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DANGOTE GROUP: BUILDING AN AFRICAN MULTINATIONAL CONGLOMERATE

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"I want to make Dangote Industries a $100 billion company."
- Aliko Dangote

In 1978, Aliko Dangote, who came from a family of entrepreneurs, established his own trading business in Kano—his home region—and moved to Lagos when he was only twenty-one years old to continue growing his business. During the next decade, Dangote built the largest trading business in Nigeria, importing basic commodities into the country (sugar, salt, flour, pasta, baby food, cotton, cement, etc.), encouraged by the liberalized commodity import regime of the Government of Nigeria, while at the same time exporting cashew nuts and gum arabic.

Nigeria had been producing oil since 1958 and by the 1990s, it had a heavily oil-dependent economy. Oil sucked up domestic and foreign investment at the expense of other sectors of the economy; as a result, Nigeria's significant manufacturing sector collapsed, forcing Nigeria to import all kinds of basic commodities, despite the country's natural wealth.

Dangote benefited from Nigeria's import growth and, by the late 1990s, his trading business was well established and quite profitable. He was wondering what to do next and where to put the group's ample financial resources to work. He invited his top management team to a weekend strategy retreat, facilitated by the consulting firm Arthur Andersen, where they collectively evaluated where to invest the company's resources.

Despite some initial doubts, they concluded that it was the right time to get into local manufacturing. Nigeria's internal demand and population were growing rapidly, the country had no shortage of raw materials, and the unstable nature of Nigeria's currency, the naira, meant that accessing foreign currency for imports was often a challenge. Therefore, the management team believed that producing certain goods in Nigeria would make a lot of strategic and economic sense not only for the group but for Nigeria and the Nigerian government as well.

Unfortunately, the track record of Nigerian industrialists was poor, and many ventures had failed, despite a strong and growing demand for their products. Dangote wanted to make sure he was successful in his new venture, so he asked Arthur Andersen to analyze why prior industrial endeavors had failed. Together with the consultants, Dangote management concluded that there were two key reasons for it: poor power supply and inconsistency in the Nigerian government policy.

The company strongly believed in the opportunity of localizing the production of some of its imported commodities, particularly sugar, flour, and cement. However, Dangote paid heed to the consultants' recommendations and knew they had to address those issues if they wanted to be successful.

Over time, the group built manufacturing businesses in textile, flour milling, pasta production, sugar processing, and salt processing. However, it was the decision to go into cement manufacturing that catapulted Dangote to the global stage.

THE ORIGINS OF DANGOTE CEMENT

It was the first week of May of 2020 and Lagos was returning to work at the end of a five-week Covid-19 lockdown. Cars were back on the road and tower cranes were busy lifting huge concrete buckets all over the city.

Lagos was growing very fast, and Dangote Cement, one of the subsidiaries of Dangote Group and Africa's largest cement manufacturer, played a major role in that growth.

Aliko Dangote, founder of Dangote Group and Africa's richest man, and his management team were reviewing the plans for their next wave of expansion across Africa. The company had made tremendous progress since its founding in 1992, and it now has operations in ten African countries. With the completion of the new projects in Ivory Coast, Gabon, Togo, Niger, and Liberia, its footprint will grow to fifteen countries across Africa. The new projects are particularly critical, as they will offtake surplus clinker from the excess production capacity in Nigeria. With the lifting of the Covid-19 lockdown, it was just putting finishing touches to commission the 8-million-ton clinker export facilities it had built in the ports of Apapa and Onne in Nigeria.

Previously, the preserve of multinational cement producers included companies like Swiss LafargeHolcim and German HeidelbergCement. Dangote Cement forayed into the industry to compete for sub-Saharan Africa's lucrative and growing cement market. Taking on the multinationals was not easy, but Aliko Dangote was a fighter and was ready to take on the giants.

THE CEMENT INDUSTRY IN NIGERIA

By the 1990s, Nigeria was a net importer of cement and the demand for it was growing rapidly, fueled by the dictates of the oil sector, demographic growth, and the urbanization of the country.

There were some small and inefficient cement plants scattered around the country – most of them government-controlled – that were clearly unable to meet the country's demand for cement. Despite the clear demand gap, no local or foreign company wanted to set up a cement plant in the country. Lafarge had a ~2m tons capacity plant 200 kilometers from Lagos. However, the company opted to import its supply shortfall from its global trading arm rather than risk capital in capacity expansion. Cement production requires huge long-term investments and is one of the most energy-intensive of all manufacturing industries. Nigeria's erratic public policies, the lack of government support, and the country's poor and unreliable power supply made companies hesitant to commit capital in building local cement production capacity.

Dangote Cement took advantage of the rapid increase in cement imports and by then was the uncontested market leader, helped by the acquisition of a dedicated import terminal at the port. This was usually a critical bottleneck when importing cement, but Aliko Dangote foresaw that the port infrastructure would not be able to handle the volume of cement import required to meet the country's growing cement consumption, so he knew local cement manufacturing had to happen sooner rather than later. Cement is a relatively affordable and bulky product; it made tremendous sense to manufacture it locally, given that Nigeria had ample access to raw materials (most importantly, limestone).

