of key ingredients for an effective industrial policy: (i) there is consensus on a common strategic vision and objectives at the country level, and a focus on new economic activities where market failures are more likely to have a binding influence on industrial development; (ii) policies are connected to performance and evaluation systems in which both the effectiveness of policies and officials can be assessed; (iii) policies promote and safeguard competition and equality of opportunity for all entrepreneurs in the domestic market and provide incentives for firms to compete in international markets.

3.1. **Many countries in MENA have taken the route of an active industrial policy in an effort to address the deficiencies in their business environment and stimulate private sector development and job creation.** The previous chapters have shown that a host of policies across MENA countries undermine the underlying firm-level fundamentals of job creation by limiting competition and tilting the playing field. While confronting these constraints directly would have been more effective, many countries in MENA have adopted industrial policies in an effort to encourage private sector development and structural transformation. In MENA, as in many other countries around the world, industrial policy has often included subsidies and tax breaks, which must be large to compensate for the deficiencies in the business environment and spur investment, growth, and job creation. Both MENA countries and many East Asian countries have used this alternative strategy extensively. In the following, we discuss the extent to which these industrial policies have been successful and the factors that explain the different experiences of the two regions.

3.2. **The MENA region has many decades of experience with industrial policy, but there is limited evidence of success.** Few observers argue that the experience has been successful: despite aggressive actions to drive industrial development, structural transformation, and job creation, results have been scarce and low. What should the region's policy makers conclude from this experience? Should they, in the future, rely more on market forces, and less on government direction? Or should they improve on the quality of government interventions? The second option appears particularly attractive to policy makers and analysts who observe the remarkable success of East Asian economies, where the government role has been large and ongoing (Box 3.1).⁴⁹

3.3. **The analytical and data challenges in assessing whether a particular constellation of industrial policies triggered growth that otherwise would not have occurred are considerable.** Did a sector emerge and prosper because of industrial policy? Despite it? More importantly, did industrial policy initiatives correct market failures, or did they simply offset, for some firms, policy distortions in other areas, such as cumbersome regulations, public infrastructure, financial markets, or the rule of law? Given this problem of

⁴⁹ This section is based on Keefer (2014).

missing data, this section follows the alternative strategy to directly compare elements of industrial policy design in MENA and East Asian countries, and in particular South Korea. It revisits in some detail Egypt and Morocco's industrial policy framework (Sections 1 and 2) and some aspects of industrial policy in Syria, Jordan, and Tunisia (Section 3), and compares it to the experience of East Asia (Section 4).

Box 3.1 Market failure and industrial policy

Government intervention has a role to play in structural transformation when market forces are disrupted. A long-standing argument for industrial policy is coordination failure: firms may not invest when the profitability of their own potential investments depends on whether other firms make complementary investments.⁵⁰ This argument is more difficult to sustain when there is an active world market in the complementary products, attenuating the need for within-country coordination of investments. Harrison and Rodriguez-Clare (2010) summarize more recent versions of this argument. Learning externalities or knowledge spillovers yield large productivity benefits for all firms, but no single firm takes them into account when deciding whether to enter a sector. For example, firms may not know how costly it is to produce in a new sector, or how profitable an export market is. Their investments in discovering these costs yield benefits for all firms that they individually do not take into account (Hausmann and Rodrik 2003). Thus, market forces are disrupted by information asymmetries related to the economic returns to investment; coordination difficulties among entrepreneurs in complementary industries; and the absence of markets.

Three concerns about industrial policy preoccupy observers and analysts. *First, can market failure be reliably identified?* A major difficulty in identifying market failures is that they may be difficult to disentangle from government policy failures. Arguably, East Asian industrial policies have not targeted market failures directly, but appear to have particularly succeeded at offsetting, for selected industries, *government*-related obstacles to growth, such as those rooted in governance challenges, red tape, and political risk.⁵¹ *Second, can industrial policy work given the significant technical and informational demands in crafting and implementing industrial policy?* Rodrik (2008) suggests an active public-private dialogue to overcome information asymmetries, citing the positive experiences with deliberation councils or private-public venture funds in East Asia. However, these dialogues are likely to succeed only to the extent that the obstacles to collective action among firms are resolved.⁵² *Third, do governments really want to fix it?* Governments may place a higher priority on alternative uses of funds or pursue other goals that are potentially incompatible with growth; these include, but are not limited to, incentives to extend open-ended benefits to supporters.

While research is convincing that industrial policy aimed at attenuating the effects of market failure is necessarily selective, a crucial point is that it must be selective at the level of industries and sectors, not at the level of firms.⁵³ Market failures do not, again by definition, afflict some firms in a sector, but not others. Moreover, recent research by Aghion, et al. (2012) indicates that industrial policy can promote productivity growth when it favors competition – and that industrial policy in China has done precisely this.

⁵⁰ See also Murphy, Vishny and Schleifer (1989).

