PLATFORMS OF PROSPERITY:

THE AFRICA EDITION

CENTRE FOR AFRICAN MANAGEMENT AND MARKETS (CAMM)

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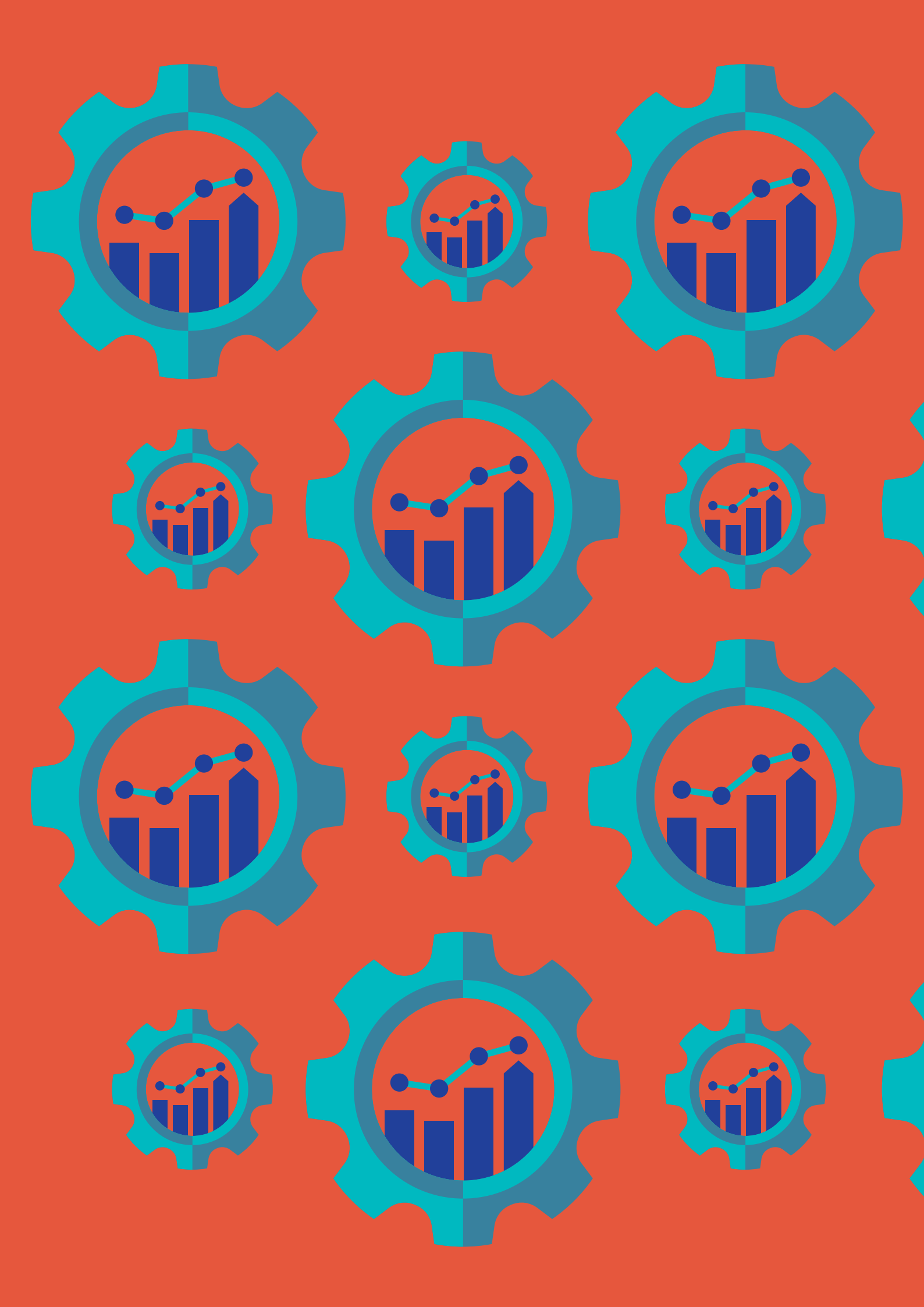
AUGUST 2021



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The authors gratefully acknowledge the funding support of Barloworld Ltd in producing this paper.

They want us to join their fighting
But our answer today
Is to let all our worries
Like the breeze through our fingers slip away...
When you're moving in the positive
Your destination is the brightest star

~ Stevie Wonder, "Master Blaster (Jammin')"

The great setback

We were on the most sustained and widespread outbreak of prosperity the world has ever seen (Pinker, 2018). The seven decades since the end of the Second World War brought greater improvements in living standards to more people than could previously have been imagined. In the two decades to 2020 alone, global poverty rates were cut by more than half (United Nations, 2021). This may have been cold comfort to those left behind, but the world was undisputedly on an unprecedented arc of improvement. Nevertheless, COVID-19 rapidly turned that rising path of improvement sharply downwards in the closing weeks of 2019.

