



INDUSTRIAL POLICY AND FIRMS' ADAPTATIONS TO IMPERFECT POCKETS OF EFFICIENCY: THE CASE OF DANGOTE GROUP

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ABSTRACT: *Among other factors, successful industrial policy requires pockets of bureaucratic efficiency to be present. However, there are cases whereby pockets of efficiency are imperfect under competitive clientelist political settlements. As such, adequate resources and organizational capabilities of capitalists could compensate for the deficits in industrial policy tools while being supported by other, “lighter”, policy tools. The case of Dangote Group in the Nigerian cement and downstream oil industries is presented to demonstrate this. While the Nigerian state was unable to implement heavier industrial policy tools, it could provide tariffs and fiscal incentives (tax exemptions and holidays). Yet, for most of the Fourth Republic period, only in the cement industry was there such a firm to take advantage of these industrial supports.*

KEYWORDS: Industrial Policy, Political Settlements, Pockets of Effectiveness, Diversified Business Groups, Nigeria, Dangote

INTRODUCTION

It is a common trope that inefficient, corrupt and ineffective state bureaucracies are pervasive in the developing world (van de Walle, 2001). However, this is mostly and fundamentally because such countries lack the structural and economic foundations for Weberian bureaucratization (Khan, 2012). Yet, some have pointed to the existence of “pockets of efficiency” (Hickey, 2019) whereby a state agency is able to operate relatively effectively within a broader inefficient bureaucratic ecology, albeit under constant struggle for survival.

Pockets of bureaucratic efficiency are needed to design and implement industrial policies, which are in turn required for the facilitation of structural transformation of developing economies (Whitfield et al., 2015). Industrial policy requires the use of many policy instruments, with some easier to implement than others within a particular country, industry and time, due to structural factors, partially adequate political settlements, and/or partial or irregular political influence of capitalists. When partial pockets of efficiency exist, some policy tools might be better able to be implemented than others, and hence the private actors would need to muster resources and organizational capabilities to compensate and ensure at least some success in industrial policy outcomes. This capacity to adapt to imperfect pockets of efficiency may be called firms' policy-adaptive capability.

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This article adopts a case study approach and uses evidence from Nigeria to compare the adaptive capabilities demonstrated by Dangote Group in overcoming state capacity deficits the cement and downstream oil sectors. What is observed in the Nigerian cement and downstream oil industries is that the state was able to administer certain industrial policy instruments (fiscal incentives, credit guarantee, and import licensing) but unable to administer others (infrastructure provision and public enterprise ownership) for the cement industry. However, the involvement of a domestic diversified business group which had built large private organizational capacity over time was able to overcome infrastructural bottlenecks which the “heavier” industrial policies were supposed to solve, but this in turn was complemented by the “lighter” industrial policy tools. In contrast, the downstream oil industry dominated by public enterprises relies more completely on the state’s inadequate heavy industrial policy capacity and was unable to overcome critical coordination problems until entry by the Dangote Group.

The article is structured as follows: Section 2 presents a review of the literature on industrial policy implementation and the politics of pockets of efficiency. It ends with a lay out of the key argument to be empirically assessed. Section 3 describes industrial policy in the Nigerian cement industry and oil-refining industry particularly from the onset of the Fourth Republic (from 1999).

Industrial Policy and Pockets of Efficiency

Industrial policy is not only ubiquitous among past and present developing countries, but it is a necessity for industrialization (Cimoli, Dosi & Stiglitz, 2009). Although a variety of explanations have been given for differences in industrial policy outcomes (Lin & Chang, 2009), one major line of thought has been the nature of the state. The Washington Consensus strongly blamed “government failure” for the gross limitations of industrial policy across Africa and Latin America (Krueger, 1990). Yet others pointed to the examples of the East Asian Tigers being “developmental states” which facilitated structural transformation through industrial policy (Amsden, 1989).

Evans (1995) identifies a difference between predatory and developmental states (and intermediate forms ranging across the middle). The latter comes closer to the Weberian ideal of bureaucracy by possessing “embedded autonomy” – whereby the state, while embedded in societal networks, maintains some autonomy and internal coherence to implement policy rationally. Khan (2018) goes further by arguing that a major reason why rent-seeking in many developing countries was growth-reducing or at least less growth-enhancing than in East Asia was that the distributions of political and organizational power – the “political settlement” – disallowed the enforcement of performance requirements after industrial policy rents are disbursed by the state (Khan, 2012).

Khan (2010) classifies political settlements in terms of the relative “holding power” across organisations and across different levels of organisations. The horizontal distribution of power refers to the power of excluded groups relative to the ruling coalition, whereas the relative power of groups within the ruling coalition describes the vertical distribution of power (Khan, 2010, pp. 8-9). The more powerful horizontally excluded factions are, the more vulnerable the ruling coalition is, and they may have to make use of more violence, repression or indiscriminate (growth-reducing) rent disbursements to retain power.

On the other hand, “the stronger the lower-level factions, the lower the capacity of the ruling coalition to enforce institutional rules that lower-level factions may contest” (Khan, 2010, p. 9).