⁵¹ Where political risk is high – and in many East Asian countries it was very high – governments cannot easily attract private investment. To increase investment, they can either rely on state-owned enterprises – for which political risk is irrelevant – or offer large subsidies to private entrepreneurs to raise their risk-adjusted rates of return. As the discussion below makes clear, during a period in which private investors confronted substantial political risk, the Republic of Korea embraced both strategies.

⁵² When the problem is the identification of new markets, however, neither side of the dialogue is likely to be especially well-informed; it is precisely because they do not know about potential opportunities that the need for industrial policy might exist. Lin and Monga (2010) point out that a few private entrepreneurs might have already entered new profitable industries. They conclude that these local success stories are themselves informative. Public-private dialogues could bring such examples to light.

⁵³ The essentially selective characteristic of industrial policy prompts critics to describe it as “picking winners.” However, market failures are typically related to particular sectors or types of economic activity. Hence, industrial policies intended to correct them are necessarily selective.

1. Industrial policy in Egypt

3.4. **After independence, the state invested in heavy industry and used its regulatory powers to direct private sector investment into favored sectors.** Among MENA countries, we know the most about the industrial policies of Egypt, the largest economy in the region. It has pursued policies meant to encourage particular economic sectors since its independence in 1952. From 1956 to 1970 the state invested in heavy industry, authorized favorable tax treatment for some private investments, and heavily regulated private sector industrial activity. Confronted with the failure of state-led industrialization, but reluctant to abandon state-owned enterprises, from 1970 to 1981 Egypt focused even more intently on using its regulatory powers to direct private sector investment into favored sectors and to discourage it in others (Loewe, 2013).

3.5. **Between 1981 and 1990, the most important adjustment in state-led development was a dramatic expansion in the business interests of the army.** Price regulations, customs, and financial sector policies continued to favor state-owned enterprises from 1981 to 1991. However, the devaluation of the Egyptian pound, incremental deregulation of domestic markets, and some tax breaks for manufacturing brought benefits to the private sector as well. Private investment rose from approximately 16 percent of total investment over the period 1960-82, to 41 percent over the period 1983-90 (Loayza and Honorati, 2007). During this latter time, the business interests of the army expanded dramatically into tourism, construction, white goods, vehicles, fertilizer, mineral water, olives, and bread, with much of it financed by the sale of government land in Cairo and on the seaside (Loewe, 2013).

3.6. **The fiscal crisis forced a change in industrial policies in the 1990s. Egypt shifted somewhat to more favorable conditions for private investment,** though not to the point that the government embraced a more economic approach to industrial policy (identifying market failures and carefully constructing policies to correct them). While maintaining important privileges for favored sectors and enterprises, more favorable conditions for all private investors included tax holidays and steps to liberalize the financial sector, deregulate commodity prices, and reduce barriers to trade and international capital movements (Loewe, 2013). Private investment reached 51 percent of total investment during 2001-06, although due in part to declining public sector investment (Loayza and Honorati, 2007).

3.7. **Despite numerous efforts, structural transformation did not fully materialize in Egypt.** Galal and El-Megharbel (2008) indicate that industrial policies through 1999 did not achieve the goals of structural transformation. They consider two markers of structural transformation: whether product variety increased and total factor productivity improved. From 1980 to 1999, product concentration actually *increased* (variety fell), total factor productivity scarcely improved, and those industrial sectors that received the greatest assistance exhibited the lowest rates of productivity improvement.⁵⁴ They argue that this is not surprising: policy over this period did not particularly target new activities; did not condition assistance to firms on concrete goals, such as export success; left open the possibility that support to firms could continue indefinitely; and supported sectors rather than activities.

3.8. **The period from 2004 to 2011 is typically seen as representing a sharp turn towards a private sector-driven structural transformation.** In 2004-05, the government privatized 87 state-owned enterprises and reduced income taxes, before moving on to simplify customs procedures and business

⁵⁴ TFP grew in Egypt at a 3.3 percent annual rate from 1983 to 1990, before dropping to 1.6 percent from 1991 to 2000 and to 1.1 percent from 2001 to 2006. TFP growth in the private sector soared to 5.6 percent in the 1980s, falling to 1.9 percent from 1991 to 2006 (Loayza and Honorati 2007).

start-up regulations, while continuing to liberalize the financial sector. Policies seemed to focus on new markets (subsidies to exports), and new production technologies (subsidies for modernization), and they were more substantial. However, vast areas of the economy remained closed to foreigners, including aviation and engineering services, and heavy industry (energy production, steel and aluminum production, construction, insurance, and fertilizer).

3.9. **Moreover, in this period, more individual business people benefitted from first-tier personal connections with the government.** Prior to 2000, approximately 8 percent of ruling party deputies were business people; from 2004 to 2011, these numbers increased to 17 percent of ruling party deputies and five ministers. The business people represented a miniscule fraction of firms in Egypt and were not politically accountable to them. Hence, they had stronger incentives to use their political positions to improve the investment climate for their own enterprises instead of the private sector in general. Because these business people typically represented large enterprises, their closer ties with the government could have triggered observable improvements in Egyptian growth over the period.