In 1999, General Olusegun Obasanjo was elected president of Nigeria. He understood the need to diversify the Nigerian economy away from the oil and gas sector and reduce the country's growing dependence on imports if Nigeria were to develop economically. Not long after the election, Obasanjo called Aliko Dangote and summoned him for a meeting. The president wanted to know why Nigeria could not produce cement and was instead importing massive amounts of it. Aliko Dangote told him it was more profitable to trade than to produce. Only if imports were restricted would it be worthwhile. Obasanjo agreed[1].

Shortly after that conversation, President Obasanjo's government adopted the backward integration policy (BIP) for the Nigerian cement industry that sought to make Nigeria self-sufficient in cement production by incentivizing the development of local production and restricting the importation of cement into the country. As part of the BIP, the government banned firms from importing cement unless they also set up production plants in Nigeria. Furthermore, the government promised to ban all cement imports once the country was self-sufficient. This policy planned to provide attractive incentives to any foreign or local firm that wanted to invest in the sector; while a number of companies invested in local manufacturing, Dangote was clearly the more aggressive risk taker and did not hesitate to make a multibillion-dollar bet in the cement manufacturing sector.

In addition to this, local manufacturers had access to a wider range of incentives under the pioneer industry scheme (a common infant-industry protection measure in many countries that provided critical support for local manufacturing ventures). In place since 1971, this scheme encouraged the growth of local production by granting qualifying industries and products relief from payment of corporate income tax for an initial period of three years, extendable for one or two additional years.

Lastly, during the period 2002-2004, the federal government, as well as some regional and state governments, sold its shares in all cement companies in Nigeria as part of a broader privatization program. Many local and multinational firms bid and, as part of this privatization, the Dangote Group acquired a controlling interest in the Benue Cement Company (which was subsequently merged with Dangote Cement in 2010).

While the then 800k ton Benue cement plant was in serious need of refurbishment and modernization, it gave Dangote Cement a perfect platform to learn and grow.

The BIP was by all accounts a resounding success, thanks in no small part to Dangote Cement. The privatization of government-owned plans revitalized the sector, unlike other sectors in Nigeria, like the iron and steel sector, which could not be salvaged despite privatization. Domestic effective capacity had fallen from ~5m tons to ~2 million tons by 2002. On the back of the BIP, this had grown to 48 million tons by 2020 (led by three large players: Dangote Cement, LafargeHolcim, and BUA Cement). With local demand in Nigeria currently at 22 million tons annually, the country has become a net exporter of cement (see **Exhibit 1** for details of cement imports, exports, and production capacity in Nigeria). Cement has gone from being a serious drain on foreign exchange to a generator of foreign currency for the country.

DANGOTE CEMENT EXPANSION

> *"We want to be a continental brand, and we are aggressively investing in many African countries. We will continue to expand our presence in Africa in order to consolidate our position as the leading cement producer in Africa."*
> - Aliko Dangote

Dangote Cement has come a long way since that fateful strategy retreat. Currently, the company is present in 10 African countries and they are the largest cement producer in Africa (see **Exhibit 2** for a timeline of their expansion).

They have a total production capacity of 48.6Mta and a leading market share in many of the markets where they operate, from Senegal to Ethiopia and from Nigeria to South Africa (see **Exhibit 3** for details of their country operations).

[1] "Aliko Dangote, Africa's richest man, on his 'crazy' $12bn project," Financial Times, July 11, 2018 https://www.ft.com/content/50f53eac-8370-11e8-96dd-fa565ec55929

Their strong cash generation in Nigeria, due to solid and profitable operations- aided by tax holidays that gave the Group cash to reinvest in the business-, has funded their expansion both within the country and in sub-Saharan Africa.

Despite the existence of strong incumbents in most markets where the Group operates, they have rapidly gained substantial market share soon after their plants were opened (see **Exhibit 4**). Their size, strength and integrated business model has allowed Dangote to do well in a regional cement market that is characterized by smaller-scale producers, many of which are using older technologies.

Their expansion follows a relatively straightforward blueprint. They search for opportunities in markets that fit specific criteria (see **Exhibit 5** for details of Dangote's expansion criteria). Once a market is selected, they enter through a proven business model.

THE DANGOTE BUSINESS MODEL

PRODUCT POSITIONING

"We can be considered a disruptor in our industry because we focus on producing the best product at the lowest cost and backing it with good service and logistics."
- DVG Edwin, Group Executive Director, Projects & Business Development.

Dangote aims to be the leader in costs, quality, and service in every country where it operates. To achieve that, it builds large, modern, and highly efficient plants that enable it to make higher-quality cement at lower costs and invest in distribution networks to improve its go-to-market capabilities.

