PPC CASE STUDY:

CEMENTING A PLACE IN AFRICA: PPC's INTERNATIONALISATION DRIVE

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Case summary

Learning outcomes: The study enables students to critique the internationalisation strategy of an African business including elements of macroeconomic analysis, company fit with jurisdictions, non-market strategies and mode of entry.

Case overview/synopsis: Roland van Wijnen was the chief executive officer of Pretoria Portland Cement Company Limited (PPC), a 130-year-old cement maker based in South Africa. He joined after the business had embarked on an international expansion strategy that had taken the business to countries of Rwanda, the Democratic Republic of the Congo and Ethiopia in a matter of years. This expansion caused the deflation of the Johannesburg-listed company's share price. The company failed to appreciate a number of success factors in each jurisdiction. The challenges included cultural misalignments, macroeconomic analysis and mode of market entry. The case dilemma involved the choices that van Wijnen faced in re-evaluating the international footprint of the business.

Complexity academic level: Undergraduate or postgraduate level.

Supplementary material: Teaching notes are available for educators only.

Subject code: CSS 5: International business.

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Roland van Wijnen, the CEO of PPC, was on safari at the end of 2021 in South Africa's Kruger National Park, when he found a quiet moment to reflect one warm afternoon. He had taken over the reins at PPC, a 130-year-old cement maker, in October 2019 when the business was in deep trouble. He had done a great deal to avert existential crisis and steered the company through the worst of the Covid-19 period. This left the pressing difficulty of the aftermath of a troubled international expansion drive and finding the capital to grow.

In the space of several years starting in 2012, PPC had branched out from its existing operations in South Africa, Zimbabwe and Botswana, into Ethiopia, Rwanda and the Democratic Republic of the Congo (DRC) in quick succession [see EXHIBIT 2]. They had committed large amounts of capital, but shareholder value would be decimated in the years to come. From some $2.56[1] per share in March of 2013, the share price fell below $0.26 by the time Dutch national van Wijnen took the reins[2].

He held no punches in his summary of the business's internationalisation drive. "It was actually some pretty crazy stuff. I don't think nearly enough homework was done and at times we partnered with the wrong people".

To succeed, PPC needed to raise capital [see EXHIBIT 11. What would van Wijnen's sales pitch be to funders? Should PPC retreat from any of its post-2012 markets? Should they aim to move into other African countries that suit it better? And if so, where should it go and how should it get there?

PPC and its leadership faced the dilemma that so many face in a highly globalised world. Specialising and trading across borders opens up possibilities of tremendous gains. However, it comes with extraordinary macroeconomic risk, cultural and administrative complexity, and a seemingly endless array of strategic decisions to be made.

PPC'S HISTORY

PPC's origins go back well over a century in South Africa. As De Eerste Cement Fabrieken Beperkt [in English, "The First Cement Manufacturer Limited"], they launched in 1892 in Pretoria. The name Pretoria Portland[3] Cement Company Limited – or, as it is now known, PPC – was adopted in 1908. The company listed on the Johannesburg Stock Exchange two years later.

By July 2017 PPC was making the full range of cement and related products that it does today [see Exhibit 3]. That meant both the individual bags of cement for retail sale, as well as the "readymix" that is used on large construction projects. It also encompassed aggregates, such as crushed stone, fly ash and lime. Each of these has important technical implications for attributes like density, longevity and strength of the final product. PPC also moved into plaster and mortar.

2010 was a marquee year for both PPC and South Africa, as the country hosted Africa's first FIFA Football World Cup. Major infrastructure projects had included the World Cup stadia, the Gautrain (a rapid rail transit system in Johannesburg and Pretoria), and the new Medupi and Kusile power stations. GDP growth was also up to 3% after falling to -1.5% in 2009 in the wake of the global financial crisis.

This was also a threshold year as Njombo Lekula, currently Managing Director for PPC South Africa and Botswana explained, "The market had enjoyed a few good years in South Africa. But we knew much of this would dry up after the World Cup." He captured the question they faced in 2010: "Do we stay here and shrink, or do we expand further into the continent?"

SUB-SAHARAN AFRICA'S CEMENT INDUSTRY

PPC and van Wijnen faced a region with a low base for cement consumption. On a per capita per year basis, global average consumption was 500kg, compared to just 91kg in sub-Saharan Africa[4].

The macroeconomy was a critical factor. Being a quasi-commodity, the cement industry's fortunes are closely linked to growth in gross domestic product (GDP) [see EXHIBIT 4] – and even more explicitly to

[1] South African rand (ZAR) amounts quoted in US dollars as at given date.
[2] All dollar amounts are US dollars.
[3] "Portland" cement is the most common variety of the product used around the world.
[4] Schmidt, W., Tchetgnia Ngassam, Inès L., Breitschaft, G., and Virchow, S. (2018). *Challenges of the growing African cement market – environmental issues, regulative framework, and quality infrastructure requirements*. MATEC, accessed 19 December 2021, https://doi.org/10.1051/matecconf/201814901014

growth in gross domestic fixed investment (GDFI). This is most pronounced in emerging economies such as those of Africa as more advanced countries become more service-oriented and rely less on industrial growth. Despite Africa's GDP contraction of 2.1% in 2020 at the height of Covid-19 lockdowns, the World Bank predicted growth in sub-Saharan Africa of 3.6% in 2022 and 3.8% in 2023[5] [see EXHIBIT 8].

The number of potential customers was also growing. Sub-Saharan Africa's population has been forecast to reach double its 2019 levels by 2050[6] [see EXHIBIT 9]. If that comes to pass, the region will make up a quarter of the world's total. More people also mean more homes, offices, schools, hospital, hotels and bridges. One industry study forecast that demand for cement across east Africa was to expand at a compound annual growth rate (CAGR) of 7.5% during 2018-2023[7].

As with any industry that lends itself to large companies, oligopoly power can be decisive for success. High concentrations of market share among small numbers of suppliers throughout the African cement industry have long made for elevated prices. The World Bank has estimated that African consumers therefore pay $2,5 billion per year more than they would if competition abounded[8]. However, the price is gradually moving towards purchasing power parity. While Africans paid more for cement than on any other continent in 2011, the average price fell by more than in any other continent between 2011 and 2017, coinciding with entry and capacity installation.

One peculiarity of cement consumption in emerging markets, such as those in Africa, lies in the proportionate demand per sector. While civil engineering consumes the bulk of the product in the United States, in Africa there is disproportionate dependence on the demand for cement for new housing[9]. So, firms like PPC are especially interested in growing economic prosperity that drives new house building, and renovations and expansions to existing homes.

While cognizant of the risks and difficulties of doing business in emerging markets, Roland van Wijnen made his sentiment clear on prospects in Africa from the start. "There is endless opportunity. If you succeed, there are nearly unlimited gains to be made. You also have to be prepared to take on some unique challenges and significant risks."