3.10. **A centerpiece of the 2004-11 period was the Egypt Industrial Development Strategy (EIDS), drafted by the Ministry for Trade and Industry (MFTI).** The Strategy tracked closely the ideal prescriptions for successful industrial policy (Loewe, 2013). It was designed to address: coordination failures in human capital by training workers and entrepreneurs (the Industrial Training Council); quality assurance (through the National Quality Council); financial markets (the Industrial Modernization Center); innovation and technology transfer (Technology and Innovation Centers); imperfect information about market opportunities (Export Council and Export Development Bank); and coordination problems in infrastructure and plant location (Industrial Development Agency). Loewe (2013) judges the EIDS to be an improvement over past industrial policies; he argues that FDI and exports surged as a result from 2004 to 2008.

3.11. **However, the EIDS was surrounded by both opacity with respect to the targeting of benefits to “insider” firms** (Roll, 2013), and weakness in measuring actual impact and costs and benefits of EIDS subsidies. For example, the composition of total FDI inflows into Egypt (and other MENA countries) is mostly concentrated in real estate and mining, which together account for 75 percent of total FDI. The high share of FDI flows into real estate, primarily from GCC countries, relativizes the importance for economic development. This is because capital accumulation in this sector typically has very limited scope for technology spillovers, expanding production capacities, or generating employment effects beyond construction periods.⁵⁵ In addition, on other dimensions of structural transformation, the effects of EIDS were more ambiguous. Symptoms of market failure – limited research and development, insufficient coordination of complementary economic activities – seemed to barely change as a consequence of EIDS. In 2004, for example, total R&D spending was an almost imperceptible 0.27 percent of GDP; by 2008, it had actually declined to 0.23 percent. While the activities under EIDS were consistent with efforts to solve coordination failures, the program was not set up either to identify market failures or to evaluate whether it corrected them.⁵⁶

3.12. **The absence of clarity in the targeting of these subsidies and lack of rigorous tracking of their efficacy raised questions of privileges to specific firms.** What explains the mixed results for EIDS? The most plausible reasons for greater exports were simply large government subsidies. Under EIDS the

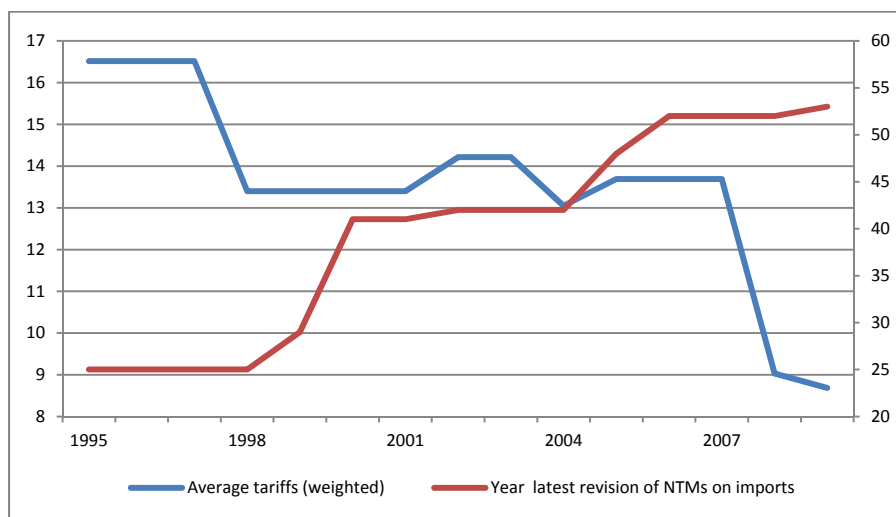
⁵⁵ In contrast, Chapter 1 shows that FDI inflows into China, Brazil, Indonesia, and India were concentrated in manufacturing or high technology services which typically have high potential for spillovers in technologies, production capacities, and employment.

⁵⁶ In discrete cases, however, government efforts to solve coordination failures may have succeeded. Loewe (2013) points in particular to the marble sector and fashion industry.

government made substantial financial transfers to beneficiary firms, particularly export subsidies (up to 15 percent of the value of goods) and modernization (up to 95 percent of the costs). These subsidies were likely sufficient to offset significant public policy distortions in finance, human capital, and administrative interference. On the other hand, the subsidies were also large enough to yield significant rents for beneficiaries. Given the absence of rigorous tracking of their efficacy, this raised questions of privileges to specific firms in the distribution of EIDS benefits.

3.13. **For instance, when tariff rates were reduced in Egypt at the end of the 1990s, Egypt apparently responded by increasing the use of non-tariff technical import barriers.**⁵⁷ A new World Bank database allows measuring NTMs in various countries. Figure 3.1 illustrates the decline in average weighted tariffs from about 16.5 percent in 1995 to 8.7 percent in 2009 – but also shows a steady and offsetting increase in NTMs. Of the 53 different NTMs in place in Egypt in 2009, almost half (24) were introduced or amended around 2000, and 21 percent between 2005 and 2009. Of these, most were issued by the Ministry of Industry and Trade, which was headed at the time by a prominent businessman. As a result, Egypt had one of the highest NTM frequencies in the world in 2010 (Malouche et al., 2013; see also Figure 4.6).