Dangote focuses on maximizing output, enabling it to improve margins (it has an industry-leading EBITDA margin of ~45-50 percent), strengthen its balance sheet, and generate funds to reinvest back into the business.

Its focus on high-quality and low-cost cement gives Dangote Cement a unique competitive advantage in all the markets where it operates. However, Dangote avoids competing on price, preferring to offer a better-quality product at the same price as rival offerings.

Dangote's plants are designed to make higher-strength cements (such as 42.5 and 52.5 grades) that will increasingly be required as the size and height of buildings increase in Africa's growing economies that are becoming more urbanized. As a result of this, the company can compete successfully in markets that appear to be already saturated.

In Senegal, for instance, Dangote entered a market that had overcapacity, as there were already two cement producers in the country. However, the incumbents were producing a lower quality cement (32.5R), and Dangote saw a chance to disrupt the market by producing and distributing a higher-quality grade of cement (42.5R) at the same price.

According to Luk Haelterman, Country Head of Dangote Industries in Senegal:

"It's a saturated market with Dangote being the third entrant in the market after two other cement manufacturers. What has kept us going is the competitive edge that our 42.5 grade of cement has given us in offering consumers fine quality of cement."[2]

The overcapacity in Senegal does not represent a challenge, as Dangote is able to export excess production to neighboring countries like Mali or The Gambia.

[2] Business Hallmark-" As Dangote Transforms Nigeria into an Export Nation", April 14th, 2015 https://hallmarknews.com/as-dangote-transforms-nigeria-into-an-export-nation/

Furthermore, the size of the Dangote Group allows it to achieve substantial advantages in logistics and procurement, investing in strong distribution capabilities at costs unattainable by smaller and less financially strong competitors.

TECHNOLOGY

"*We do not spare expense when paying for the best technology. This is our strength; we do not compromise on obtaining the best technology in any of the manufacturing businesses we are involved in.*"
- Aliko Dangote

Technology is at the forefront of Dangote's business model. It aims for a very high-efficiency and low-cost operation and because of this, it needs to employ state-of-the-art equipment. This gives it a strong competitive advantage over incumbents with old technologies, old plants, and high operating costs.

Despite a strong cost culture, Dangote opts for European equipment for its plants. It spares no expense in incorporating various cutting-edge technology in its cement plants. For example, RoboLab for automatic sampling to ensure quality, auto-loaders for fast loading of cement into trucks, fuzzy logic to guide operators using expert systems, etc. It then uses Chinese companies to build the plants to save on construction costs. The company has formed long-term partnerships with leading providers, like China's Sinoma as their main EPC contractor and German companies like Loesche and Haver & Boecker as cement equipment suppliers. For electric motors and turbines, it has partnerships with General Electric and Siemens.

BUSINESS INTEGRATION

Dangote Cement's high degree of value chain integration has become a very distinctive and unusual characteristic of the company (see **Exhibit 6** for an illustration of their value chain positioning).

RAW MATERIALS

Limestone is the main raw material used in the production of cement. Globally, cement plants tend to be located where there is limestone. Dangote owns and operates limestone quarries around all its cement plants and also operates other raw material mines wherever it can (e.g., it has its own coal mines in Nigeria, its own pozzolana mines in Cameroon, and its own clay mines in Senegal).

Where it is not possible to operate its own mines, other raw materials are either bought from local suppliers or imported. In Nigeria in particular, Dangote imports many of these materials directly (such as diesel, for instance).

POWER

Dangote, acting on its advisors' findings, produces its own power. The cement production process is highly energy-intensive and energy costs in cement manufacture constitute almost 40 percent of the total cost. Even to this day, electricity supplies are unreliable and very expensive in Nigeria (and across sub-Saharan Africa). Many firms rely on generators for their own power. Nigeria's electricity firms, which are meant to serve the country's 200 million inhabitants, produce about as much power as the city of Edinburgh, with a population of barely half a million[3].

Dangote Cements builds dedicated power plants for all large cement plants, except in countries with a robust power sector (e.g., Ethiopia, South Africa, Congo Republic) or where the plants are too

[3] The Economist- "Muhammadu Buhari has big ambitions for Nigerian manufacturing," May 30, 2019 https://www.economist.com/middle-east-and-africa/2019/05/30/muhammadu-buhari-has-big-ambitions-for-nigerian-manufacturing

small to justify such an investment (e.g., Cameroon, Ghana, Sierra Leone). As a side business, Dangote tries to sell excess power to the grid in Nigeria, Senegal, and Zambia.

An interesting aspect of Dangote's cement plants is that they have been designed with the flexibility to use coal or gas. This allows decisions on fuel choice to be made based on availability vs. cost-effectiveness.

The group knows that fuel supplies can be disrupted, which happened with its gas supplies some years back. This drove it to adopt a coal mining strategy in Nigeria. In fact, using coal it mined itself not only improved the group's fuel security but also helped it to reduce its foreign exchange risk.