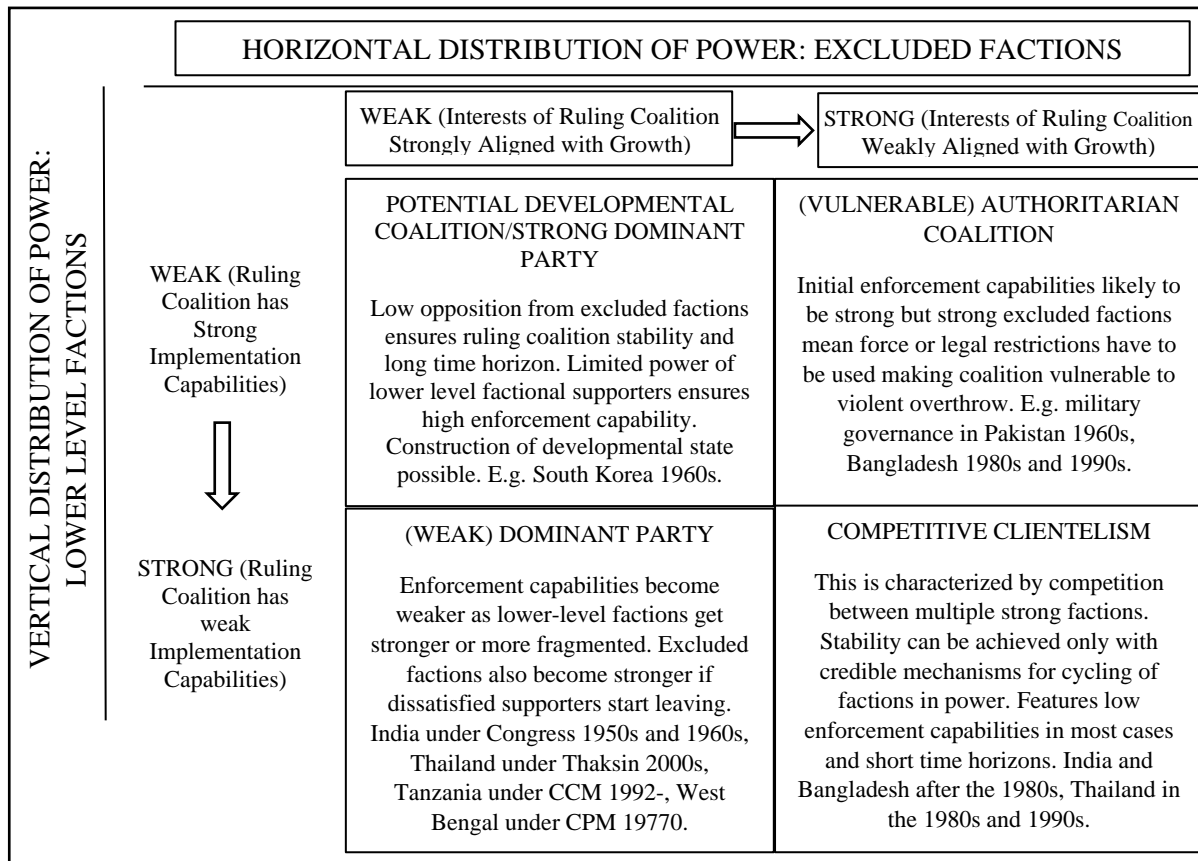


Figure 1: Patron-Client Factions and the Structure of the Ruling Coalition (Khan, 2010, p. 65)

Whitfield et al. (2015) build upon the political settlements framework by proposing an “elaborated political settlements” theory. Successful industrial policy requires three ingredients: mutual interests between ruling elites and capitalists; pockets of bureaucratic efficiency within the state to design and implement industrial policy; and learning for productivity by firms that receive industrial policy rents.

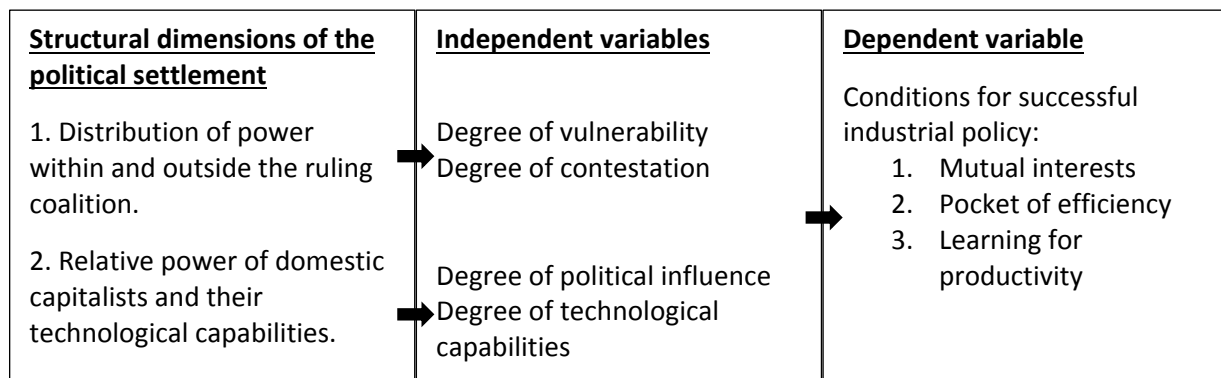


Figure 2: Model of the Elaborated Political Settlements Theory (Whitfield et al., 2015, p. 24)