PPC's HOME BASE: SOUTH AFRICA, ZIMBABWE, BOTSWANA

PPC Ltd., the South Africa-based entity, already owned 100% of PPC Zimbabwe when van Wijnen joined the business – as was the case with all of its international positions. Zimbabwe presented the ongoing problem of one of the world's most unstable currencies, the Zimbabwean dollar. Liquidity in US dollars was an ever-present problem for PPC's local operation, even after the local currency was

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[5] World Bank, *Global Economic Prospects: Sub-Saharan Africa*, January 2022, accessed January 7, 2022, https://thedocs.worldbank.org/en/doc/cb15f6d7442eadedf75bb95c4fdec1b3-0350012022/related/Global-Economic-Prospects-January-2022-Regional-Overview-SSA.pdf

[6] United Nations, *World population prospects 2019, Online edition, revision 1, 2019*, accessed February 4 2022, https://population.un.org/wpp/

[7] Imarc Group, *East Africa Cement Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2022-2027*, 2022, accessed 12 January 2022, https://www.researchandmarkets.com/research/8jmx46/the_cement_market?w=12

[8] World Bank, *Breaking Down Barriers: Unlocking Africa's Potential through Vigorous Competition Policy*, 27 July 2016, accessed 14 November 2021, https://www.worldbank.org/en/news/feature/2016/07/27/africa-competition

[9] Byiers, B., Karaki, K., and Vanheukelom, J. (2017). *Markets, Politics and Value Chains No. 216*. European Centre for Development Policy Management.

relaunched and rebased in mid-2019. Nonetheless, with installed capacity of 1,4mtpa (million tonnes per annum), PPC was the largest cement maker in the country.

PPC leadership could fly to Harare from Johannesburg inexpensively in just 90 minutes. The language of business and politics matched the English used at home. The two countries shared a parallel British colonial past as well as intangible connections such as sporting rivalries.

Van Wijnen highlighted one facet of doing business far more straightforward in Zimbabwe than in PPC's home country of South Africa. "The Reserve Bank of Zimbabwe owe us $20 million. It has long been clear they would struggle to pay this to us. Their currency crisis is a deep-rooted problem, so they guard whatever hard currency they have very closely. So, we sat down with the Bank's Governor and had a candid conversation. We said, look we know it is difficult for you to repay us right now. But we have an idea. We suggested reasonable ways for them to pay us the money as the US dollars became available. The idea was well received. We avoided an antagonistic interaction and we are all better for it."

In a similar vein, van Wijnen recalled another instance of a positive experience overcoming challenges through interaction with official bodies. "At one stage we faced opposition claiming we lacked the requisite license to import. We spoke with the relevant minister who made the necessary phone calls to confirm our documentation was all in order. Problem solved.

"Critically, you don't want to go to government with complaints and demands. You've got to understand their rules and why they are in place. Are they trying to protect consumers or are we looking at a tax to make money? Listen to them. That way you can make a compelling case. Maybe you can show that a proposed regulation is going to place extra costs on consumer or even kill jobs. If you work together, you've got a better shot at good outcomes for everyone.

"This sort of productive teaming has been harder for PPC in their home base of South Africa. We have always had this access in my prior experience. Perhaps it is to do with the haunting history of South Africa. But this would be a welcome development. It is our chance to ask what we are getting wrong or right. To find solutions together."

Botswana was another established market for PPC. The landlocked home to the Kalahari Desert and the Okavango Delta has long been one of Africa's most stable and prosperous countries. Aided by generally free democratic elections, GDP per capita grew from $650 in 1970 to $7,000 in 2019[10]. The country is heavily dependent on mineral resources. Nearly two thirds of exports are diamonds and reserves are second largest globally behind Russia. It is also rich in the nickel that is key to the likes of batteries in electric cars.

ETHIOPIA

PPC's expansion starting in 2012 created a total geographic spread of more than 7,800km, from its southern-most operation in South Africa to the furthest north in Ethiopia [see EXHIBIT 1]. In all, the expansions took the company to operating seven integrated cement plants and five grinding stations; 27 readymix plants with 100 000m^3 capacity per month; five aggregate quarries; one lime factory; and two fly ash plants.

In July 2012 PPC acquired a 27% equity stake in Habesha Cement in Ethiopia for $7m. Here the immediate target was to build a US$130 million cement plant with an annual capacity of 1,4 million tonnes. This was to be funded by a combination of equity and $86 million debt funding from the

[10] World Bank, constant 2015 USD, https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?locations=BW

Development Bank of Ethiopia. Habesha raised an initial 53% of the project cost through equity investments by more than 16,000 local shareholders.

The Ethiopian market had some large fundamentals going for it. The population of nearly 120 million people was by far the largest of any of PPC's markets and growing at 2.5% per year. And it was getting wealthier. GDP per capita grew withing the band of 5% and 10% between 2014 and 2019 [see EXHIBIT 5].

Ethiopia also represented PPC's largest geographical leap, directly into the "bulge" of Africa. It meant delving into new cultures and a nation with five official languages. There was also the risk of conflict. Chiefly in the simmering and longstanding tensions in the northern Tigray region. Neighbours including South Sudan, Somalia and Eritrea were also hot spots for fighting.

These sorts of challenges can also represent possibility in the view of van Wijnen. "Unstructured markets are the hardest. But they also have the best prospects. If you get them right. You exactly know what you're getting if you move into the United States or South Korea. In developing economies, it is the ability to deal with complexity and uncertainty that means large gains to be made" [see EXHIBIT 7].

RWANDA

PPC entered Rwanda in 2013 with a 51% shareholding alongside the Rwandan government's 49% in CIMERWA. The initial hurdle to overcome was an engineering one. The existing plant was antiquated and had capacity for just 95,000tpa (tons per annum) – not enough to achieve efficiencies. So they set about commissioning a new 600,000tpa facility.

Rwanda is one of Africa's smallest nations, and landlocked apart from the Lake Kivu border with DRC. Just over 12 million people live there. Unusually for Africa, the country offered PPC political stability. President Paul Kagame took the helm in 2000.

Logistics were an anticipated problem in the so-called "Land of a Thousand Hills". Even though the site in Bugarama, in the west of tiny Rwanda was just 280km from the capital city and the construction hub of Kigali, it took trucks as much as two weeks to traverse the rugged road system that connected them. They were also reliant on a network of independent truckers for transportation of cement. With time, this was streamlined using a "virtual warehouse". This system meant orders were perpetually on the road and an order in Kigali could be fulfilled within a few hours. This is the sort of problem-solving van Wijnen refers to when he describes the outsized potential gains being in places other people would rather not go.

One of PPC's responses to the Covid-19 pandemic showed them the benefits of community engagement. They made the best of the emergency and fast-tracked a school-building initiative. This created jobs and helped primary education in a part of rural Rwanda that desperately needed it. PPC knew well that Rwanda has a vision of becoming a knowledge-based middle-income economy. And that contributing to this is part of creating that unwritten social and political license to operate.