Prior to the pandemic, economic predictions expected that poverty rates would decline in 2020 (World Bank, 2021), "Had the pandemic not convulsed the globe, the poverty rate was expected to drop to 7.9% in 2020." The actual estimate was between 9.1% and 9.4% of the world population living on less than $1.90 per day in 2020. Thus, in staying with the established trend of material gain in global welfare, 2020 was expected to take the world to a better place by the end of the year compared to the start. Of course, with the benefit of the brilliance of hindsight, we know that the exact opposite came to pass. The unprecedented COVID-19 crisis has put individuals, firms, and countries into a new level of uncertainty, fuelled by the inability to make coherent strategic decisions for now and the immediate future. It has marked a significant turning point especially for countries and businesses, as these units have had to rethink "normal" and adapt to the newness of the situation.

Economies and societies have been hard hit by the extent of the pandemic, with significant societal turning points exacerbated by the George Floyd crisis in America, education crisis in the United Kingdom (UK), riots in Europe, increased incidences of gender-based violence in South Africa, and police brutality in Nigeria. Economically, nations are shaky due to government expenditures to support employment more than doubling, increased healthcare costs, and lost income from the freeze on cross-border travel. COVID-19 and the policy response have resulted in an unprecedented and global freeze in economic activity. The grimness of the situation also extends to Africa, though the crisis seems to be more of an economic crisis than a health crisis, with the continent doing better than was initially predicted at the onset of the global pandemic. However, the gains made in the controlled spread of the virus present heightened economic costs as a result of harsh lockdowns in a predominantly informal economy. The high levels of inequality are predicted to rise with

“Had the pandemic not convulsed the globe, the poverty rate was expected to drop to 7.9% in 2020.”

The World Bank (2021)

the increased suffering of the middle class due to high costs of credit, job losses, and weak policy support from the governments to ameliorate the economic hardships. Moreover, there is the concern around the potential debt crises facing at least 19 of the 54 African nations.

While the coronavirus and the scale of the resultant devastation are new, one admirable facet of human nature has a long history as a bright shadow to dark times. People are resilient. If businesses, economies, and nation states can ride out tumult, the experience can fuel hope of that most endearing narrative: the comeback story. Consider several cases of people pivoting and finding prosperity despite the tumult of the COVID-19 recession. In a recent report, Qureishi (2021) notes a number of success stories that have been born out of this crisis of 2020, including manufacturers in Kenya converting factories to produce personal protective equipment; Rwanda utilising locally assembled drones and robots to track COVID-19 patients; Ghana producing a low-cost COVID-19 antibody test; and engineering students in Senegal developing a multifunctional medical robot to ease the burden on healthcare workers.

Resilience and ingenuity have their limits, though. If the world is to look back on a “Great COVID Comeback”, large tools with deep foundations are needed. We need inclusive solutions, transportable and customisable to different political and philosophical systems, across borders, and through boundaries. We need platforms, if you like, or to use the language of our age, economic “apps”.

With countries gradually coming out of the crisis, there is a need for strategic direction at a macro and micro level to ensure that there is a trajectory of economic and social improvements. Although this seems to be a task for the strong-minded, history has shown that individuals, businesses, and nations have the capacity to reinvent and emerge from a crisis with direction and purpose. The onus is on economies to think innovatively on how to overcome the challenges and maximise the opportunities presented. In this paper, we interrogate macroeconomic growth models that countries have focused on to recover and respond to crises. We employ data from our six-pack framework that looks at savings and investment, demography, education, health, openness, and policy and institutions as the key focus for prosperity.

Prosperity by download

I should have based my judgement upon deeds and not words.

~ Antoine de Saint-Exupéry, The Little Prince

Ferguson (2012) advances what he argues is an exhaustive – or at least comprehensive – list of the six components or institutions that enabled "the West" to accelerate past "the rest" in quality of living since approximately 1500AD. In his now iconic TED Talk, Ferguson (2011) says:

"Let's call [these six institutions] 'killer apps'. They're kind of like the apps on your phone, in the sense that they look quite simple. They're just icons; you click on them. But behind the icon, there's complex code. It's the same with institutions."