The elaborated political settlements framework (Whitfield et al., 2015, p. 20) typically interprets the bureaucratic pocket of efficiency as emerging and being maintained due to political support by the ruling elites (which provide relative autonomy to bureaucrats, shielding them from overly distortive redistributive demands made by other elites and the low-level followers) and competence of the bureaucrats. This political support derives from mutual interests between ruling elites and capitalists. Hence, the difficulty in creating a pocket of efficiency would mostly be the result of weak mutual interests between ruling elites and capitalists or a high degree of contestation within the ruling coalition which prevents political insulation and adequate resource allocation for the bureaucracy. However, competitive clientelist countries can experience higher levels of contestation within the ruling coalition, thereby making it difficult to implement industrial policy without performance-reducing political interference. Thus, even with mutual interests present, it could be possible to establish a partial pocket of efficiency. In such a case, the capitalist's capabilities in adapting activity and operations to this bureaucratic shortfall/deficit are important. Hence, for the same degree of mutual interests and state resources, different policy tools may be more viable than others due to different required bureaucratic structures. This affects industrial policy implementation. If the binding constraint requires a certain policy instrument (or mix of such instruments and actions) to address, but the "pocket of efficiency" only permits a limited range or depth policy instruments or their usage, then the industrial policy process becomes bottlenecked.

For example, some industrial policy tools may require coordination among more state agencies than others. Many governments assemble such policy-based coordination within an "economic strategy team". Agencies may have opposing interests (see, e.g., Ayinde et al., 2016, p. 20; Farole & Moberg, 2017, pp. 242-244), or projects may be "especially difficult to superintend across multiple, widely dispersed sites of action" Bain et al. (2015, p. 9).

In contexts where mutual interests have emerged, but pockets of efficiency are partial, the capitalists' capabilities may play a role in compensating for the inability of bureaucrats to address all binding constraints through certain policy tools and actions. The major problem, as Whitfield et al. (2015) concede, is that the technological capabilities of capitalists among developing countries, and especially in Africa, are generally poor. Nonetheless, just as



scholars have peered further into the notion of political will and government failure, there is a need to peer further into forms of corporate and inter-firm organization and their connections with pockets of efficiency for industrial policy. For instance, Leff (1978) has argued that diversified business groups (DBGs) may arise in developing countries as internal markets for imperfect capital, labour and product markets in the face of imperfect (domestic) external markets, enabling enable the exploitation of economies of scope for related diversification, and risk-reduction for unrelated diversification (Schneider, 2009).

The argument is buttressed using a comparative case study approach, comparing the Nigerian cement industry with the country's oil-refining industry. The comparison with the downstream oil industry is because both sectors are comparative advantage sectors – there is an abundance of limestone for cement production, and an abundance of crude oil for oil refining. They both produce products which have strong domestic and Pan-African demand – cement for infrastructural development and fuels for energy consumption. They are also both capital intensive and therefore require high levels technological and organizational capabilities for large investments to be made. Therefore, the demand and fundamental supply conditions may be held more or less roughly equal for the purposes of extracting sources of divergent performance.

Nigeria, since 2015, has been the largest economy in Africa by GDP, although it remains a lower middle-income country (World Bank, 2019) with a small manufacturing share of the economy (Chete et al., 2016, p. 117), high unemployment and poverty rates. Being an ethnically and religiously diverse country fraught with multiple rivalries, “Nigeria is vulnerable to numerous instabilities...arising from horizontal elite competition, vertical societal redistribution demands and external oil shocks.” (Usman, 2016, p. 17). The prevalence intra-elite power struggles give ruling elites a short-term view of power and rent-extraction.

Roy (2017, p. 20), using political settlements analysis, therefore unsurprisingly argues that Nigeria has alternated between vulnerable authoritarianism throughout the period of military rule, and largely competitive clientelism throughout civilian rule. It then becomes difficult to secure pockets of efficiency and ensure implementation of developmental policies due to weak control over elites and lower-level factions (Roy, 2017, p. 19).

This makes it more difficult for it to implement various industrial policy tools such as infrastructure provision (Marwah, 2011) and power supply are limited (Iarossi, et al., 2009, p. 24). There is also a general difficulty in enforcing trade policy such as tariff provisions and import bans (Raballand & Mjekiqi, 2010, pp. 207-210).

The Nigerian political economy makes pockets of efficiency for any industrial policy difficult to uphold across all relevant policy instruments. Yet, as will be demonstrated below, there are instances where firms' capabilities are able to compensate and adapt to partial pockets of efficiency.