Figure 3.1 The evolution of average (weighted) tariffs and NTMs on imports since 1995



Notes: Data is from WITS. Rate reflects most-favored nation tariffs. The NTMs data provides either the year when an NTM has been introduced or the latest year in which it is has been substantially revised.

3.14. **Even if discrete policy initiatives were well-designed and effectively implemented – a disputed assumption – the broader policy framework in Egypt did not constitute a successful industrial policy.** While political connections evidently did not lead to broad benefits for all Egyptian industry, they delivered substantial benefits to the connected firms themselves. Chekir and Diwan (2012) identify 22 politically connected firms among the 116 largest Egyptian firms traded on the Egypt Stock Exchange. Following the Arab Spring revolution, they estimate the value of connected firms dropped 23 percentage points more than non-connected firms – that is, 23 percent of the expected future returns to investments in these firms were contingent on political connections.

⁵⁷ The World Bank database on NTMs provides either the year when a particular NTM has been introduced or the latest year in which it is has been substantially revised. Unfortunately, the database does not distinguish between the two.

2. Industrial policy in Morocco

3.15. **Dramatic movements in the exchange rate, however, have consistently dwarfed the impact of other industrial policy initiatives targeting export.** Moroccan industrial policy has long vacillated between providing selectively-targeted benefits and benefits to all exporters. In the 1980s, Morocco sought to increase manufacturing with tariffs and licenses. However, over the same period the currency experienced a large, 40 percent real depreciation. This likely played the largest role in the significant rise in exports and manufacturing that occurred over the period (Achy, 2013). The government liberalized in the 1990s, reducing tariffs, margin controls, and other licensing requirements; it halted direct credits for exporters and increased the role of the market in the allocation of credit. Neither manufacturing nor the economy in general prospered during this time – but this was likely due to the 22 percent *appreciation* of the exchange rate over the period.

3.16. **The government began to use several selective investment promotion schemes to encourage structural transformation in the late 1990s.** The largest was the Hassan II Fund for Economic and Social Development, which provided investment subsidies amounting to about US\$560 million (4.5 billion dirham), mostly to textile manufacturers and automotive suppliers. Again, as was the case throughout the region, market failures were not defined, nor was the efficiency of the subsidies ever evaluated.

3.17. **Moroccan industrial policy was not accompanied by significant administrative reforms.** A group of prominent and politically loyal business firms also enjoyed the capacity to act collectively, through the business organization the *Confédération Général des Entreprises du Maroc* (CGEM). They saw their interests hurt by the removal of tariff protections, but when they used the CGEM to resist these reforms, the government responded by expanding the ranks of the CGEM to include more small and medium-sized firms. The government also began an anti-corruption campaign that targeted some in the business community (Achy 2013). Concurrently, and as in Egypt, the government also brought business representatives into the legislature. In addition, the reorganized CGEM began to call publicly and insistently for a level playing field in economic policy, and to act autonomously of the government. The degree to which this ability to act autonomously also protected member firms from opportunistic changes in government policy is, however, unclear.

3.18. **One reason for the modest effect of these programs is that they were small.** None of these policy initiatives seemed to have a perceptible effect on structural transformation. Achy (2013) catalogs all of the subsidies and their cost. In 2010, they amounted to approximately US\$612 million, less than 0.7 percent of GDP. Even if exceedingly well-targeted to market failures and credibly implemented with respect to time-bound goals, the industrial policy program in Morocco was small relative to the spending associated with industrial policy in East Asia.

Table 3.1 The Cost of Industrial Policy in Morocco (2010)

Industrial Policy Measure	Estimated cost, 2010 (millions of Moroccan Dirham)
VAT exemptions/rebates for capital goods	102
Tax exemptions for exporters	2,502
Tax exemptions for new enterprises in Tangiers, other targeted locations	697
Tax exemptions for locating in free export zones	55
Customs exemptions for capital goods imports by large investors	283
Auto industry customs exemptions	365
Hassan II Fund for Economic and Social Development	900
Total	4,904

Source: Table adapted from Achy (2013), Table 6. Note: US\$ 1 = 8 Moroccan Dirhams.

3. The experiences of Syria, Jordan and Tunisia

3.19. **In Syria, the 10th five-year development plan (2006 – 10) emphasized the more rapid growth of manufacturing exports.** Accordingly, similar to the EIDS effort in Egypt, investment and export promotion agencies were created, as were “industrial cities,” meant to support the clustering of manufacturing firms. In cooperation with UNIDO, the government launched the Industrial Modernization and Upgrading Program (IMUP), which focused its support on the textile and clothing sectors. Nevertheless, the program did not respond to any explicit analysis of market failures, nor was there an evaluation of the efficiency gains from allocating subsidies to these sectors rather than to other sectors, or to allocating no subsidies at all. Chahoud (2011) found little evidence that these initiatives were broadly implemented during the period.