PACKAGING

Dangote also produces the packaging materials required to sell its cement. Bag-packing units are usually located at its own cement plants. Dangote has been producing bags since 1998 when the group established a subsidiary called Dangote Agro Sacks. This company is one of the largest in the world with production capacity of over 600m 50kg bags. The company supplies its sister companies with bags and uses any spare capacity to produce bags for the market.

In fact, Dangote Agro Sacks is a good example of Dangote's approach to vertical integration. In many cases, businesses are started to meet the production and commercial needs of a group's operations, but their output is also sold to external customers should there be a compelling business opportunity.

LOGISTICS

Dangote Industries, with more than 12,000 trucks, has created the largest delivery fleet in sub-Saharan Africa. It buys and operates its own fleet for raw materials and cement delivery because in many countries there is no reliable third-party logistics capacity, so having its own fleet helps it reach its customers more effectively. Having its own logistics also allows Dangote to offer its distributors additional incentives through subsidized transportation costs and faster delivery. This compensates for a higher selling price while being opaque to the competition.

In certain (limited) cases, third party trucks are contracted for capacity smoothening, when available, and some customers also bring their own trucks to collect cement from the plants.

Dangote has taken this vertical integration to the next level by setting up a $100 million truck assembly plant in Lagos. This plant was a joint venture between Dangote Industries (65 percent) and the leading Chinese manufacturer, SINOTRUCK (35 percent). The plant has the capacity to produce up to 10,000 trucks per annum.

This investment is fully aligned with Dangote's integration strategy. The group spends millions of dollars annually to import trucks to distribute products in Nigeria and across the continent. This move provides the group with a cost advantage by reducing unit truck costs relative to imports.

THE BUSINESS LOGIC

While this vertical integration approach goes against conventional management thinking, which encourages companies to stick to their core competencies, it addresses many of the challenges of doing business in Africa, particularly, the substantial market failures in certain critical segments of its value chain.

If Aniko Dangote believes he can do something in-house more efficiently than the market could, he will not hesitate to do it. Business integration is the default approach at the group and typically arguments have to be made against it.

GOVERNMENT RELATIONSHIPS

"If you want to do business, you have to foster a good relationship with the government of the day. If you don't, how do you expect the government to listen to your complaints?"[4]

- Aliko Dangote

Aliko Dangote, like other successful African entrepreneurs, has been accused of being too close to Africa's political class. In fact, he does not have any qualms about it and knows that he needs to actively lobby African governments to protect his group's interests and get the fiscal and economic incentives required to make the long-term investments he favors. Dangote Industries has built strong relationships with successive Nigerian governments and many other African governments. The group has worked with governments across Africa to make investments and build new plants that bring local jobs and economic development in exchange for investment incentives in the form of tax holidays and access to key raw materials (e.g., limestone or natural gas). He is listed as no. 66 on Forbes list of "The World's Most Powerful People."

However, Aliko Dangote is not shy to confront governments when he feels he is not being treated fairly.

He fought the Nigerian government in the privatization process of the Benue Cement plant when, after winning the public bid, the government tried to go back on the deal. Aliko Dangote stuck it out: "I refused. If I'd allowed somebody else to buy Benue, they would have used it to kill me in the market." After forty-two months of delay, the government finally transferred the plant to Dangote Cement[5]. By then, the plant was in very bad shape and saddled with a debt of N1.6bn. Similarly, he had a spat with the president of the Republic of Benin who initially refused to allow Dangote trucks to transit through his country on their way to Togo and Ghana from Nigeria. A truce was only achieved when Dangote agreed for the government of Benin to install trackers on the trucks to monitor their movement during transit and ensure they do not deviate from their route to sell cement in his country.

He also fought the government in Cameroon when they stopped the construction of the Dangote Cement plant in Douala, claiming that the land had religious significance for the local community (interestingly, a government minister was the chairman of Dangote's main competitor). But Aliko Dangote didn't back down and succeeded in building a $150 million plant.

His public condemnation of President John Magufuli of Tanzania (more about it below) is the latest episode of an entrepreneur who works with governments across Africa to shape policy and create the right investment environment for manufacturers. He is not afraid to confront those politicians that do not hold up their end of the bargain.

CASE STUDY: TANZANIA

"Our problems in Tanzania continued until November 2018, when we finally got our gas turbines running to replace the expensive diesel generators we had been using."

- Joseph Makoju Mni, past Group Managing Director, Dangote Cement

Dangote Cement's entry in Tanzania offers an example of the challenges many manufacturers face in Africa and what happens when Dangote Cement does not or cannot stick to its strategy.

In February 2016, Tanzania's cement market was transformed by the entry of Dangote Cement's 3.0Mta factory in Mtwara, on the south coast of Tanzania. The plant is the largest in the country and has about 600 million tons of limestone reserves, enough for 149 years, and can produce large amounts of high-quality cement to meet the growing local cement demand, as well as surrounding

[4] The Economist- "Cementing a fortune", June 23rd 2012- https://www.economist.com/middle-east-and-africa/2012/06/23/cementing-a-fortune

[5] "Africa's Business Revolution: How to Succeed in the World's Next Big Growth Market," A. Leke, G. Desvaux & M. Chironga, Harvard Business Press, November 2018

export markets by sea. While it is 560 km from the key market of Dar es Salaam, Dangote's 600-truck fleet is able to serve the national market efficiently.