Comparative Case Studies

The Cement Industry

State-owned integrated cement plants supplied about 50% of the total market supply of cement between 1960 and 1978 (Akinyoade & Uche 2018). Yet like many other public

enterprises in Nigeria, they performed poorly and inefficiently and were heavily subsidized by the state. Although domestic production grew under the public enterprises, it did not keep up with cement demand (Marwah, 2011, p. 78).

The country experienced severe economic turbulence in the 1980s resulting due to the second global oil shock, domestic debt and balance of payments crisis, and economic recession between 1980 and 2000. There was no new cement plant built in the country between 1980 and 2000 (Mojekwu et al., 2013, p. 362), and the state-owned cement companies could no longer be subsidized. From a peak of 3.5 million tonnes in 1986, local cement production crashed to 2.28 million tonnes by 2000; whereas in the same period imports grew massively (Mojekwu et al., 2013, p. 362).

The country transitioned to civilian rule in 1999 to form its Fourth Republic. In 2002, the federal government initiated the Backward Integration Policy (BIP) – an import-substitution policy aimed at improving domestic production of cement. The government required that all recipients of cement import licenses show proof of building factories for local cement manufacturing in Nigeria (Ohimain, 2014, p. 71). All state-owned cement companies were privatized. The government established the Nigerian Investment Promotion Council (NIPC) and effectuated a wide range of tax incentives (Fakile & Adegbile 2011). The government also supports the industry through public procurement, with the government being “the largest consumer of cement in the country with an estimated 50% of total consumption” (Ojo & Oguntimehin, 2017, p. 75).

As a result of these industrial policies (along with greater macroeconomic and political stability), cement investments and domestic production improved immensely and exceeded imports by 2008 (as figure 5 depicts). In 2013 the country became a net exporter of cement for the first time (Oxford Business Group, 2016a, p. 175). By 2017, 95% of the material for the industry’s cement production was sourced domestically (McCulloch et al. 2017).

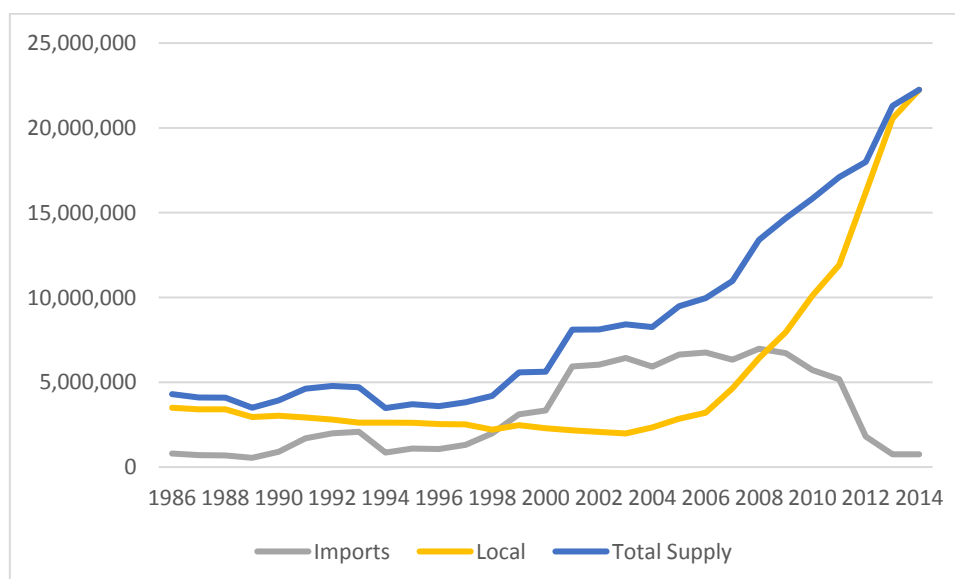


Figure 3: Nigerian annual cement supply 1986-2014 (tonnes) (Mojekwu et al., 2013, p. 371; Akinyoade & Uche, 2018, p. 835)



Therefore, imported cement as percentage of total supply has declined from a peak of 76.5% in 2003 to 3.3% in 2014 (Akinyoade & Uche, 2018, p. 835; Mojekwu et al., 2013, p. 371).

Since the BIP, “over \$20 billion has been directly and indirectly injected into the Nigerian cement industry with Dangote Cement Plc accounting for 60% of that spend” (Osagie, 2014). The company accounted for 80% of the Dangote Group’s revenues by 2014 (CNBC, 2014). The company, accounting for about 90% of Aliko Dangote’s personal wealth has become the largest company quoted on the Nigerian Stock Exchange (Akinyoade & Chibuike, 2016). Dangote Cement and Lafarge Africa together account for over 90% of sales (Oxford Business Group, 2016a, p. 75).

Akinola (2019) attributes the success of the cement industry to the mutual interest formed between then President Obasanjo, and the cement importer and business magnate Aliko Dangote. This occurred within an atmosphere of economic, fiscal and political pressures for the president to undertake industrial policy and economic reform (Usman, 2016). Dangote influenced a willing federal government to enact the Backward Integration Policy (BIP) which assembled a range of industrial policy tools. However, Fawehinmi (2017) has accused Dangote of extracting unproductive monopolistic rents and not paying its fair share of taxes. Indeed, Dangote Cement realized net profit margins of 50 to 80% consistently between 2010 and 2016, yet with an effective tax rate of just 2% in 2016 due to the company taking advantage of the government’s fiscal incentives (Itaman & Wolf, 2019, p. 14).