"If you're unsure, build a school," reasoned van Wijnen. "It's quite simple. You need good relationships with local stakeholders. Let's be very honest, making cement is not a clean business. We dig a big hole in the ground, process inputs that burn carbon and move large volumes on heavy vehicles. There is no sense denying it. But we can put something back into communities. So, we find out what is most needed and we do our bit. These social investments typically mean building infrastructure like roads, sanitation, and schools. If a politician can take some credit, that's fine. Our company has existed for 130 years. There's no way to achieve that without goodwill from stakeholders."

This approach to stakeholder engagement is not universal. Van Wijnen issued a caveat around the way Chinese companies are addressing goodwill in Africa. “I don’t think the approach of many of these companies is sustainable. Not long term. I see many of them putting money down – people like that – but imposing rules without the sort of engagement with stakeholders that is so critical.”

DEMOCRATIC REPUBLIC OF CONGO

Also in 2013, PPC began construction of the new cement plant in the Democratic Republic of Congo (DRC), sometimes referred to as Congo Kinshasa. Here the entry mode took on yet another unique shape. PPC, with a 69% holding, was one of four parties, along with two large institutional investors and one wealthy former state governor. The entity formed PPC Barnet Cement. With a manufacturing plant near Kimpese, in Cataractes District of Bas-Congo Province in the west of the country. This added capacity for another 1,2MTpa of cement.

The DRC covers the same land area as the whole of Western Europe. Beneath that lies one of the world’s richest stores of natural resources – copper, cobalt, diamonds and petroleum oil. It also has nearly three quarters of the world’s coltan – a key ingredient in mobile phones, personal computers, automotive electronics, and cameras.

However, this is a very poor country. In 2018, it was estimated that nearly three quarters of the Congolese population, some 60 million people, lived on less than $1.90 a day (the international poverty rate).

One strategic misstep flagged in the aftermath was a legal obligation that formed part of the joint venture. The DRC project came with commitments that any shortfall in generation of cash or meeting operational deadlines in that business could be recouped from the South African holding company.

The DRC operation was never able to generate sufficient cash to service its debt owed to the International Finance Corporation (IFC). With total industry capacity of some 2.3 million tonnes and demand of 1.2 million tonnes, this was a technical certainty.

The upshot was that PPC in South Africa had some US$180 million in senior, dollar-denominated debt owed by the DRC unit. “As a result,” explains van Wijnen, “South Africa ended up paying millions and millions of dollars into the DRC. That was one of the first things I realised when I joined in October 2019, that we had to separate the balance sheet of South Africa from the balance sheet of the international operations.

That is what PPC head office in Johannesburg agreed with lenders. “We struck an agreement with them [in] March this year [2021] and we’re implementing that. Consequently, we will not have any economic benefits out of our business in the DRC for a long time. But more importantly, there will no longer be cash outflows from South Africa either. I think that fixed a big issue that we had in the balance sheet.”

This was an expensive move. “We have provided the DRC business with over US$70 million, what we call deficiency funding – money that was not generated in the DRC that was supplemented from South Africa”, says van Wijnen. “To get out of the arrangement, we paid an additional US$16.5 million in early April. And with that, we have drawn a big line underneath that problem.”

On the good news, South African lenders agreed to defer a rights issue to strengthen the balance sheet. The market breathed a sigh of relief, as shares rose as much as 26% on the day of 31 March 2021. What mattered was that the PPC group in South Africa was no longer on the hook for nonpayment of debts owed by the DRC unit. That said, PPC CFO Brenda Berlin reckoned the situation was that "PPC essentially had no chance of making money from the DRC venture for decades."

A BETTER WAY TO INTERNATIONALISE?

Van Wijnen spent a great deal of time scrutinising the post-2012 expansion. "I think the internationalisation drive was done in an opportunistic way. One criterion for choosing a country was that it be under-served. But that is pretty common in Africa. So that doesn't narrow your target down."

"Sheer size was an obvious attraction in DRC and Ethiopia. Nigeria was another potential destination using this metric. But it was already quite a structured market, so leadership didn't go there."

Van Wijnen also questioned the wisdom of the geographic distances traversed. "We jumped a whole lot of countries. Suddenly we found ourselves all the way in Ethiopia, Rwanda, and DRC. Did that make sense? Probably not. You need a logic behind these moves. I would rather build a regional model, connecting your footprint as you go. That means sequentially moving into neighbouring countries."

Brenda Berlin elaborated on the salience of geography for cement makers. "Location, location, location. Cement operations have a natural radius of 200km to 400km. This is a heavy product and very expensive to transport. Now, imagine you can obtain the only limestone deposit inside that radius. And there is sufficient demand within range. That is hard to do. But the scope for returns is immense.

"We also didn't manage and prepare the right talent. This should have been done first. Identify the talent already in your company, and then work out how you will source new talent in the new country."

Then there was the puzzle of how to enter a country. Van Wijnen's analysis covered the variety of approaches PPC took. "You can go the greenfield option. That means sinking a great deal of capital into the ground right away and running your own complete operation. That is risky. What is your strategy for getting returns to your shareholders? At best it is going to take a long time. Of course, this does make for the best returns if it works. It also makes a clear statement. If you put big money in, you are there for the long run.

"One cement company that does this with much success is Cemex. The Mexican company has grown impressively throughout Latin America. There's nothing slow about their approach. They move in and implement what they call 'the Cemex way'. Their local acquisition gets 'Cemexed', in a sense."

This post-merger integration (PMI) process, championed by CEO Lorenzo Zambrano, was key to the company's globalisations since the early 1990s. It is fast-moving and relies heavily on technology. The acquired company would have its business processes, technology and organisational structure standardised throughout.

Lessons learned from "Cemexing" a Colombian acquisition did prompt a softening of the approach. As one analysis put it, "Attempts to impose the same management processes and systems used in Mexico on the newly acquired Colombian firms resulted in an exodus of local talent. As a result of the difficult integration process that ensued, CEMEX learned that alongside transferring best practices that had been standardized throughout the company, it needed to make a concerted effort to learn best practices from acquired companies, implementing them when appropriate. This process became known as the CEMEX Way."[11]

Van Wijnen saw potential problems with the Cemex Way in an African context. "Cemex is focused on a region that is not nearly as diverse as Africa in terms of culture, language, or geography. But this is a vast continent. People forget this. Look at a map, you'll see that Kruger National Park is the size of Belgium. It is 55 countries. Some share culture and languages, but variety is incredible. At a minimum you need to think in terms of north, south, east, and west. But even within those regions you'll find multiple languages and cultures. If you can't speak easily with local partners and stakeholders, it is extremely difficult. I think this contributed to Cemex's difficulties in for example Australia."

That begged the question. Is it better to move in with a small investment and grow gradually? "You certainly limit your risk," reckoned van Wijnen. "You can begin with a grinding station and leave your partners pretty much as they are. You provide technical assistance and help them grow organically. Once there is a need for more cash to take the next step, you can inject the money and take a majority stake. That's when you standardise and put your own systems in."

This sentiment was reflected in the take of Njombo Lekula. "The best of all for us was Zimbabwe. We were initially just technical advisors to an existing business. It was only in 2000 that we bought 100% of the business. And because Zimbabwe is so similar to us, we speak the same language and the people are so well educated, it was easy to run the same systems."