The abundance of natural gas around Mtwara, where Dangote's plant is located, was a strategic factor in the decision to locate the cement plant in the area. Dangote was able to secure certain concessions from former Tanzanian President Jakaya Kikwete (2005-2015), whose administration provided foreign companies with economic and fiscal concessions to attract investments and create jobs in Tanzania. Due to political pressures, the cement plant went live before the accompanying power plant was completed.

The government promised to supply Dangote's plant with natural gas at reduced prices along with other incentives. However, the newly elected government of President John Magufuli refused to honor the agreement with Dangote and imposed further restrictions on the company (such as prohibiting the importation of coal). In fact, President Magufuli's administration engaged in an open public crusade against many foreign businesses.

The lack of an agreement on gas supply forced Dangote Cement to use temporary diesel generators to power the plant, as there is not enough grid power in the area to keep the plant running, and that affected the production and margins in Tanzania quite badly. Dangote was able to reach an agreement with the government and install gas turbines in late 2018 and reverse the negative trend. The Tanzanian operation became profitable in mid-2019.

LOOKING AHEAD

"As the Group looks to its next wave of growth, the need for geographical diversification and the trade-off between economies of scope vs. economies of scale is one of our key strategic questions."
- Aliyu Suleiman, Group Chief Strategy Officer

Dangote Cement's strategy appears to have worked very well, despite some glitches and setbacks. The extraordinary results to date speak for themselves. It is now the largest company in Nigeria, the twentieth-largest company in Africa (and one of the most profitable ones), and the tenth-largest cement player in the world. It is also the flagship business of Africa's largest conglomerate.

However, Dangote's approach was an extremely capital-intensive way of growing its cement business. In addition to its core business of producing and selling cement, the cement business is now involved in mining, logistics, port operations, diesel import, power generation, and packaging and soon will be involved in shipping.

The group aspires to replicate its success in cement by building similar pillars in the oil and gas and food and agriculture sectors. In the oil and gas sector, the group currently has multiple large-scale projects in the pipeline such as a $12 billion oil refinery (largest single line refinery in the world), a $3 billion gas pipeline project, and a $2.5 billion fertilizer plant, which will come on board in the coming years. Similarly, in the foods and agriculture sector, the group has a pipeline of projects such as backward integration for its sugar business, rice production, tomato paste production, etc. These new projects will require substantial financial resources going forward.

Given the huge investment required for these projects, should the group continue investing in vertical integration in the mature cement business, or should it begin to stick to its knitting?

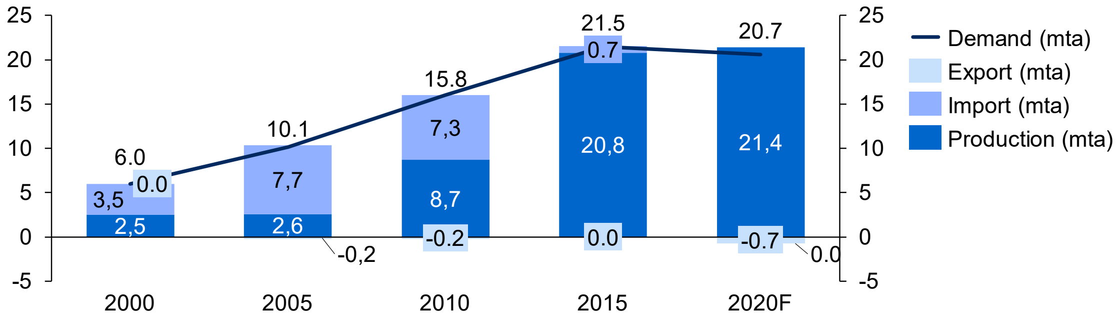
Will the cement model work in the oil and gas and food and agriculture sectors? Should it focus on economies of scale for these sectors (e.g., expanding capacity of the fertilizer plant that is about to go live) or economies of scope (e.g., investing in other areas of the fertilizer value chain)? Should the food and agriculture business focus on processing or integrate backwards into farming?

Also, as Africa develops and some of the reasons to vertically integrate disappear (e.g., more market reliability, competitive access to inputs, energy, or adjacent services, etc.) should Dangote reconsider its commercial approach and business strategy? Should existing investments in sectors related to the cement business be spun off to raise capital?

Could this be a good time to change the strategy or should Dangote double down on its unique approach? Could Dangote's business model be replicated in other emerging market regions with similar challenges?