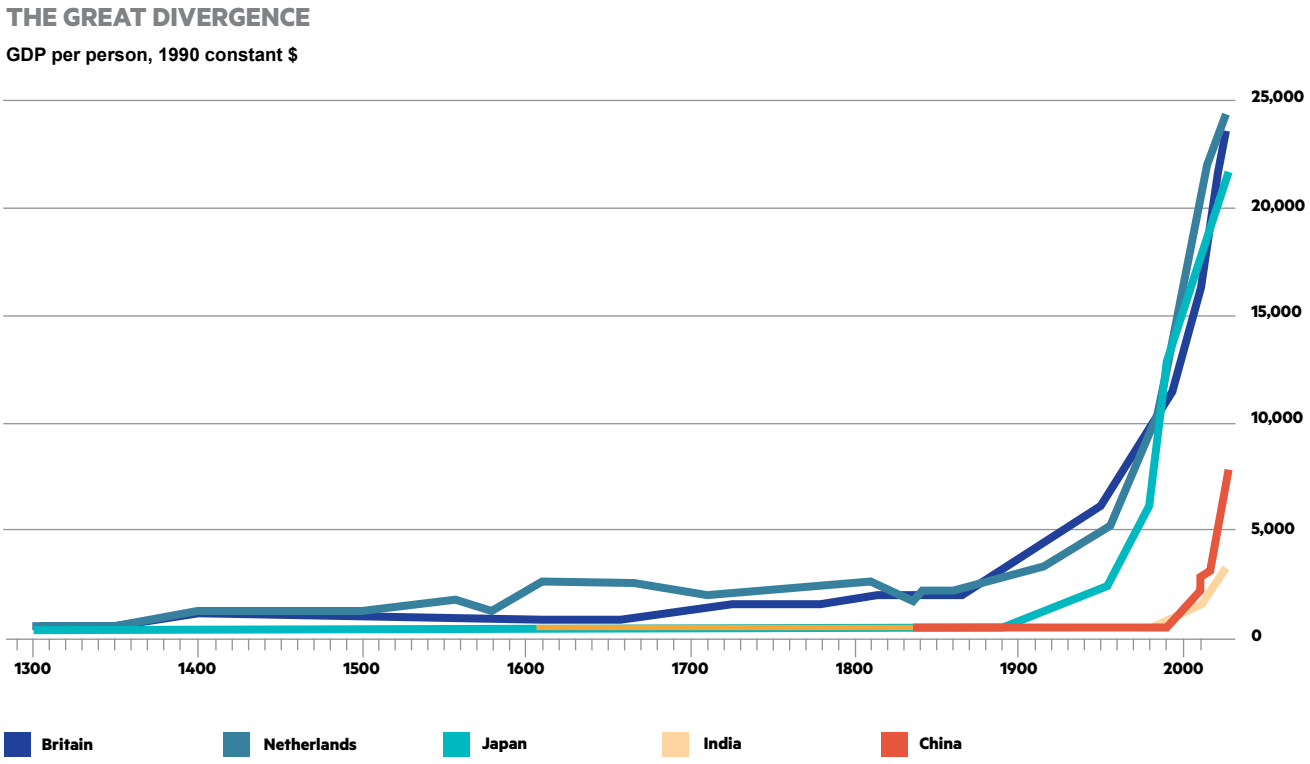


Figure 1: The "Great Divergence" depicted by gross domestic product (GDP) per person in 1990 constant United States (US) dollars (*Source: Maddison Project, 2021*)

Ferguson (2012), a historian by training, identifies six institutions: competition; scientific revolution; property rights; modern medicine; consumer society; and work ethic. He builds his case from centuries of data. However, the "app" comparison takes on particular importance today. Like smartphone apps, he says that these are "downloadable" and can be installed even more efficiently today than in years gone by. Ferguson (2012) continues, "Any society can adopt these institutions, and when they do, they will achieve what the West achieved after 1500AD – only faster." In his headline note, he quips: "This is the great re-convergence and it's the biggest story of your lifetime."

Furthermore, Ferguson (2012) concedes that the "apps" description is an adaption of a complex idea for a TED Talk audience with 20 minutes to focus. Nevertheless, the principle that the enablers of long-term prosperity are open-source and free to use by any government is eminently feasible.