Even the onset of hyperinflation[12] [see EXHIBIT 10] shortly after the purchase in Zimbabwe led to some advantages, as Lekula explained. "We stuck it out and kept the business alive. We treated people well. That earned us a great deal of loyalty with staff."

However, the gradual entry method, despite its benefits, was getting harder. "The issue is governance, explained van Wijnen. "In the past you may have been able to trust that a local partner was doing enough to stay away from bribery and corruption. Today that isn't viable. Bribery and corruption are not just a moral no-go, but the laws these days mean it isn't worth the risk even if you wanted to use unethical tactics. You have to choose local partners with great care.

"Lafarge, the big global cement maker, learnt this the hard way. Their problems in Syria, where they are alleged to have paid money inappropriately, are well known in the public domain.

"Holcim, as another example, ended up with lots of companies all doing things differently following a strong international expansion. But I think they learned an important lesson. In the late 1990s they started a big standardisation drive. They now seem to be focusing mostly on developed markets.

"One warning about getting involved in improper activities is that you can't get out. I don't think people pay that $100 to get something done have the intention of paying bribes forever. But they get caught in a spiral. So, you can't even hand over that first bank note to an official."

Independent of where you go and how, is the universal challenge of selecting the right partners. "I don't think PPC did enough homework on this in several of our investments," van Wijnen continued. "Put simply, partners have to like each other. It is no secret that we fell out with our partners in

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[11] Lessard, Donald R., Lucea, Rafael (2010). Mexican Internationals: Insights from CEMEX. In Rammamurti, R. (Ed.) Emerging Multinationals in Emerging Markets (Reprint edition) Cambridge University Press.
[12] Recorded at 79.6 billion percent month-on-month at its peak in late 2008. Hanke, S., Kwok, A. (2009). *One the Measurement of Zimbabwe's Hyperinflation*. The Cato Journal. Accessed 15 December 2021 https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/2009/5/cj29n2-8.pdf

Rwanda and DRC. Of course, you can get it wrong at the other extreme. In Ethiopia we have pretty much gone alone. We have some problems to resolve there, too."

KEEPING THE BANKS AT THE DOOR

Throughout 2020 it seemed likely that PPC's woes would force them to raise capital. Rumours swirled in the business community that a rights issue of around R1.25bn was on the cards. Lender pressure was growing as questions over cash generation persisted.

One move that helped to stave that off and satisfy banks was a large disposal. PPC completed the sale of its non-core lime business for R515m in the third quarter of 2021. That would go some way to paying down the net debt burden which had hit R1.9bn in March 2021.

Simultaneously, cement sales had begun picking up as lockdowns eased and the company completed a long-needed restructuring process. Some operations were deemed no longer viable to keep running. They were trimmed back and the headcount was reduced accordingly.

THE CHALLENGE: WHERE TO NEXT?

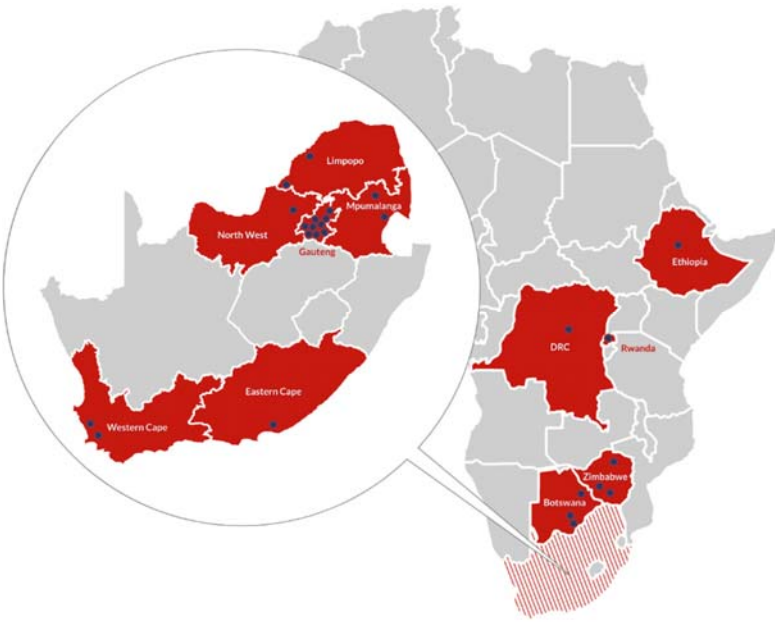
With some room to breathe, having reached a solution in DRC in March of 2021 and secured local content designation in South Africa, what is next for PPC? "First," says van Wijnen, perhaps revealing his engineering background, "we need to make sure our various operations are working like clockwork. Without that we don't have a compelling story. Attached to this is the need for a new and better way to investigate new geographies and new ventures. I think we have learned all the right lessons for that.

"Then the major task is to have a strong investment case to convince the board and shareholders of investments to generate growth. Would there be appetite to once more invest in cement capacity outside South Africa or would be it be more appealing to look for growth in other businesses within South Africa, Botswana and Zimbabwe [see EXHIBIT 6]. The environmental challenges to reduce carbon emissions might create opportunities for PPC to look beyond cement."

Nearing the end of his vacation in the African bush, van Wijnen was feeling re-energised to return to the concrete jungle in a few days' time. He was relishing the challenge his PPC role presented. What will his value proposition be when he and his colleagues in the EXCO approach the board? Should PPC exit any of the African markets it is currently in? Would they be able to garner support for a move into a new country? If so, which country would offer better prospects than the ones that have performed poorly thus far? Which modes of entry might make the most of any cross-border move? Are there any non-market strategies that van Wijnen should consider? He took another deep breath in the shade of an acacia tree, and he began sketching out his plans.