3.20. **Like Syria, Jordan created a variety of programs to support industry, with responsibilities dispersed across several ministries.** The Ministry of Trade and Industry created a strategy to support small and medium-sized enterprises, the Jordan Investment Board, which was charged with improving the business environment and, especially, allocating tax incentives to investors; the Development and Free Zones Commission was created to develop four regional development zones, meant to target specific industries with substantial tax and other benefits. Even the Central Bank adopted a policy of reducing reserve requirements for private banks by an amount equal to their SME loans.

3.21. **Among all these programs in Jordan, perhaps the most significant has been the least systematic:** tax incentives granted to selected firms and industries by the Council of Ministers. These are issued without transparent conditions or evaluation procedures, and outside of a bureaucratic apparatus that could monitor the contribution of beneficiary firms towards growth or employment.

3.22. **In contrast to the Korean experience described below, Jordanian benefits were uncoordinated, relatively small, and not conditioned on performance.** In addition, there was no effort to identify market

failures. Instead, government policy sought, as is often the case, simply to create industrial activity in sectors or regions where there was little. It did not distinguish whether there was little activity because of market failure or because of a simple lack of comparative advantage.

3.23. **Industrial policy in Tunisia took the form of special regulatory regimes for exporters, including generous tax and tariff rules.** A central feature of Tunisian industrial policy was the formal offshore regulatory framework. For non-exporters, the firms in the onshore economy, the regulatory and tax environment did little to promote competition and innovation. On the contrary, they established significant barriers to entry of foreign or domestic firms, especially in service sectors where most of the politically connected firms close to the Ben Ali family operated. The protection of rents in service sectors likely also reduced the quality of backbone services provided to the rest of the economy (creating *weak links*), potentially also constraining productivity in the offshore economy despite the generous tax and tariff exemptions.

Box 3.2 Are GCC countries an exception?

The GCC provides some cases of what appear to be successful industrial policy interventions. One class of successes relates to the energy sector development. The GCC countries entered the 1970s almost entirely concentrated in crude oil production operated by international companies, and with basic needs for access to services and infrastructure still unmet. In that decade, Saudi Arabia embarked upon a strategy to develop its own technical capacity in oil production along with facilities for oil refining and petrochemicals. Among the most ambitious of these interventions was the creation of two industrial cities, in Jubail (on the Gulf Coast) and Yanbu (on the Red Sea). These cities are governed by a Royal Commission (set up in 1975), which operates outside the administrative ministry structure and has complete autonomy over spatial planning, regulation, and investment in the cities.

The intention of the two cities was to transform the energy sector by promoting a cluster of sub-industries related to petroleum products and petrochemicals, including associated logistics. All major production operations in the industrial cities are owned by Saudi Arabian Aramco, Saudi Arabian Basic Industries (Sabic, a government-created petrochemicals company), or joint ventures of one of these two companies with international partners. As a result of these efforts, Saudi Arabia now has a broad-based hydrocarbons sector, in which its massive oil endowment is complemented by a downstream value chain. Of course, this industrial capacity reflects a policy decision to provide industry with oil and gas inputs at below export price. The key to avoiding dissipation of this cost advantage lies in the effective commercialization of these companies through professional management, insulation from political pressures, and exposure to international best practices by forcing foreign investors into joint ventures.

Whereas the Saudi Arabian example can be linked to its energy endowment, Dubai presents a more complex case where a services industry specialization did not have an obvious starting point. Instead a few critical decisions made by the leadership – dredging Dubai Creek to facilitate bigger ships; establishing a free zone around the new port at Jebel Ali to encourage transit and assembly activity; building up the airport and the airline; and encouraging foreign investment in finance and real estate (not least through liberal visa policies) – combined to set in motion a sustained boom and an acquired comparative advantage in logistics.

While virtually every element of this strategy was implemented by state-owned companies, emirates were in constant competition with other emirates. As in Saudi Arabia, these companies were professionalized and run on a commercial basis. The context of Dubai provided further discipline. The emirate was in constant competition with other emirates and some decisions came as competitive responses to them. For example, Jebel Ali port was triggered by Sharjah's initial moves to attract container traffic and Abu Dhabi has mimicked elements of the Dubai logistics strategy.

Finance provides an additional lever. As a subnational entity without its own large oil resources, Dubai

companies had to fund themselves through operations or debt – the latter forcing some analysis of viability and profitability from banks or securities markets. While banks were themselves closely linked to the government, they were run along sufficiently commercial principles to induce some genuine economic pressures on the SOEs. The irony was that the growth strategy, initially presented as diversification, was in fact linking the various facets of the growth closely together, as the Dubai debt crisis of 2008 showed. Nonetheless, the logistics network saw little adverse impact even at the peak of the crisis, indicating its resilience.