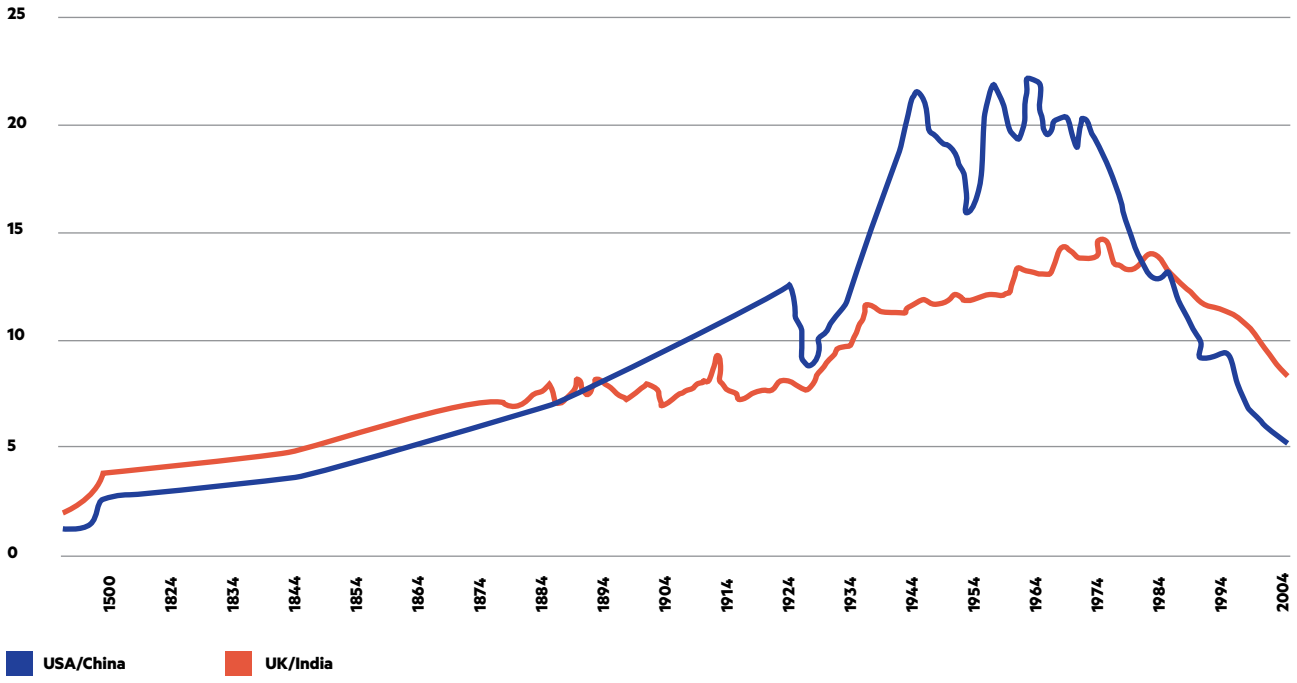


Figure 2: The "Great Re-convergence" depicted by ratios of GDP per capita ratios between countries *(Source: Maddison Project Database, 2021)*

Methodology: The six-factor model

I could see in the distance all the dreams that were clear to me
Every choice that I had to make left you on your own
Somehow the road we started down had split asunder
Too late to realise how far apart we'd grown.
How I wish I, wish I'd done a little bit more
Now "shoulda woulda coulda", means I'm out of time
'Cause "shoulda woulda coulda", can't change your mind
And I wonder, wonder, wonder what I'm gonna do
"Shoulda woulda coulda" are the last words of a fool

~ Beverley Knight, "Shoulda Woulda Coulda"

The six-factor model was developed by the Centre for African Management and Markets (CAMM) at the Gordon Institute of Business Science (GIBS), in a country prosperity project that has run since 2009. The research draws on data from 160 countries going back six decades, with the final scorecard removing microstates from the analysis to reduce the survey set to 125 countries spanning 60 years, making for 7 500 country years of data, which is a treasure trove of economic and industrial intelligence. The model is derived from a multiple linear regression model with a learning component to determine the factors most closely associated with prosperity across the entire sample of countries over time.

Factor	Proxy descriptors
Savings and investment	Elevated (>25% of GDP), productive (non-rent-seeking assets), and funded domestically, with no more than modest rates of foreign direct investment (conventionally <3% of GDP). Gross domestic fixed investment (GDFI) is an excellent proxy.
Demography	More people need to be joining the workforce than going into retirement. A misconception is that longevity and higher retirement ages lead to "job displacement". The opposite tends to hold. Lagged population growth is an excellent proxy.
Policy and institutions	Stable policies beat "good" or "bad" policies. Policy has to be backed by capacity and capability (ranging from institutional strength to physical infrastructure).
Education	The first 1 000 days are key. Spending on education is not always a good proxy for the effectiveness of education.
Healthcare	Workforces must be physically and mentally healthy. Robust proxies for these are infant mortality rates and life expectancy.
Openness	Connections must be functional, fed by comparative advantage. Connections to neighbours tend to have more pronounced and enduring impacts than connections per se. Proxies are flows of trade and capital, and the movement of people and ideas (TCIP).

Table 1:The six-factor model with descriptors for each of the six factors

Factor	Description	Multi-factor constituents
Savings and investment	i. Structural investment rate (10-year average % GDP) ii. Stability of investment (σ) iii. Structural rate of saving (10-year average % GDP) iv. Stability of saving (σ) v. Savings-investment gap (% GDP)	27.5
Demography	i. Population growth (15-year lag)	5.1
Policy and institutions	i. Macroeconomic management rating index ii. Transparency, accountability, and corruption in the public sector index iii. Public sector management and institutions cluster strength index iv. Ease of doing business index, time to open a business (days); cost of business start-up procedures (% of income per person); logistics performance index	15.0
Education	i. Pre-primary enrolment rate (gross %) ii. Primary school enrolment rate (net %) iii. Secondary school enrolment rate (net %) iv. Tertiary education enrolment rate (gross %) v. Adolescents out of school (% of lower secondary school age)	12.4
Healthcare	i. Infant mortality rate (per 1 000 live births) ii. Life expectancy at birth (years)	15.7
Openness	i. Imports and exports relative to GDP (%) ii. Export complexity index iii. Foreign capital flows relative to GDP (%) iv. TCIP index	24.3

Table 2: The six-factor model with proxies and weights for each of the factors

In addition to asking the learning model to "go and find what works" by interrogating more than 1 200 variables that include demographic, social, political, economic, geographic, and institutional factors, the model also identifies factor weights and factor sequencing or – in the words of Ferguson (2012) – the "download order."

From Table 2, it can be seen that not all factors are of equal importance. That is, not all are equally strongly correlated with prosperity. With a coefficient of 27.5, the savings and investment factor is the most important, containing more than a quarter of the model's explanatory power. The openness factor is nearly as potent, correlated with just under a quarter of explanatory power. Demography, the least strong factor, with a coefficient of just 5.1, marks the lower cut-off point for inclusion in the model.