Aliko Dangote implicitly justifies this by arguing that sometimes the company pays more in corporate, education and VAT taxes to the government than it pays to its shareholders in dividends (Channels Television, 2019). Another argument is that aside from corporate taxes which critics focus on, it pays a lot to the government as duty levies and VAT payments in the course of its economic activity (Kintum, 2002, p. 5). Moreover, despite receiving industrial policy rents and tax advantages, subsequent growth of the Dangote Group seems to be organic, with the company realizing economies of scale and scope. (Behuria, 2019, p. 16; Itaman and Wolf, 2019, p. 14-16).

During the importation era, Dangote built capabilities from importing various products, and accounted for 46% of the bulk cement market in the country (Mobbs, 2004, p. 2). The president enabled Dangote to invest in cement production by favouring Dangote Industries Limited (DIL) in the privatization of the Benue Cement Company (BCC) which Dangote purchased and revamped, gaining entry into the cement manufacturing market in this manner.

Hence, in 2001 DIL received a license for local manufacturing capacity as it acquired 35% shareholding during the BCC privatisation exercise; it then acquired the federal government’s majority 65% equity in the Benue Cement Company (BCC) in 2004 (Chijindu et al., 2016, p. 33). The BCC’s capacity utilisation was largely below 50%, and the plant’s obsolescence brought about frequent maintenance challenges (Chijindu et al., 2016, p. 33). As a result, Dangote Cement substantially rehabilitated the plant and boosted its capacity from 900,000 tonnes to two 1.4 million tonnes lines. The Dangote Group also built the Obajana cement plant in Kogi State (Mobbs 2004, p. 3).

Although the state was able to provide import bans and tariffs (which are less difficult to enforce for cement, due to its high weight-to-value ratio), it was unable to implement heavier industrial policy tools. Therefore, Dangote’s foray into the cement industry has not been a



smooth process. The construction of the Obajana plant “was almost the end of him” (Bishop, 2017, p. 25). Dangote had to overcome several significant coordination problems which the state was unable to solve. As Wallis (2008) notes, “even for the best-connected tycoon, the state can be an unreliable partner.” Back in 1978, the state had promised to build a gas pipeline to power the area but this never occurred (Bishop, 2017, p. 26). Dangote therefore had to finance a 180km gas pipeline, an independent power plant and build a dam (Wallis, 2008).

Yet this is not without compensating industrial policy support. The construction of the Obajana factory ran into cost overruns, and Dangote was in dire need of more funds (Bishop, 2017, p. 6). As a former minister and a member of Obasanjo’s economic team makes known, “[Dangote] would not have been able to setup the Obajana cement company if the federal government hadn’t given him a loan guarantee of \$1.5 billion.” (Usman, 2016, p. 44).

In addition to this, the former group Managing Director of Dangote Cement Plc, Devakumar Edwin, noted that whereas businesspeople complain about a lack of infrastructure in Nigeria, “the law provides pioneer status tax concession and capital allowance” (Osagie, 2015). For the Obajana Cement Plant, which is the largest cement plant in Africa, he notes the necessity to build a gas pipeline, a dam, housing infrastructure, telecommunication facility, a three-kilometre by-pass road, and a gas turbine-based power plant (Osagie, 2015). He further emphasizes that:

Yes, we had to massively invest in infrastructure but the law permits to capitalise these investments and claim capital allowance. Hence, instead of...complaining that the government is not providing infrastructure, the investors should avail the tax benefits and concessions provided under the law and invest in the required infrastructure (Osagie, 2015).

Nonetheless, the assumption is that the investments will be highly profitable to compensate for the risk. This last assumption is manifest in the statement that:

If you need superb infrastructure readily available, you should go and invest in Europe or US but, you would get 3% to 5% returns whereas, here you will get better returns. As such, you have the option either to invest in countries where everything is available but gives you minimum returns or invest here where you have to make a provision in your project cost for infrastructure but get better tax benefits and better returns (Osagie, 2015).

This combination of private infrastructure-building and seeking industrial policy support is not coincidental, but a deliberate strategy. As Dangote claims:

We knew that everyone who had tried industrialization in Nigeria pre-1995 had gone out of business. So, we took a deep look at the impediments, and we realized that there were two major problems that were making manufacturers fail. First, there was no reliable electric power. Second, there were major inconsistencies in government policies (Leke et al., 2018, p. 134).



To address these risks the Dangote Group underscored the necessity of building both infrastructure and close relationships with the state (Leke et al., 2018, p. 134).

With regard to organizational capabilities, vertical integration from raw material sourcing to production and distribution ensures the resilience of its supply chain (White & Rees, 2018, p. 7). Stakeholder engagement further allows the firm to create the right partnerships and agreements (Camarate et al., 2015, p. 14). Diversification has therefore been deliberate, as Dangote claims that “There’s no sector that’s permanently healthy...If today cement is excellent in Nigeria, it might not be in the next five years. So, we’re fully diversified across different products, as well as downstream, midstream, and upstream” (Leke et al., 2018, p. 139).