At least part of the apparent success of GCC countries' industrial policies is explained by the sheer size of the programs made possible by oil revenues. This contrasts starkly with the initiatives in other MENA countries.

4. What did successful countries do? The case of the Republic of Korea

3.24. **Successful firms emerged despite the fact that the political challenges of promoting structural transformation in Korea in the 1960s echoed those of the MENA region in the 2000s.**⁵⁸ The 1960s in Korea were a period of significant political unrest. Student demonstrations and military coups drove regime change, the president faced few institutional controls on his authority, and top officials earned significant rents (Kang 2002). Even as late as 1982, the first year for which governance indicators are available, Korea looked little different than Egypt in 2010, according to the *International Country Risk Guide* indicators of Political Risk Services. In sharp contrast to MENA and such programs as EIDS in Egypt, however, the firms supported by Korean industrial policy rose to become world-class producers. One of the outstanding success stories of Korean industrial policy was the formerly state-owned Pohang Steel Company (POSCO). What explains these different outcomes, despite similar governance challenges and political risks?

3.25. **Ironically, in one important respect, Korean policies appear very much like those undertaken in MENA:** selected industries received support with little attention to the identification of market failures or cost-benefit analysis. However, Korean policies were substantially more generous, tightly linked to the achievement of structural transformation goals, and supported by significant organizational changes in both the public and private sectors.

3.26. **The magnitude of government intervention to drive structural transformation in South Korea is well known.** Private investors shy away from large commitments of capital in environments where leaders can predate on their investments with impunity. The policies that Korea pursued in the 1960s and 1970s had precisely the effect of offsetting the reluctance of private investors to commit capital. First, President Park bypassed private investment altogether and placed heavy reliance on state-owned enterprises; government investment is naturally free from the hazards of government predation. The government established more than 20 major state enterprises in capital-intensive sectors (electricity, airlines, shipbuilding, steel, and so on). Second, private firms in priority sectors received massive direct and indirect subsidies, ranging from direct cash payments and tax exemptions to favorable import and foreign exchange regimes (Kim and Leipziger 1993, 19). These subsidies compensated investors in priority sectors for the political risks they incurred in committing substantial amounts of capital to the structural transformation agenda. The government's massive infrastructure investments also effectively raised the private return to investment. As Kim and Leipziger (1993, 10) report, from 1960 to 1970, Korea dedicated one-third of gross domestic investment to infrastructure and dramatically increased electricity generation and installed telephones. Why did these policies succeed in South Korea? Three responses to this question are most plausible.

⁵⁸ In 1980, Korea's real purchasing parity power-adjusted income per capita (\$5,543) was the same as Egypt's in 2010 (\$5,760).

3.27. **First, by implementing policies to stimulate activities where none previously existed, industrial policy in South Korea was effectively, if not intentionally, more likely to address market failure.** Subsidies aimed at – and were conditioned on – creating economic activities in areas where there was none, most famously in the heavy and chemical industries. In addition, the state aggressively funded information acquisition – again, at least potentially addressing a market failure. For example, the state funded 97 percent of research and development expenditures in Korea in the early 1960s (Evans p. 147). In contrast, Galal and El-Megharbel (2008) show that industrial policy in the MENA region, including Egypt’s EIDS initiative in the mid-2000s, did not effectively target new markets or products – the ones most exposed to market failures.

3.28. **Second, the Republic of Korea credibly linked subsidies to export performance; even those that benefited insiders and cronies.** In contrast to MENA, the implementation of industrial policy was conditional on firm success in pursuing structural transformation. Not only were subsidies contingent on firms entering new activities, but they had to succeed in those activities in order to continue to receive subsidies. That is, even if subsidies might also have been disproportionately channeled to politically connected firms in East Asian countries, these firms still had to meet the performance targets aligned with economic growth.

3.29. **Time-bound goals are central in order to provide entrepreneurs with incentives to innovate and invest.** However, if political incentives to pursue growth are weak, friends of the regime are unlikely to regard deadlines as credible. They will anticipate that governments will prefer to extend deadlines in exchange for rents, weakening their incentives to innovate. More generally, the efficacy of industrial policy hinges on entrepreneurs’ confidence that successful firms will not confront an abrupt and opportunistic change in the rules of the game (higher taxes, more intense regulation, and predatory behavior by officials).⁵⁹ The greater this threat, the less credible are government promises and the larger must be the industrial policy subsidies that governments use to accelerate growth.

3.30. **In contrast, the policy benefits offered to firms in MENA were not conditioned on concrete goals, such as export success.** Instead, the policy regime left open the possibility that support to firms could continue indefinitely.