This distinction between more and less powerful enablers of long-term prosperity is a feature of the model. Applying the data to an individual country or region indicates not only the degree to which each factor is embedded but, read alongside the coefficient for each factor, the model provides policymakers with the information to determine areas of improvement that offer the greatest efficiency. In other words, it suggests areas where an amount of energy and social, political, and policy investment ought to provide the highest relative return in the form of prosperity. "Bang for policy buck" if you like. A country with low scores on a factor with a high correlation with long-term prosperity has such an indicator.

Half a dozen of the other

The six-factor model of prosperity shares important foundational arguments with the six killer apps of Ferguson (2012). Chiefly, both models are agnostic to specific policies. Ferguson (2011) makes this point using the killer app of property rights: "It's not the democracy, it's having the rule of law based on private property rights". The very same can be demonstrated using the factor of policy and institutions. It says nothing about the content of policy; it is about stable and predictable policy and capable institutions. That is not to suggest that any policy is as effective as any other as an agent of prosperity, but simply that stable policy is a keystone factor of long-term prosperity. If there is a key message to policymakers in these findings, it is that policy stability matters more than policy and that policy only matters if it is accompanied by capable institutions.

Additionally, the factors and killer apps speak to similar timelines. In a time of stock tickers, tweets, and 24-hour news, the availability bias can overemphasise the immediate and short term. The killer apps are built on data going back centuries. Even the recent changes in fortunes that are described as the "Great Re-convergence" are measured in decades. Likewise, the factors say nothing about currency sell-offs overnight in Asia or even the impact of last year's interest rate cuts, quantitative easing, and negative interest rate policy. We are in the realm of decades, lifetimes, and generations. We are in the world of prosperity and well-being, rather than dividend declarations, policy pronouncements, and business cycles.

There is striking congruence between several of the killer apps and the six factors, many of which are plain to see – for example, the app of modern medicine perfectly matches the healthcare factor, and science and education share a large overlap. Even elements that appear contradictory find congruence on closer inspection – for instance, Ferguson's app of consumer society might sound incongruous with saving and investment, yet both models apply to the long run. While we cannot consume what we save in the short run, saving today enables investment tomorrow, and therefore consumption in the long run.

Perhaps the most salient difference between the two models that, by chance, lands on six critical ingredients is the method of derivation. Ferguson, a British-educated historian now based at the Hoover Institution at Stanford University in the US, derives his model qualitatively and historical documents are his data source. By contrast, the factors in our work are built using economic data and applying quantitative methods that also incorporate "machine learning", where each year brings new data and a fresh chance to retest the model in what econometricians call "out of sample".

Applying the six-factor model in Africa in 2021

Two conditions of self-sustaining growth are that a country has acquired a cadre of domestic entrepreneurs and administrators and, secondly, that it has attained to adequate savings and taxable capacity.

~ Sir Arthur Lewis, Nobel Prize Lecture:
The Slowing Down of the Engine of Growth

We have run the six-factor model with the latest available data for 2021 and applied this to the 125 countries that make up our global set. Notably, although we have access to data for more than 200 countries, and reliable data for 160 of these 200 countries, our final data set comprises 125 countries to remove microstates. The country score is derived by considering the structural progress and end-weight in each of the six factors across a 20-year measurement period. The two-decade measurement period ensures factor weights are structural and not cyclical, fickle or fleeting. From this, we model the country's "six-factor growth structure" with a 10-year horizon. This also translates into a consideration of the country's potential, which gives a robust reading for the country's sustained growth performance as distinct from economic forecasts that tend to place emphasis on the "next year or two". Importantly, in deriving the structural growth potential, the model is not forecasting that this will come to pass.