This tendency has always been the company’s strategy from the beginning. As Dangote narrates, “We spent almost two years from 1978 to 1979 importing cement to Nigeria and when the cement climate went bad, we focused on sugar and didn’t revisit cement till 2000.” (Ekwueme, 2016, p. 6). In other words, within the volatile business environment, diversification is done both for survival and to exploit opportunities, as is found to be the case with several African diversified business groups (Behuria, 2019, p. 17; Leke et al., 2018, p. 140).

Since transportation expenses are important in the cement business, vertical integration also occurs in the distribution aspect of the business; hence the Dangote Group operates the largest fleet of trucks in Africa with over 10,000 trucks deployed for logistical activities, distributing a variety of products across the continent. (Adewole, 2019, p. 29). The company manages this diversification by operating a fully integrated supply chain model, entailing the management of the supply chain as a single entity and ensuring the flow of information across the entire system (Ivanov, 2019, p. 20) – a feat which is possible with information technology (McKinsey & Company, 2015) and which makes it resilient to shocks in its supply chain (Leke et al., 2018, p. 144).

Additionally, Dangote Cement exports to other African countries, although by 2017 Nigeria accounted for 68.6% of total sales (MarketScreener, 2019). Dangote suggests that his planned expansion across Africa – and beyond – is motivated partly by a need to spread exposure – “The risk of having too many assets in one market is certainly a driver.” (Wallis, 2018). Part of this is possibly driven by the inability of Dangote to completely control the flow of rents, which arises due to the competitive clientelism characterizing the country. This is evinced by the 2008 policy inconsistencies of banning and unbanning cement/clinker importation at different times, and attempting controls on cement prices. Other inconsistencies have been companies found to have been granted importation licenses without evidence of building manufacturing plants, the imposition of additional levies on bulk cement, unstable energy provision, and Dangote Cement facing import competition by the leading importer, Ibeto Cement (Ohimain, 2014, p. 75). In fact, the former Managing Director of Dangote Cement explicitly notes that

Essentially, our business models never depend on any government protection ... This focus on risk analysis and a business model independent of government protection proved to be good since, when Yar’adua government came, it totally opened up the importation of cement ... It happened just as we had commissioned the Obajana Cement Plant. If our business model had been based on the assurance of government



protection in the form of import restriction or anti-dumping duty, we would have been wiped out and, probably, we would have been out of the cement business! (Osagie, 2015).

These challenges faced by Dangote Cement are reflected in the high costs of domestic cement production, and the volatility of cement prices (Ohimain, 2014, pp. 75-76).

Dangote says expansion is being financed by profits so that, when it's completed, "we'll not owe any bank money." (Cocks, 2012). This is unsurprising given the difficulties in accessing long-term credit at affordable rates of interest in Nigeria, and the inability of the Central Bank of Nigeria and development finance institutions to sustainably address this. This has put a focus on equity financing, with Dangote Cement's debt ratio being very low (Obilomo & Ojo, 2013, p. 2) despite its undertaking of the largest investments in the industry. According to the former Managing Director of Dangote Cement,

One of the reasons why we make a rigorous risk analysis before we make any investment is because most of the funds come out of the President's pocket ... Obviously, he would not like his investments to be wiped out because of a mistake we make in investment planning. As such, we do not invest in a business unless we are really sure of the survival of the business irrespective of all the potential problems which we are likely to face (Osagie, 2015).

In the long-run, further progress requires more comprehensive industrial policies. For instance, the stubbornness of the price of cement to fall even as domestic production capacity expands is the result not purely of an oligopolistic market structure, but of structural supply-side factors which require the state to address, such as transportation infrastructure, energy and power supply (Fiakpa, 2008).

The Downstream Oil Sector

During the oil boom of the 1970s, the government made huge investments in the industrial sector, including the establishment of four state-owned oil refineries. Although the country produces a maximum of 2.5 million barrels of crude oil per day (bpd), its four oil refineries only have an installed refining capacity of 445,000 bpd – less than 20% refining capacity of overall crude oil produced (Ogbuigwe, 2018, pp. 181-182).

In 1977 the state-owned company, the Nigerian National Petroleum Corporation (NNPC), was created and was tasked managing the oil refineries. The figure below shows that while domestic production of refined petroleum products rose during the 1980s, it entered into decline at the end of the 1990s.