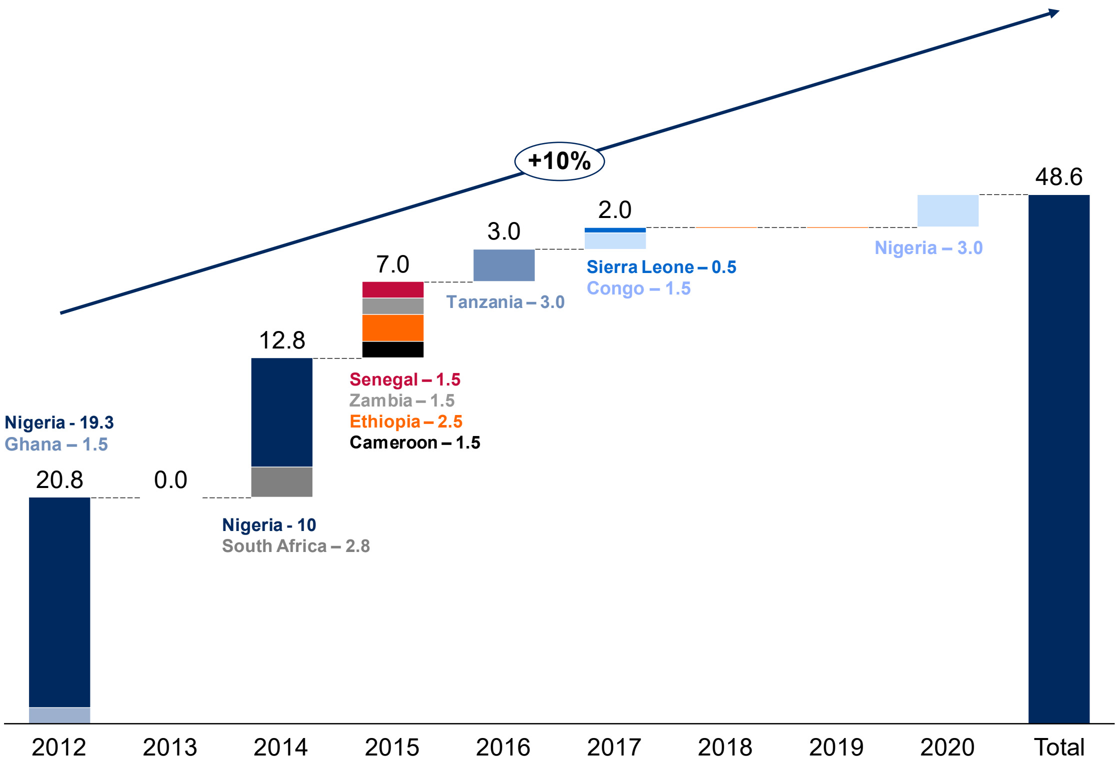
EXHIBITS

EXHIBIT 1
CEMENT IMPORTS, EXPORTS AND PRODUCTION CAPACITY IN NIGERIA (2000-2020)