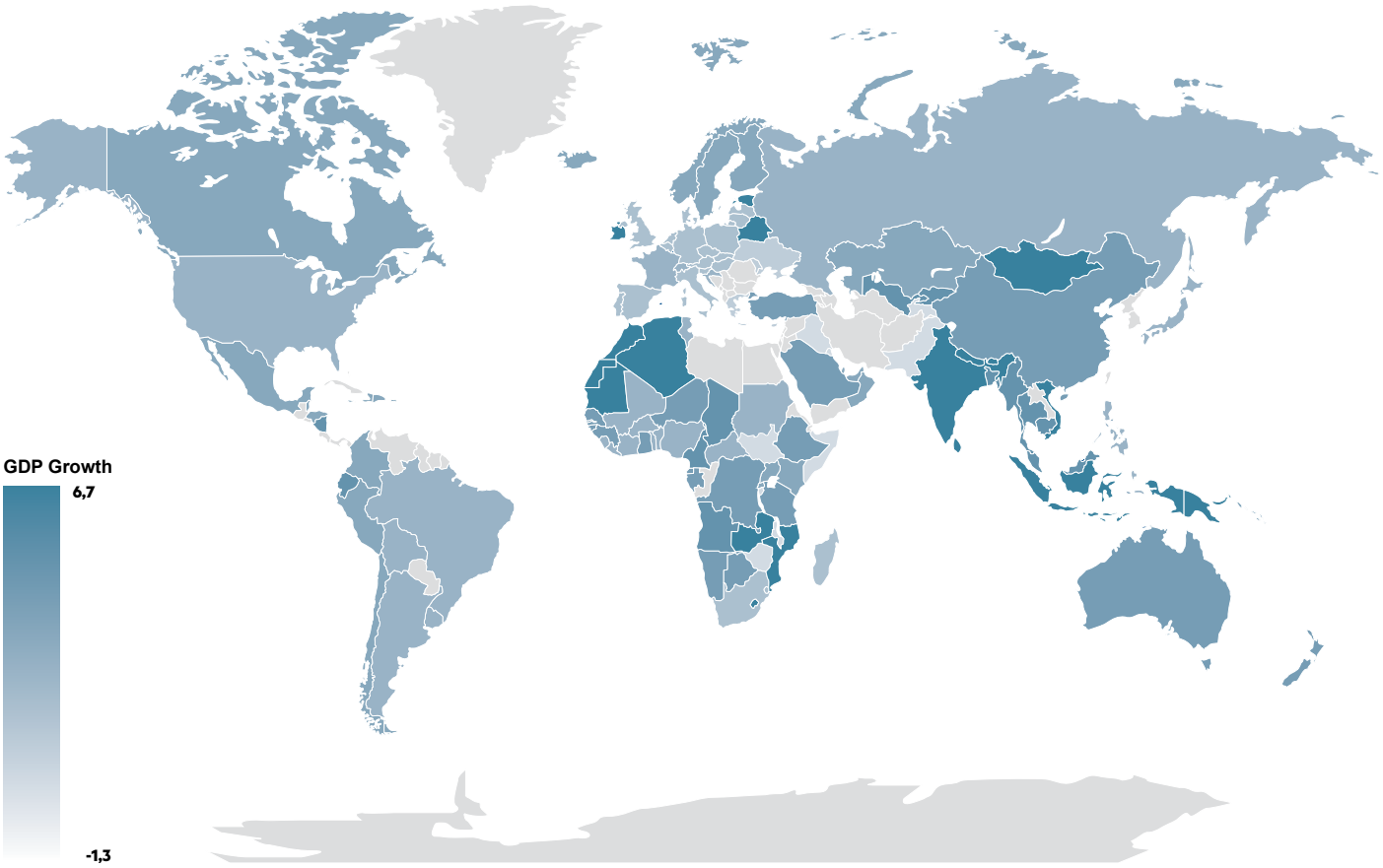


Figure 3: The range of structural growth rates by country, as calculated from the six-factor model

That caveat aside, the six-factor growth structure gives us the ability to rank countries based on total six-factor score and 10-year prospects, which, in turn, is a sound basis for policy formulation in the public sector and strategic intent in the private sector. The growth structure figure suggests a best possible economic growth rate given the associated country's actual six-factor score. As per Figure 4, global potential growth rates for the 2021–2030 period range from -1.3% (Guinea-Bissau, Somali, and South Sudan) to 6.7% (Algeria, Mongolia, Mozambique, Qatar, the Seychelles, and Zambia).