3.31. **Third, the government made public and private sector organizational reforms to ensure the successful implementation, and the credibility, of industrial policy.** On the one hand, it is technically difficult to design subsidies, their timing and their expiration; on the other hand, the private sector response to subsidies is greater to the extent that private firms trust in the credibility of future policies. President Park mandated wholesale changes in government and in the industrial structure of the economy to improve the government’s implementation capacity, and to make it costly for him to act opportunistically. In the narrow pursuit of better industrial policy, he established a super-ministry, the Economic Planning Board, to consolidate functions – previously scattered across various ministries – related to the formulation and implementation of industrial policies (Kim and Leipziger 1993, 28-29). More broadly, though, he substantially moderated the tendency, manifest over the years 1948-1960, to treat the public administration as a spoils system, where civil service positions were used to reward political allies and supporters. Instead, the public administration reform imposed to practically all positions the

⁵⁹ These problems of credible commitment are pervasive. In monetary policy, for instance, governments have an incentive to deviate from low inflation policies to reduce government debt burdens. They increase the credibility of their low inflation commitments by increasing the independence of central banks.

requirement that appointments be made on the basis of open, competitive examinations; increased the difficulty of those examinations;⁶⁰ linked promotions strictly to job performance; and provided civil servants with job security (Kim and Leipziger 1993, 30). The administrative reforms immediately improved the capacity of the civil service to implement industrial policy: expertise was higher and promotion systems were linked more transparently to success in the public sector mission, which was structural transformation (Kim and Leipziger, 1993).

3.32. **Administrative reforms also improved the credibility of the presidential commitment to industrial policy.** They increased the ability of the bureaucracy to resist opportunistic policy reversals by the president. On the one hand, the elite Economic Planning Board, with widely-recognized levels of expertise, gave the civil service an informational advantage with respect to the president. On the other hand, consistent with Gehlbach and Keefer (2011), the administrative reforms improved the ability of officials and firms to act collectively in the event that President Park reneged on his commitments. In contrast, prior to the civil service reforms, there was little horizontal cohesion among civil servants, who received their jobs through connections with higher level patrons. Gehlbach and Keefer (2011) argue that these institutional changes are sufficient to generate credible commitments. They also document similar changes undertaken by Deng Xiaoping in China, when he changed state and party organizations to support increased investment and faster economic growth. For example, promotions in the Chinese public sector (for example, from county executive to provincial executive) are contingent on achieving economic growth in their jurisdiction.

3.33. **These administrative reforms contrast sharply with the MENA experience.** The Social Fund for Development was once one of the most efficient and transparent agencies in Egypt (Loewe, 2013). However, its preeminence faded in the face of political pressure to use the fund as a source of patronage jobs. This weakened the capacity of the government to implement industrial policy, but it also undermined the credibility of its policies, since bureaucracies organized around patronage are less effective checks on opportunistic behavior by leaders.

3.34. **Fourth, the emerging industrial organization of the country also supported collective action by the private sector.** The Korean government famously encouraged very large industrial enterprises, the Chaebols. Large conglomerates, each representing substantial shares of total industrial employment in the country, and each the potential source of rents and campaign contributions to politicians, could more easily defend their interests before the state. For example, the nine Chaebols that received the plurality of bank loans in 1964 all had family members in high positions of the ruling party or the bureaucracy (Kang, 189). Kang (190-192) argues that the arrangements between the Chaebols and the government allowed each to hold the other hostage – and, therefore, to make credible commitments. The top 20 Chaebols accounted for nearly 15 percent of non-agricultural GDP in 1975, but they were also heavily indebted, with debt-equity ratios approaching on the order of 350 percent. They needed the government, and so had every incentive to fulfill their commitments to pursue export growth, and to provide private financing to government. However, the government needed them and could not let large swaths of the economy go out of business.

⁶⁰ Only about four percent of those filling the higher entry-level positions had taken the civil service exam (Evans, 52). Under Park, the civil service became more strictly meritocratic, such that approximately 20 percent of those taking high entry level positions had passed the civil service exam. The exam also became more difficult. One sign of its difficulty: between 1963 and 1985, 157,000 persons took the civil service exam and 2,600 passed it (Kim and Leipziger 1993, 30).

3.35. **Despite similarities between MENA and South Korea in the linkages between large businesses and high positions in the ruling party, the political commitment to economic growth was more deeply rooted in South Korea, taming the extent of rent-seeking.** The prominence of individual families in the economic life of low and middle-income countries is a common occurrence, and also pervasive in the MENA region. South Korea appears to stand out, though, in two important ways. The “mutual hostage taking” characterized by Kang was more extensive and pervasive than in MENA. More importantly, the political commitment to economic growth was more deeply rooted, taming the extent of rent-seeking that typically accompanies oligarchic industrial structures.

3.36. **In this regard, all observers agree that the South Korean leadership had a single-minded commitment to economic growth.** From South Korea and China to Malaysia and Singapore, the governments of East Asia structured their bureaucracies and ruling parties around the goal of economic growth. The political imperative of generating growth motivated leaders to embrace organizational reforms that substantially reduced their discretion over the decisions of the bureaucracy. Indeed, this commitment is the reason that the institutional reforms (civil service reform, Chaebols, infrastructure, and so forth) did not collapse into patronage, rent-seeking, and stagnation, as in other parts of the world. For instance, when the political process allows bureaucrats to focus more on collecting rents from industrial policy than on using it to transform the economy, private-public dialogue is likely to yield correspondingly less useful information and leads potentially to counter-productive policies. What explains this commitment? This question is not unique to Korea. It also arises in the case of other East Asian “miracles.”⁶¹ The question persists because there is no systematic explanation of the unusually focused dedication of Park Chung Hee, Deng Xiao Pen, and Lee Kwan Yu to the goal of economic growth. Most explanations plausibly refer to the devastation of war, the need to support a large military, the tapering of aid, and concerns about public support (despite the non-democratic nature of these regimes).