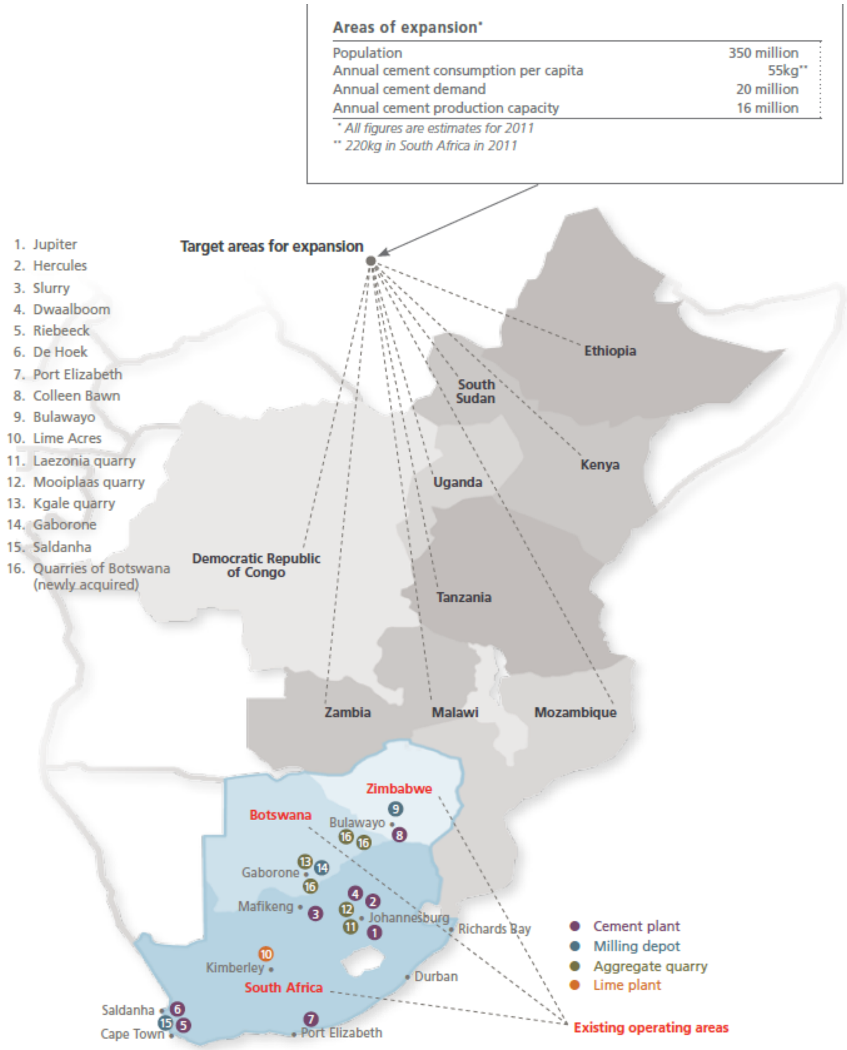
EXHIBITS:

EXHIBIT 1: PPC'S GEOGRAPHIC FOOTPRINT (2021)



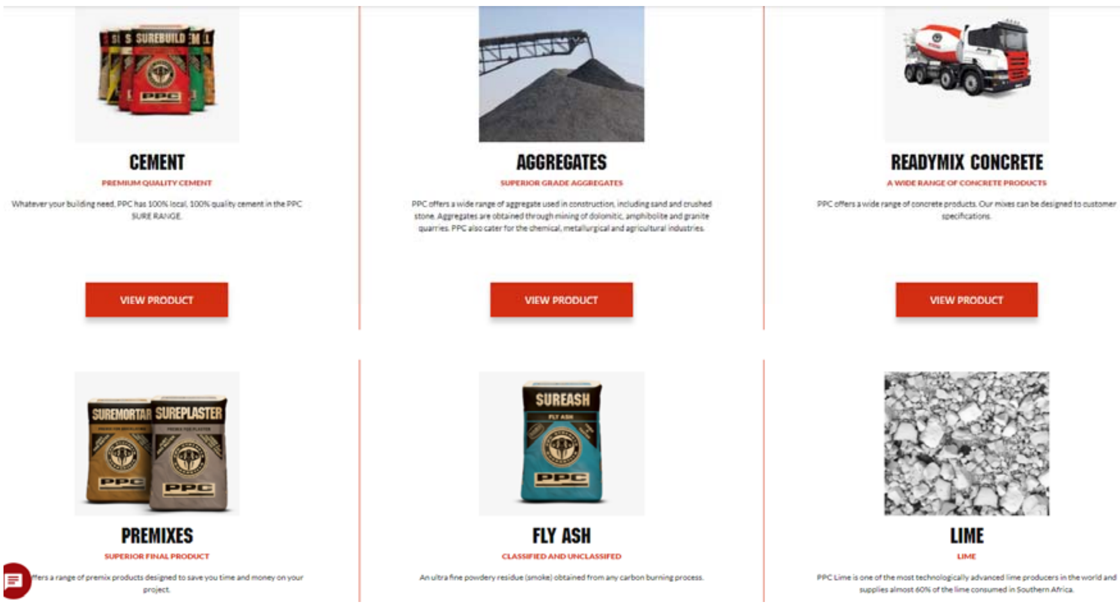
SOURCE: PPC ANNUAL REPORTS

EXHIBIT 2: PPC'S EXHISTING OPERATING GEOGRAPHIES PRIOR TO THE INTERNATIONALISATION DRIVE AND TARGET AREAS FOR POTENTIAL EXPANSION (2011)