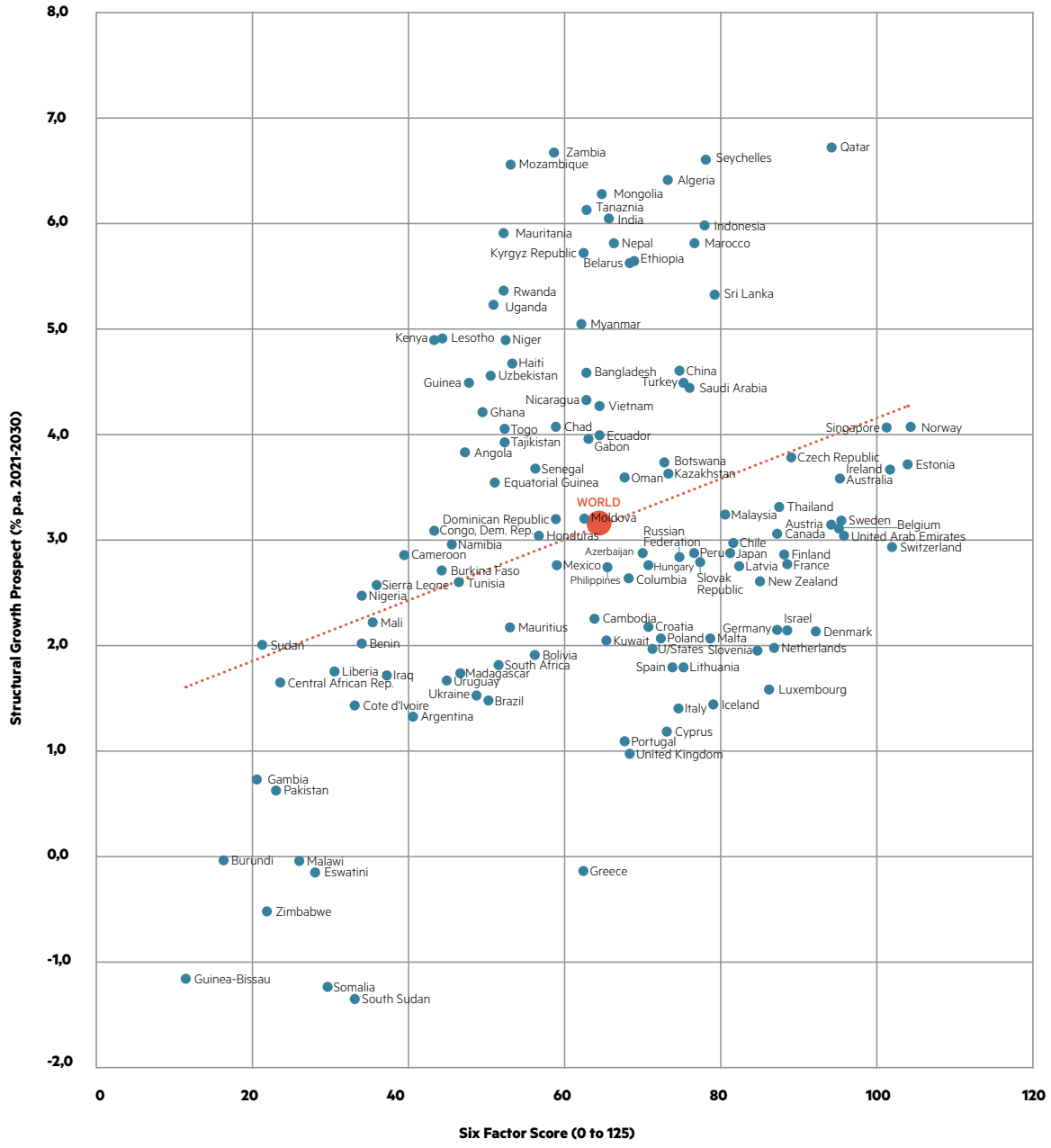


Figure 4: The range of structural growth rates by country, as calculated from the six-factor model

Notably, the growth structure of the world economy post-COVID-19 points to 3.1% per annum over the decade. Importantly, this is not to suggest that economic growth is the be-all and end-all of prosperity – we acknowledge the many shortcomings of GDP as a measure of progress. However, the correspondence between GDP and other broader, core measures of well-being, such as the Human Development Index and Gross National Happiness is high. Furthermore, we take some confidence from the fact that the supposed growth structure of the next 10 years of 3.1% per annum closely resembles the growth structure of the world economy over the past 100 years. From this, we can focus on more specific regional or country questions. To this end, Figure 5 shows structural rates for African countries for the 2021–2030 period.

For the sake of illustration, three African countries have been selected for further analysis. One country was chosen from the lowest six-factor scores (Somalia); one from the middle range (South Africa); and one from the top scorers (Botswana).