5. Lessons for MENA

3.37. **This section argues that the lessons from East Asia are more sophisticated and difficult to implement than commonly understood.** East Asia implemented its industrial policies much differently than MENA and in ways that leaders in many countries often resist. The modalities these countries used to implement industrial policy imposed considerable limits on the discretion of leaders. These also included organizational reforms that restricted their discretion and strengthened the credibility of their commitments to the reforms. In addition, the pursuit of growth as a strategy of gaining political support necessarily substituted for other strategies. However, this focus on growth came at a cost. Comparing only the within-sector benefits of industrial policy (abstracting from important potential spillover benefits on other sectors), the resources used for structural transformation were, in many cases, diverted from uses that might have delivered greater welfare to citizens, including Koreans’ own consumption. For example, East Asian leaders could have preferred large consumer subsidies to build legitimacy. However, structural transformation, Korean-style, is expensive and incompatible with the subsidies common in the MENA region.

⁶¹ Outside of East Asia, Rodrik and Subramanian (2005) argue that Indian growth was driven by a change in attitude of Indian leaders: they began to see growth as a viable strategy for political survival.

3.38. **Other attributes of industrial policy in East Asia are, however, worthy of replication.** Industrial policies

- offset governance and political risks;
- were complemented by infrastructure construction and ample support for human capital acquisition;
- focused on activities that were entirely absent in the economy;
- were accompanied by far-reaching organizational reforms in the public sector;
- were implemented in an environment of a single-minded focus on growth;
- tightly linked subsidies to the success in more competitive export markets; and
- were applied at the sector, rather than the firm level.

3.39. **The firm-directed industrial policies common in the MENA region distorted competition and growth.** Industrial policy in MENA had a tendency to privilege individual (connected) firms instead of benefitting all firms (and new entrants) in targeted sectors.⁶² These firm-specific policies concentrated benefits on privileged firms, not sectors. These policy privileges provide these firms with potentially large exogenous cost advantages over their competitors in the same sector. Thus, the Schumpeterian growth framework predicts that they lead to less *neck-and-neck* competition and hence growth; that is, they drive non-connected firms out of the market and suppress the incentives to innovate (to escape competition) for all firms in the sector. In contrast, Aghion, et al. (2012) indicate that industrial policy can promote productivity growth when it favors competition by reducing costs for all firms and entrants in a sector. The authors argue that industrial policy in China has done precisely this. Moreover, they show that sectors in China that benefited from more uniform intra-sector subsidies exhibited greater productivity growth.

3.40. **The even-handed, effective application of the policy requires that government decision makers be relatively immune to the influence of vested interests, at least in fast-growing modern sectors.** In the absence of a single-minded focus on growth, the political cost of catering to vested interests is low, political incentives are correspondingly higher to privilege some firms over others, and to pursue industrial policy even when it has no demonstrated positive effect on development.

3.41. **The single-minded focus on growth, however, might be the most difficult to replicate as it implicitly requires a new social contract between government and citizens.** Much is made of the social compact in MENA, one that trades government employment and consumer subsidies for limitations on expressions of citizen voice. These same limitations were pervasive in East Asia, but the social compact took a different form, emphasizing jobs and productivity growth. Moreover, the organizational changes in the public sector have been consistently some of the hardest for MENA governments to accommodate, and yet played an essential role in the success of industrial policies in East Asia.

3.42. **Policy makers can choose an alternative and potentially cheaper strategy to accelerate structural transformation, by reducing the impact of policy failures before seeking to address market**

⁶² Some have argued that industrial policies should be “horizontal,” applying to all sectors. This has the appeal of at least superficially preserving a “level playing field.” However, for two reasons horizontal policies may be incompatible with this goal. First, identical policies have heterogeneous effects across sectors (cheap capital or energy favor capital- or energy-intensive industries). Second, horizontal policies have a limited economic rationale to the extent that market failure drives industrial policy, since market failures are heterogeneous across sectors. Sectoral policies could, however, be broadly targeted. For example, countries could promote an export sector, comprised of many different lines of economic activity, by undervaluing their exchange rates.

failures; or by using expensive subsidies to offset the costs of both. Government policy failures can rival or exceed market failures as obstacles to structural transformation. In many countries, however, industrial policies such as those followed in East Asia are too expensive or too difficult to implement credibly. Moreover, government-induced market failures in MENA have arguably been at least as significant a barrier to growth as information asymmetries and coordination difficulties in private markets.