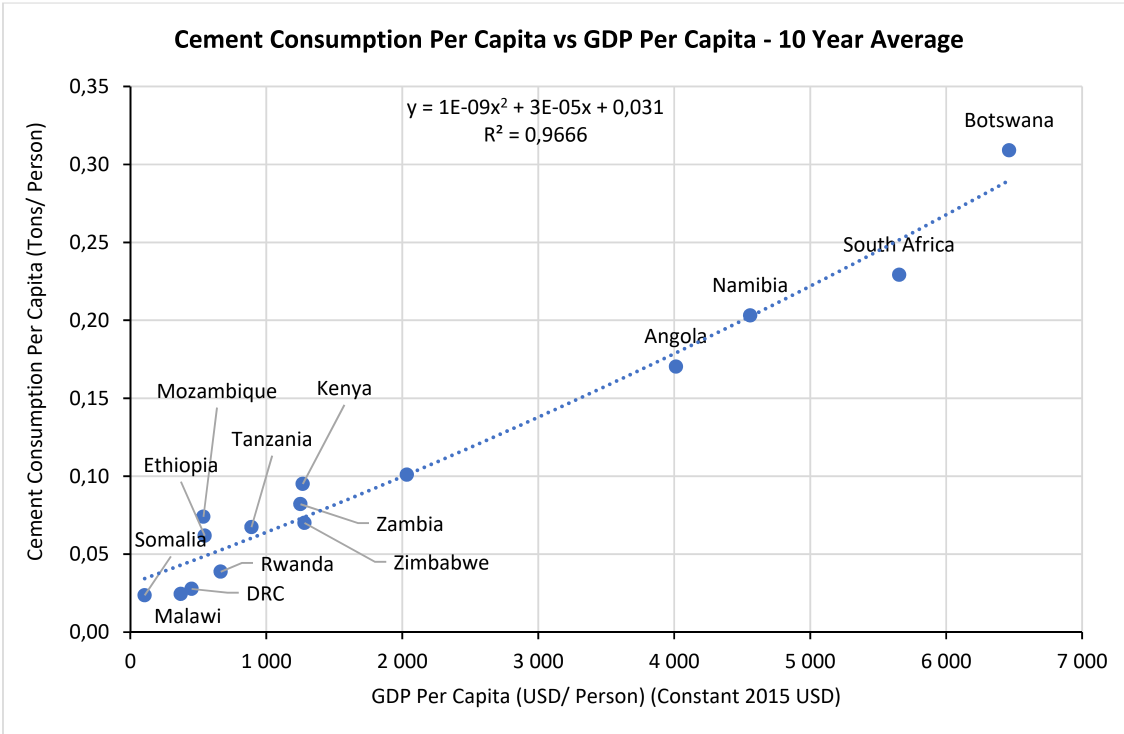
SOURCE: PPC ANNUAL REPORTS

EXHIBIT 3: PPC'S PRODUCT LINE



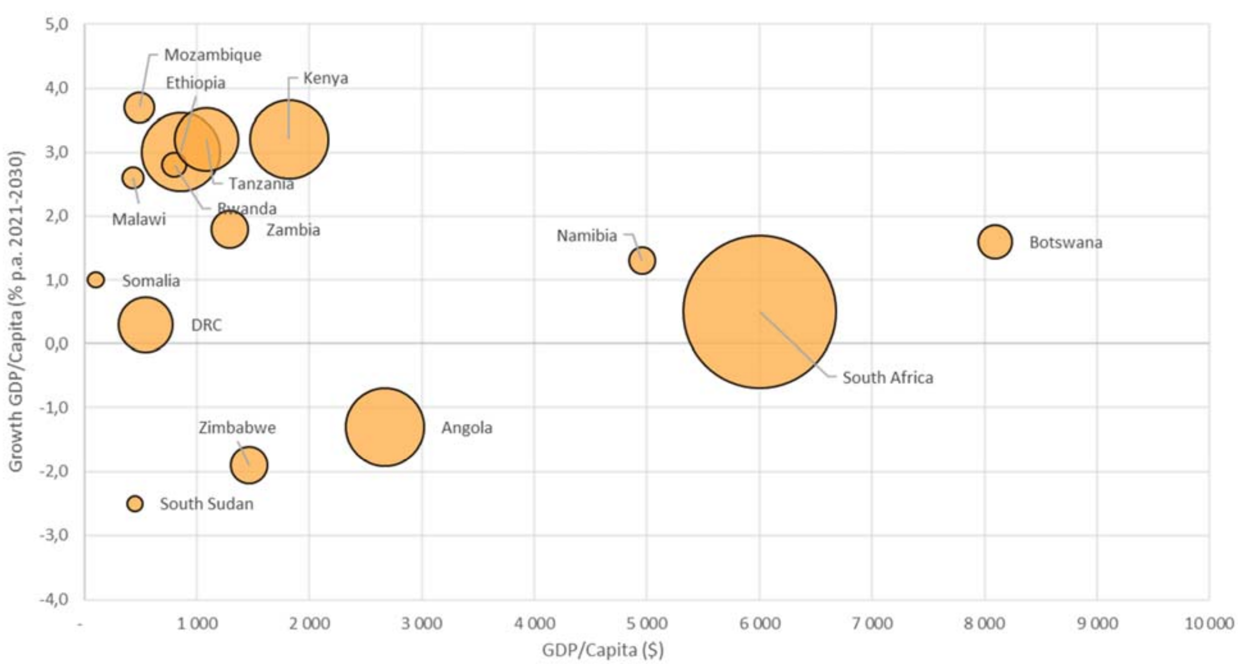
SOURCE: PPC ANNUAL REPORTS

EXHIBIT 4: CEMENT CONSUMPTION PER CAPITA PLOTTED AGAINST GDP PER CAPITA



SOURCE: Saville (2019)

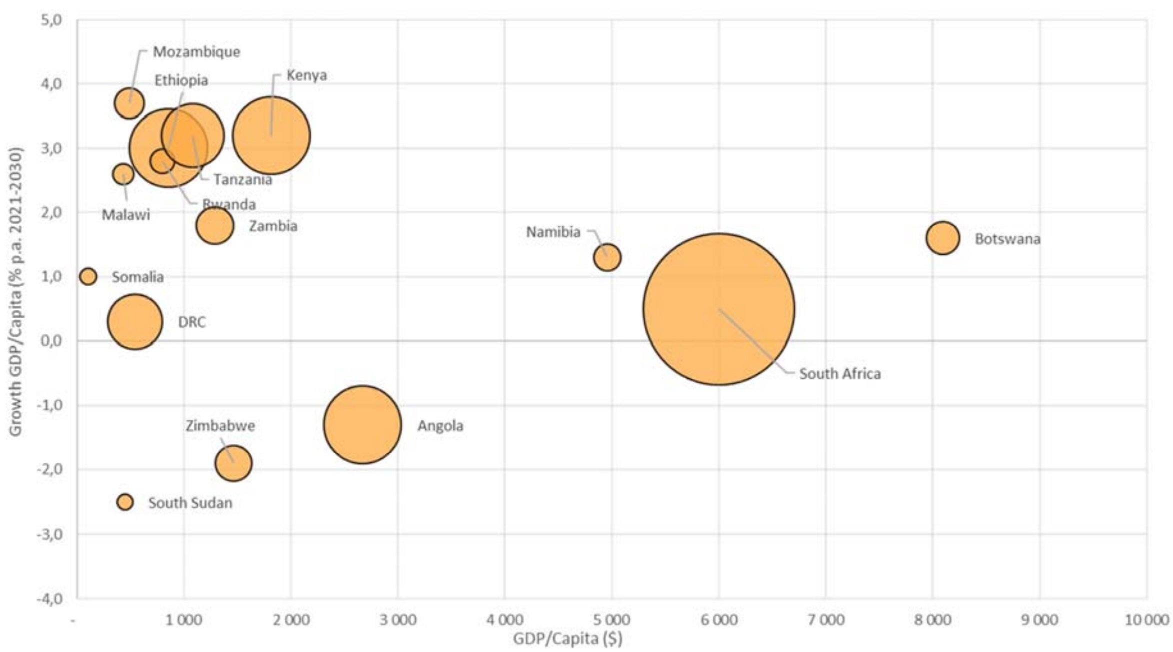
EXHIBIT 5: GDP/CAPITA PLOTTED AGAINST GROWTH IN GDP/CAPITA FOR SELECTED AFRICAN COUNTRIES



SOURCE: Saville (2019)

Size of circle represents country GDP in $’bn (2019)

EXHIBIT 6: GDP/CAPITA AND SIX FACTOR MODEL-BASED FORECAST GDP/CAPITA GROWTH FOR SELECT AFRICAN COUNTRIES.



SOURCE: Saville (2019)