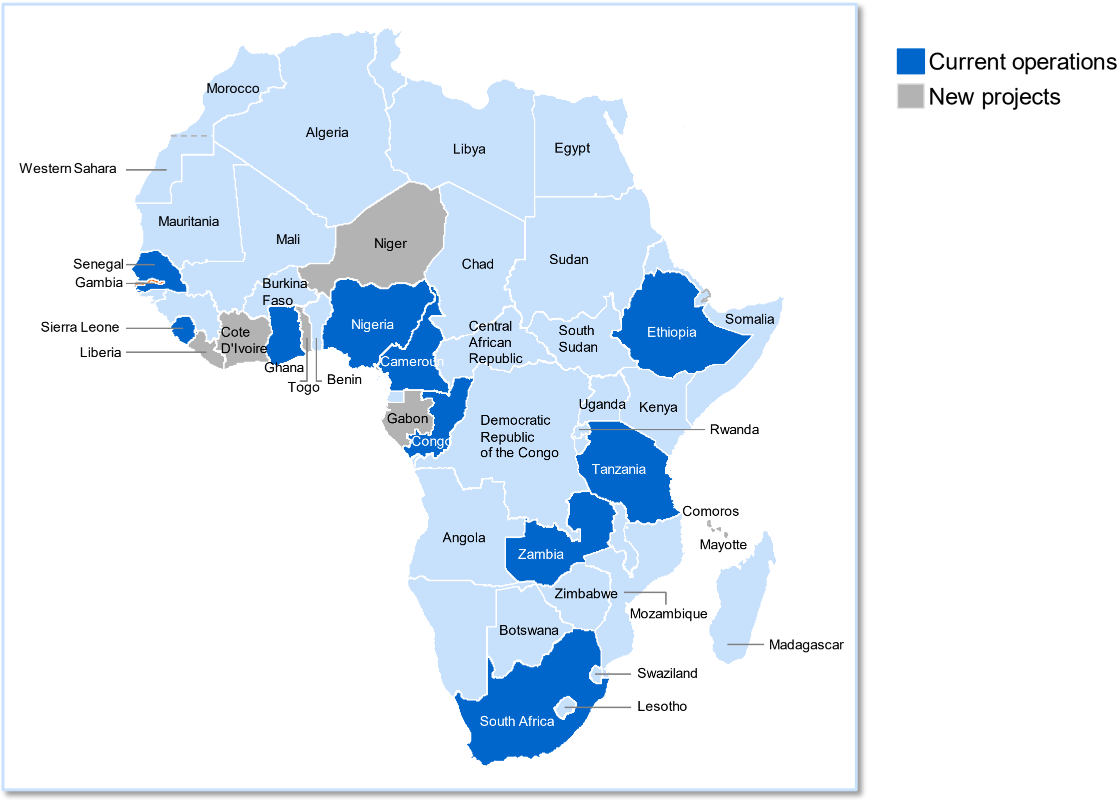
Source: Dangote Cement

EXHIBIT 2
DANGOTE CEMENT'S CAPACITY GROWTH (MTPA)