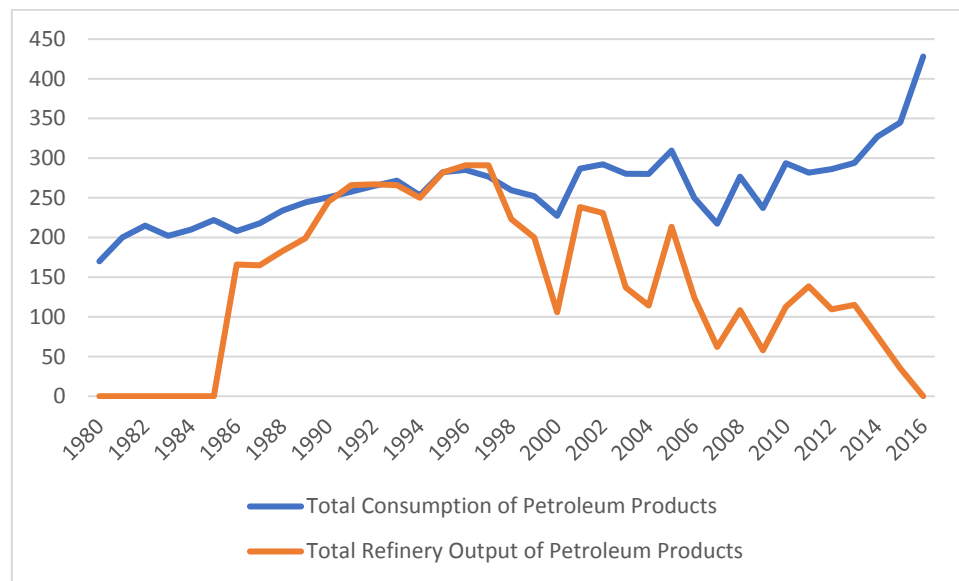


Figure 4: Nigerian production and consumption of refined petroleum products (Energy Information Administration, 2019)

The state-owned refineries are beset with several problems. No major Turnaround Maintenance (TAM) has been undertaken in any of the refineries since 2000 (Ogbuigwe, 2018, p. 183). One key problem besetting the refineries relates to the supply chain. There is frequent vandalism of pipelines transmitting refined products from refineries and those supplying crude to refineries (Ogbuigwe, 2018, p. 183). About 53% of unplanned shut downs is estimated to be due to supply chain problems in 2009, while equipment failure made up 47% (Ogbuigwe, 2018, p. 188). As Roy (2017, p. 33) and Usman (2016, pp. 34-39) note, oil bunkering and sabotage sustain vertical redistributive demands and powerful elites in the producing areas, in addition to the oil companies. The use of ships to transport crude to the refineries in order to address the challenge has been attempted, but it is about 249% more expensive (Sayne et al., 2015, p. 33; Wapner, 2017, p. 8).

The government has tried to repress oil saboteurs and militants through forceful means, but with little luck especially given the unfavourable terrain of the Niger Delta. Its attempts at co-opting the by offering side-payments in the form of developmental projects through the Niger Delta Development Commission (NDDC) in 2000 and the Amnesty programme in 2009 have not had sustainable outcomes due to corruption and mismanagement (Omotola, 2007; Ushie, 2013), reflecting a lack of control over higher- and lower-level elites.

The inefficiency of the refineries is manifest in the persistently low (less than 10%) and decreasing capacity utilization over time (Wapner, 2017, p. 9) and financial losses (BudgIT, 2019, pp. 4-6). While billions of naira have been put into improving the operations of these refineries, the results have been disappointing (Udo, 2019).

In 2002 the government issued 18 licenses for private refineries (NNPC, 2019). However, in 2005, the NNPC launched its Greenfield Refinery Initiative (GRI) “as a strategic response to a lack of visible progress” on the 18 licenses (NNPC, 2019). By 2011, there were government plans for building three new refineries in Lagos, Bayelsa and Kogi states to raise refining



capacity to 400,000 bpd (NNPC, 2019); but these were later abandoned (BudgIT, 2019, p. 11). The National Refineries Special Task Force launched in 2012 discovered that out of 35 investors given licenses to establish refineries by that time, 28 lacked the capacity to do so (Punch, 2018).

In 2001, Amakpe International Refineries Ltd had planned to be the country's "first privately held and privately financed oil refinery" by building a 12,000-bpd refinery in Akwa Ibom State (Oil & Gas Journal, 2001). It failed to take off, had its license expired in 2007 (although it renewed multiple times thereafter). It was then taken over by the Assets Management Corporation of Nigeria (AMCON) in 2016 over defaults on bank loans (Akpan, 2019), although it is still working to build a 6000-bpd modular refinery under AMCON administration (Awosiyan, 2018). Of the 23 modular refinery licenses issued, only the Niger Delta Petroleum Company (NDPC) was commissioned in 2011. This plant, the 1,000 bpd Ogbele Diesel Plant, expanded over time to a 10,000-bpd capacity plant, but has not really transformed the industry (BudgIT, 2019, p. 9). The lack of usage of refining licenses has been attributed to bureaucratic delays (indicating inadequate political influence among players), lack of funding for the private initiatives, technical incompetence and difficulties in securing competent technical partners (indicating lack of adequate organizational capabilities and resources) (Baffour, 2013; Okere, 2016; Onyekwelu, 2019) as well as limited energy infrastructure and a regulated petroleum products market (Nkaginieme, 2005).