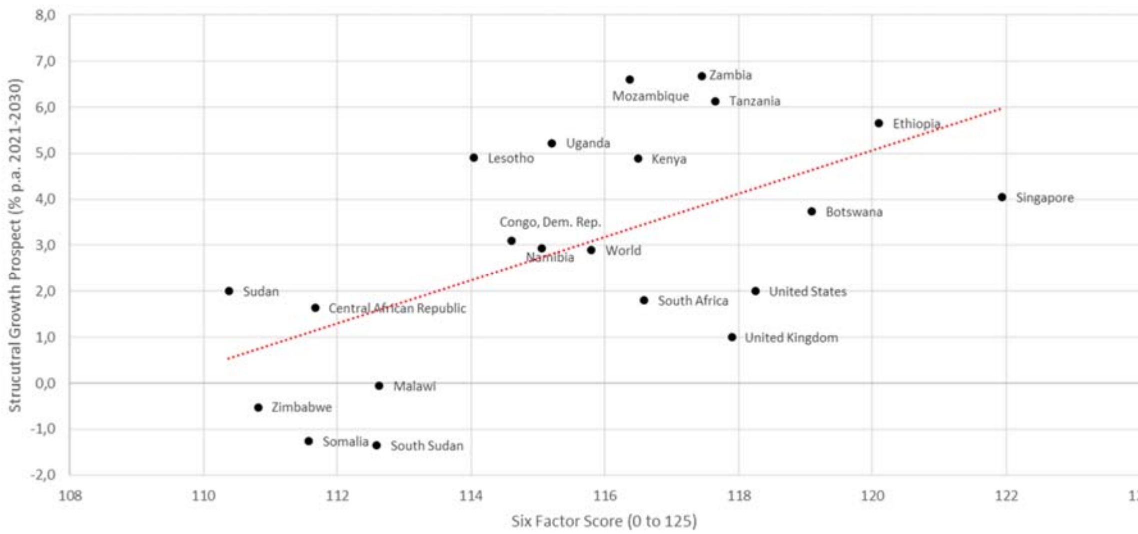
Size of circle represents country GDP in $’bn (2019)

EXHIBIT 7: COMPONENTS OF THE SIX FACTOR MODEL

Factor	**Proxy descriptors, units and lags**	**Multi-factor coefficients**
Savings and Investment	• Structural investment rate (ten-year average % GDP) • Stability of investment (σ) • Structural rate of saving (ten-year average % GDP) • Stability of saving (σ) • Savings-investment gap (% GDP)	27.5
Demography	• Population growth (15-year lag)	5.1
Policy and Institutions	• Macroeconomic management rating index • Transparency, accountability, and corruption in the public sector index • Public sector management and institutions cluster strength index • Ease of doing business index, time to open a business (days); cost of business start-up procedures (% of income per person); logistics performance index	15
Education	• Pre-primary enrolment rate (gross %) • Primary school enrolment rate (net %) • Secondary school enrolment rate (net %) • Tertiary education enrolment rate (gross %) • Adolescents out of school (% of lower secondary school age)	12.4
Healthcare	• Infant mortality rate (per 1,000 live births) • Life expectancy at birth (years)	15.7
Openness	• Imports & exports relative to GDP (%) • Export complexity index • Foreign capital flows relative to GDP (%) • TCIP index	24.3

SOURCE: Saville (2021)

EXHIBIT 8: THE SIX FACTOR MODEL: SIX FACTOR SCORES PLOTTED AGAINST STRUCTURAL GROWTH PROSPECTS



SOURCE: Saville (2021).

EXHIBIT 9: SIX FACTOR SCORES FOR SELECT AFRICAN COUNTRIES (2021)

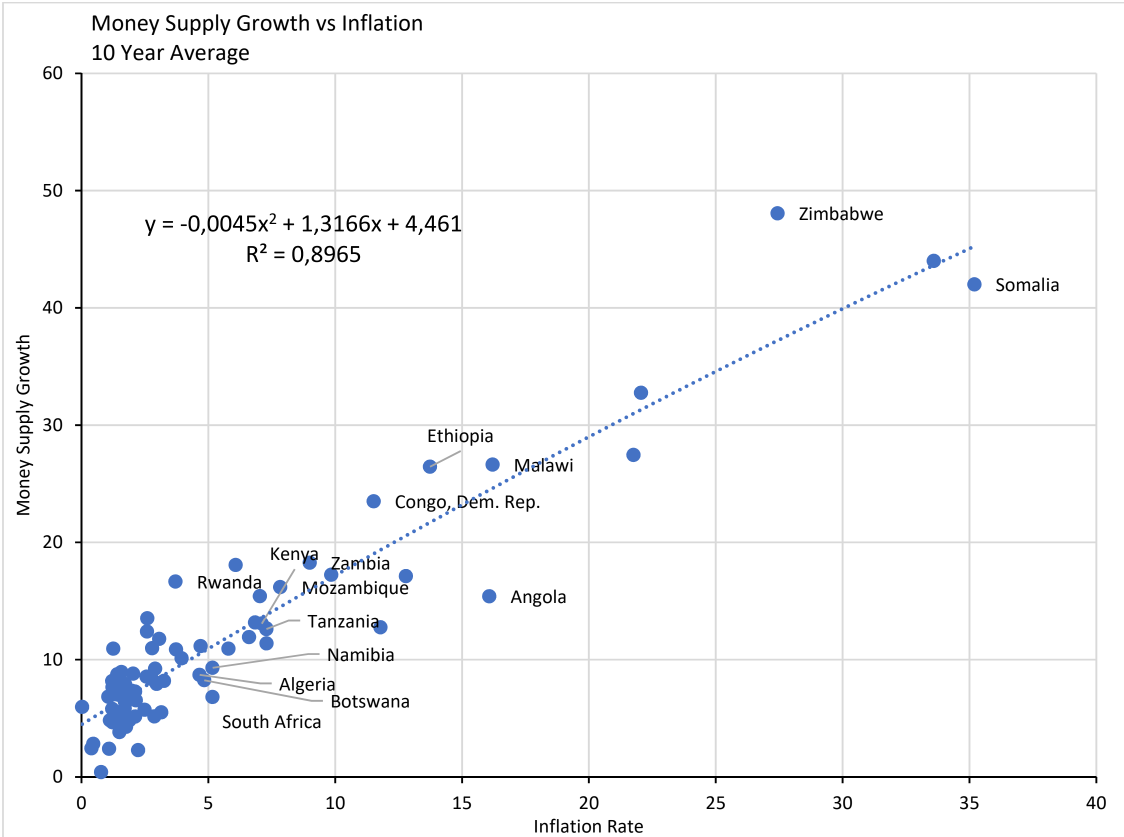
	GDP	Population	GDP/Capita	GDP/Capita Growth (Six Factor Model)	GDP Growth (Economic Complexity Model)	Productive Sector Contribution to GDP	Industrial Volatility (Sensitivity)	CAGE Score	Inequality	Fractionalisation	Investability	Industrial Agility (Readiness & Innovation)
	$'bn)	('mn)	($)	(% p.a. 2021-2030)	(% p.a. 2020-2028)	(GDFI+NX as % GDP)	(%, s.d.)	(1 = Best 15 = Worst)	(Gini Co-efficient)	(PREG Metric)	(Currency Rank) (x/79)	Global Innovation Index 2020
Angola	94,6	31,8	3432	0,6	3,5	29,4	8,0	12,3	51,3	0,65	66	13,6
Botswana	18,6	2,3	8258	1,6	3,1	30,6	7,0	3,5	53,3	0,05	11	25,4
DRC	47,3	86,8	561	0,3	1,9	17,6	4,3	12,0	42,1	0,80	65	13,6
Ethiopia	96,7	112,1	772	3,0	5,1	19,5	4,6	6,8	35,0	0,57	72	18,1
Kenya	95,5	52,6	1710	2,6	5,0	9,1	2,2	3,0	40,8	0,57	69	26,1
Malawi	7,7	18,6	389	1,7	4,5	5,9	7,6	8,0	44,7	0,55	75	21,4
Mozambique	14,9	30,4	498	3,7	5,5	8,2	3,4	9,5	54,0	0,36	68	18,7
Namibia	12,9	2,5	5931	1,1	3,8	7,5	3,6	5,8	59,1	0,55	63	22,5
Rwanda	10,1	12,6	820	2,8	5,1	8,2	2,3	4,5	43,7	0,26	60	25,1
Somalia	4,9	15,4	348	-4,1	3,5	18,7	0,4	13,0	39,7	0,35	79	13,6
South Africa	351,0	58,6	6374	0,5	2,6	19,5	2,1	1,5	63,0	0,49	62	32,7
South Sudan	4,6	11,0	1280	-2,1	6,5	-21,6	7,0	13,5	46,3	0,41	79	13,6
Tanzania	63,2	58,0	1060	3,2	7,2	26,9	1,7	5,5	40,5	0,59	51	25,6
Zambia	23,1	17,9	1539	3,8	4,1	35,5	4,0	5,5	44,3	0,71	67	19,4
Zimbabwe	21,5	14,6	2146	-1,9	3,8	-2,2	19,5	8,0	57,1	0,41	76	20,0