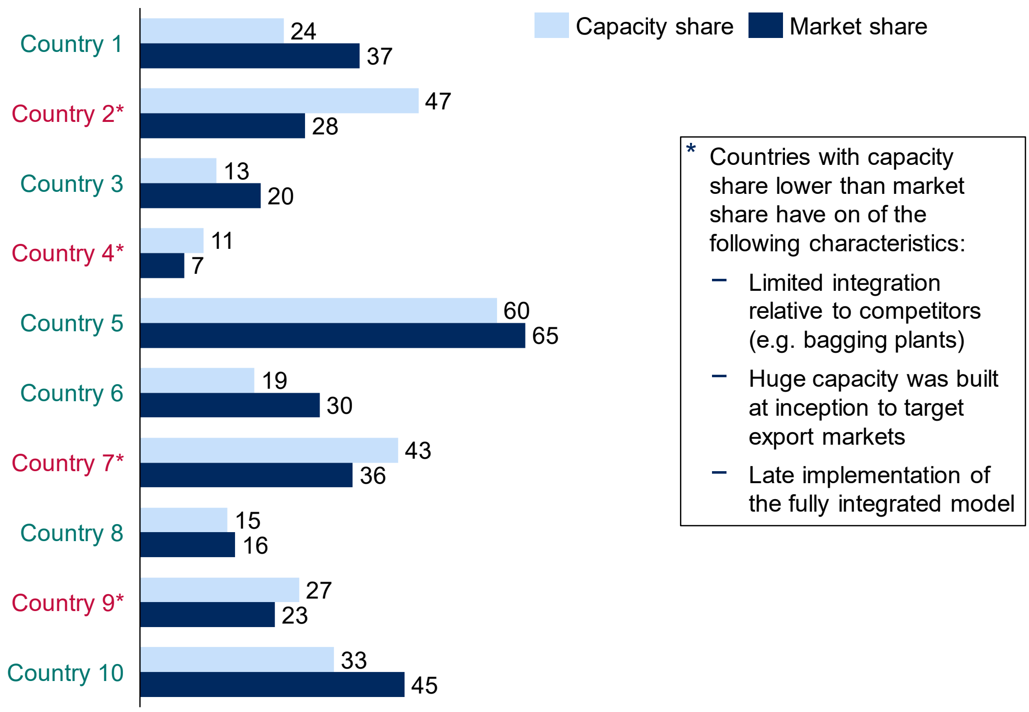
Source: Dangote Cement

EXHIBIT 3
DANGOTE CEMENT'S COUNTRY OPERATIONS



Source: Dangote Cement

EXHIBIT 4
DANGOTE CEMENT'S MARKET AND CAPACITY SHARE



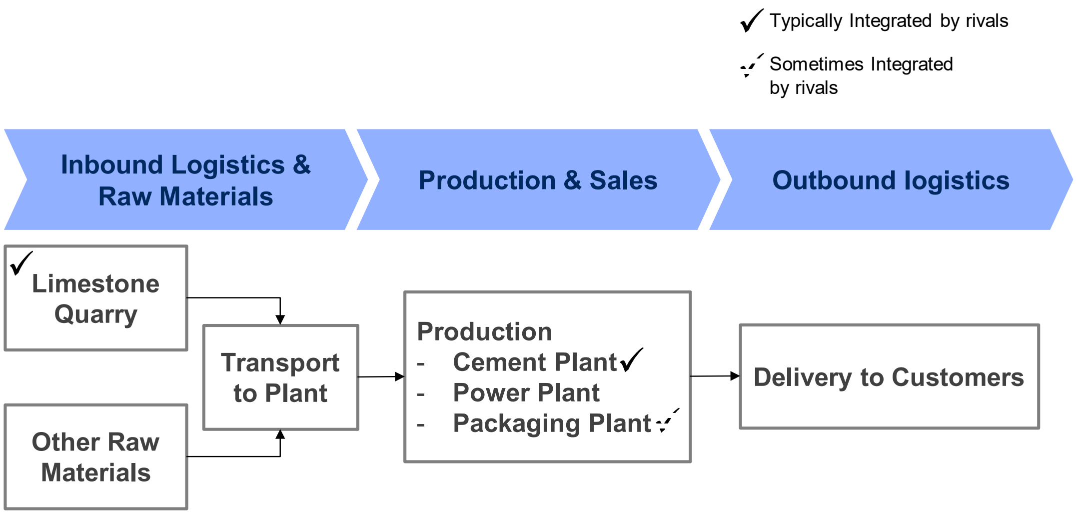
Source: Dangote Cement

EXHIBIT 5
DANGOTE'S EXPANSION CRITERIA

- A market that is characterized by substantial cement imports.
- A self-sufficient market with older, less-efficient, more costly and sub-scale plants.
- A self-sufficient market with fast cement consumption growth that is likely to lead to supply shortage in the near future.
- Availability of good limestone from which to make cement.
- A welcoming government ready to offer investment incentives to protect its long-term presence, usually in the form of tax holidays.

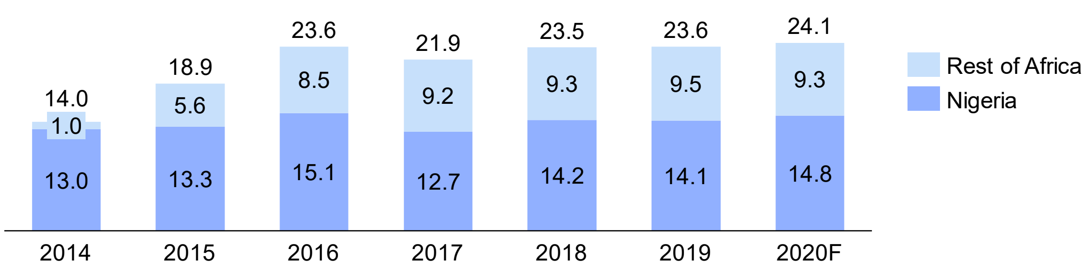
Source: Dangote Cement

EXHIBIT 6
CEMENT PRODUCTION VALUE CHAIN AND DANGOTE CEMENT'S POSITIONING



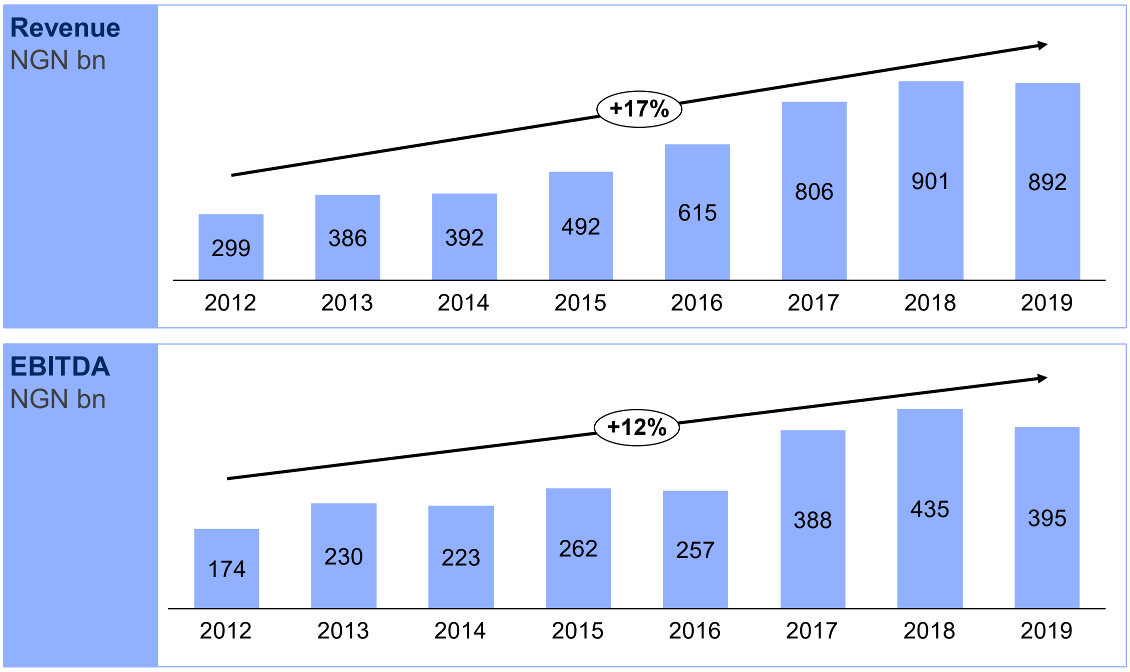
Source: Case author

EXHIBIT 7
DANGOTE CEMENT VOLUME GROWTH (MTA)



Source: Dangote Cement

EXHIBIT 8
DANGOTE CEMENT FINANCIAL PERFORMANCE



Source: Dangote Cement

EXHIBIT 9
ALIKO DANGOTE

Source: Dangote Group site

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