At the close of President Obasanjo's administration, the Bluestar Oil Service Limited Consortium (in which Dangote Industries Limited held a 55% stake) paid for a 51% stake in the state-owned Port Harcourt and Kaduna refineries in 2007 (Osae-Brown, 2017). The consortium planned to build a 300,000-bpd refinery in Lagos, and President Obasanjo even expedited approval to build the \$250 million refinery in Lekki Free Zone of Lagos (Galadima, 2006). In response to the attempted privatization, organized labour protested. In a nationally-strategic sector which faces high vertical redistributive demands (Otokunefor, 2017; Usman, 2016), organized labour argued questioned the transparency of the sale, alleged that the refineries were under-priced (Biniyat, 2007), and argued that job losses would be experienced. The consortium eventually backed out. Ultimately, the privatization process was reversed under the succeeding administration of President Umaru Yar'adua in response to public pressure. Nonetheless, the Dangote Group, since the 2007 refinery sale debacle, continued to plan on building its own refinery (Lacqua, 2017). Eventually, profits from its cement and other operations provided it with ample cash flow to undertake the refinery project, which was announced in 2013 initially for a 400,000-bpd refinery, and eventually "jumped to" 650,000 bpd refinery, and begun in earnest in 2015 (Lacqua, 2017).

Therefore, both attempts to eliminate fuel subsidies and to privatize the refineries have been consistently met with public backlash – reflecting contestation from strong vertical elites and clients within the industry (Usman, 2016). Yet, the difficulty in maintaining a pocket of efficiency within NNPC precludes the success of revamping the refineries, as the many attempts since 1999 have shown. Private investors have furthermore had inadequate capacity to build refineries especially given the constraint of regulated fuel pump prices. Only Dangote Industries Ltd. has been able to build the capacity to undertake the ambitious project of building a \$15 billion 650,000 bpd refinery in Lagos State, scheduled for mechanical completion by the end of 2022.



Dangote reveals that the inadequacies of the road networks for the transportation of needed equipment necessitated the incurrence of the cost of developing certain roads (Edozien, 2018). Likewise, a special port and jetty had to be constructed due to the inadequacy of all the Lagos Apapa port (Pilling, 2018); the same for the construction of quarries (Munshi, 2018).

Two 550-kilometer underwater pipelines to transport oil from Delta to the Lagos refinery also needed to be constructed (Edozien, 2018). This would enable the firm to evade oil bunkering politics which the state has been unable to pacify (Edozien, 2018) in the Delta area and avoid the high costs of the alternative of using ships. The company also has to build its own industrial gas plant and power plant, as well as produce its own trucks (through a joint venture with a Chinese company) (Pilling, 2018). In other words, as the Group Executive Director, Strategy, Portfolio Development and Capital Projects, Dangote Industries Limited, Devakumar Edwin noted, "I would say that the cost of money spent to put infrastructure in place that would support this project is between 20 to 25% of the total cost of the investment. But there is also another issue. If we do not invest in infrastructure, the challenge of developing the project would be bigger." (Sunday, 2019).

Not only does the refinery construction benefit from the Dangote Group's financial and administrative capacity, it benefits from its diversified nature, with the refinery construction being a big customer of Dangote Cement, using Dangote trucks as well (Metclaf & Pendleton, 2019).

However, Dangote has also benefited from some industrial policies in building the refinery. The refinery is being built in the Lekki Free Trade Zone (LFTZ), authorized by the Nigeria Export Processing Zones Authority (NEPZA) (World Bank, 2012). Dangote Oil will benefit from simplified and expedited services on bureaucratic matter such as visas and customs services, and concentrated transportation infrastructure provision around the surrounding area (Oxford Business Group, 2019). Yet as at 2015 the IFC (2015) noted that "For the most part though, the LFTZ is presently undeveloped, aside from a few small industrial facilities and an internal road network". Incentives also include rent-free land at construction stage and pro-business labour policy (Oxford Business Group, 2016b).

The Free Trade Zones (FTZs) were created in recognition of the low state capacity for broader infrastructure provision. As the Managing Director of NEPZA says, "Power, water and even a functioning road network are not guaranteed nationwide. The decision has been made to empower free zones to create oases of great infrastructure" (Oxford Business Group, 2019).

Yet despite Dangote's investment in infrastructure, port and road congestions have led to delays in completion of the refinery project (Whitehouse, 2019). Nonetheless, faced with the challenge of oil subsidies backed by powerful vested interests, many analysts acknowledge that "Past efforts to build refineries have often been delayed or cancel[led], but analysts have said Dangote should be able to build a profitable Nigerian refinery, owing to his past successes in industry and his strong government connections." (Cocks, 2013).



CONCLUSION

Among many scholars of industrial policy there has been a tendency to generalize “state capacity” and hence argue that “government failure” requires either ‘minimal’ state involvement. The pockets of efficiency literature provide a useful counter-framework, and when nested within the elaborated political settlements theory which highlights a nexus between pockets of bureaucratic efficiency and capitalists’ technological capabilities, more nuanced and complex analyses of industrial policy may be undertaken. The interface between pockets of efficiency and firms’ policy-adaptive capacity becomes more important when the former exists only partially. This has been demonstrated through a comparative case study of Nigeria’s 21st century cement and oil refining industries.

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