	GDP	Population	GDP/Capita	GDP/Capita Growth (Six Factor Model)	GDP Growth (Economic Complexity Model)	Productive Sector Contribution to GDP	Industrial Volatility (Sensitivity)	CAGE Score	Inequality	Fractionalisation	Investability	Industrial Agility (Readiness & Innovation)	Rank Score	Rank Volatility
	$'bn)	('mn)	($)	(% p.a. 2021-2030)	(% p.a. 2020-2028)	(GDFI+NX as % GDP)	(%, s.d.)	(1 = Best 15 = Worst)	(Gini Co-efficient)	(PREG Metric)	(Currency Rank) (x/79)	Global Innovation Index 2020	(Mean)	(%, s.d.)
Angola	4	6	4	10	12	3	14	13	10	13	7	12	9,0	4,0
Botswana	9	15	1	8	13	2	12	3	11	1	1	4	6,7	5,2
DRC	6	2	12	12	15	8	9	12	5	15	6	12	9,5	4,1
Ethiopia	2	1	11	4	5	5	10	8	1	10	11	11	6,6	4,0
Kenya	3	5	6	6	6	9	4	2	4	10	10	2	5,6	2,8
Malawi	13	8	14	7	7	13	13	9	8	8	12	7	9,9	2,8
Mozambique	10	7	13	2	3	10	6	11	12	4	9	10	8,1	3,6
Namibia	11	14	3	9	9	12	7	7	14	8	5	6	8,8	3,5
Rwanda	12	12	10	5	4	10	5	4	6	2	3	5	6,5	3,5
Somalia	14	10	15	15	11	7	1	14	2	3	14	12	9,8	5,3
South Africa	1	3	2	11	14	5	3	1	15	7	4	1	5,6	5,1
South Sudan	15	13	8	14	2	15	11	15	9	5	14	12	11,1	4,3
Tanzania	5	4	9	3	1	4	2	5	3	12	2	3	4,4	3,1
Zambia	7	9	7	1	8	1	8	5	7	14	8	9	7,0	3,5
Zimbabwe	8	11	5	13	10	14	15	9	13	5	13	8	10,3	3,4

SOURCE: Saville (2021)

South Africa is plotted against an average score of other countries on the list.

EXHIBIT 10: INFLATION RATES PLOTTED AGAINST MONEY SUPPLY GROWTH FOR AFRICAN COUNTRIES



SOURCE: Saville (2021)

EXHIBIT 11: PPC CONDENSED CONSOLODATED STATEMENTS (31/03/2022)

CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

as at 31 March 2022

	Notes	March 2022 Rm	Reclassified[(a)] March 2021 Rm
ASSETS			
Non-current assets		9 698	10 147
Property, plant and equipment	2	9 255	9 622
Right-of-use-assets		69	68
Goodwill		37	38
Other intangible assets		113	149
Financial assets		166	196
Other non-current assets		32	50
Deferred taxation assets		26	24
Current assets		2 711	2 676
Inventories	3	1 085	1 111
Trade and other receivables		1 006	993
Taxation receivable		43	115
Cash and cash equivalents		577	457
Assets held for sale and held by disposal groups	4.1	2 458	2 984
Total assets		14 867	15 807
EQUITY AND LIABILITIES			
Capital and reserves			
Stated capital	5	4 575	3 965
Other reserves		(4 592)	(2 731)
Retained profit		7 049	5 649
Equity attributable to shareholders of PPC Ltd		7 032	6 883
Non-controlling interests		(121)	(153)
Total equity		6 911	6 730
Non-current liabilities		3 053	2 855
Provisions		211	219
Deferred taxation liabilities		1 654	1 621
Long-term borrowings	6	1 150	983
Lease liabilities		38	32
Current liabilities		1 781	2 923
Provisions		12	30
Trade and other payables		1 256	1 167
Lease liabilities		21	28
Short-term borrowings	6	431	1 645
Taxation payable		61	30
Other current liabilities		—	23
Liabilities associated with assets held for sale and disposal groups	4.2	3 122	3 299
Total equity and liabilities		14 867	15 807

[(a)] *Other intangible assets (mineral rights) of R45 million have been reclassified to Property, plant and equipment to align the group accounting policies.*

CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS

as at 31 March 2022

	Notes	March 2022 Rm	March 2021 Rm
Continuing operations			
Revenue	7	9 882	8 938
Cost of sales		(8 352)	(6 877)
Gross profit		1 530	2 061
Decrease/(increase) in expected credit losses on financial assets		49	(3)
Administration and other operating expenditure		(1 057)	(1 007)
Operating profit before items listed below:		522	1 051
Fair value and foreign exchange movements		2	(376)
Fair value gain on Zimbabwe financial asset		56	256
Fair value loss on Zimbabwe blocked funds		(18)	(17)
Net monetary loss on hyperinflation in Zimbabwe		(108)	(200)
(Impairments)/reversal of impairments	9	(38)	1 317
Profit before finance costs, investment income and equity-accounted investments		416	2 031
Finance costs		(240)	(283)
Investment income		10	15
Profit before equity-accounted investments		186	1 763
Profit from equity accounted investments		—	2
Profit before taxation		186	1 765
Taxation	10	(207)	(742)
(Loss)/profit for the year from continuing operations		(21)	1 023
Profit/(loss) for the year from discontinued operations	4.3	158	(1 141)
Profit/(loss) for the year		137	(118)
Attributable to:			
Shareholders of PPC Ltd – continuing operations		(71)	983
Shareholders of PPC Ltd – discontinued operations		159	(794)
Non-controlling interests		49	(307)
		137	(118)
Earnings/(loss) per share (cents)			
Basic – group	11	5	12
Diluted – group		5	13
Basic – continuing operations		(5)	65
Diluted – continuing operations		(5)	65
Basic – discontinued operations		10	(53)
Diluted – discontinued operations		10	(52)

Source: PPC annual reports (2022).