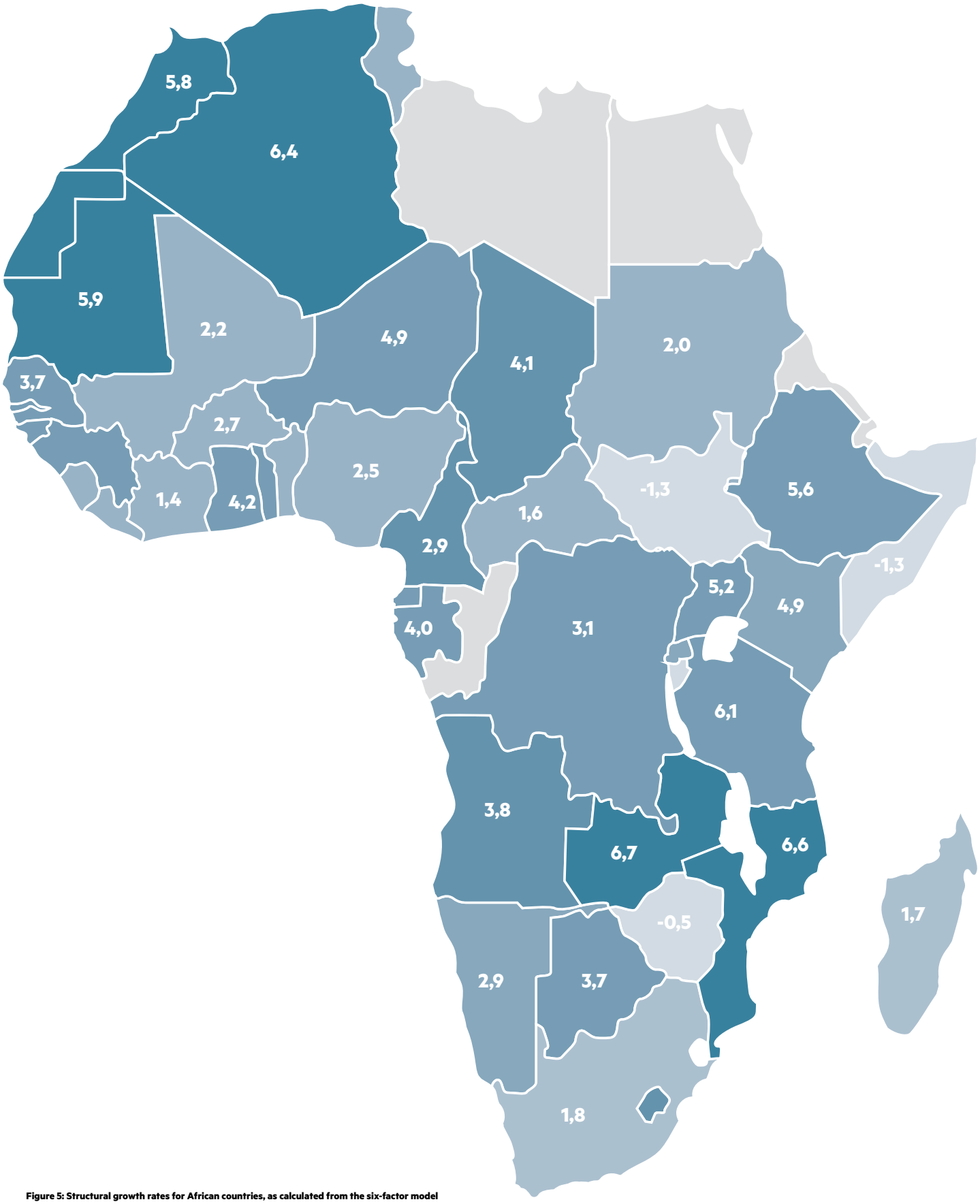
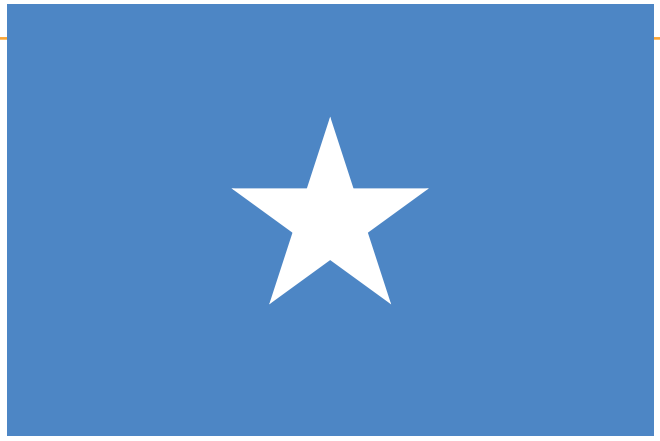


Figure 5: Structural growth rates for African countries, as calculated from the six-factor model

Somalia



Whereas in the industrialized West, poetry – and especially what is regarded as serious poetry –seems to be increasingly relegated to a marginal place in society, Somali oral verse is central to Somali life.

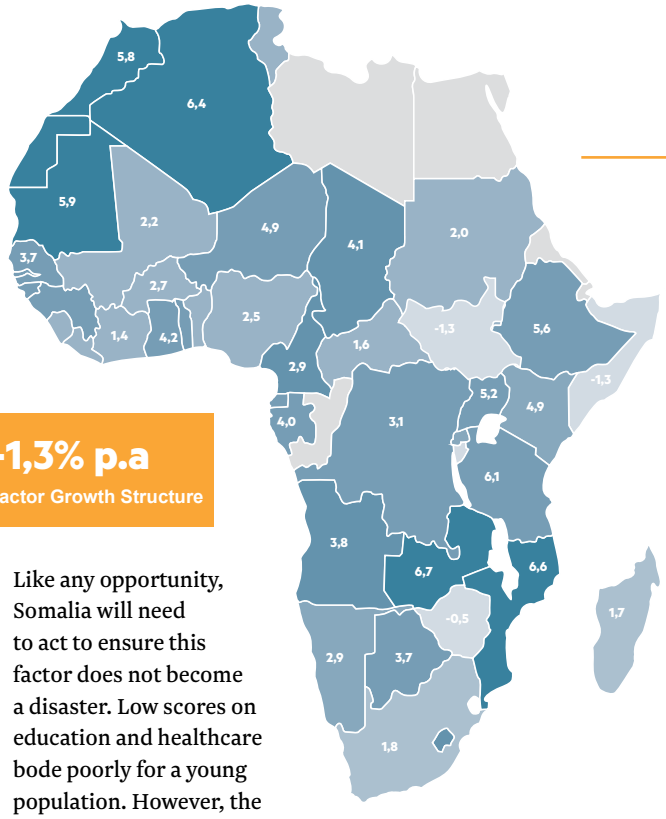
~ Somali scholar Said Sheikh Samatar, explaining the country's moniker, the "Nation of Poets"

Our starting point ought to be Somalia's overall six-factor ranking of 116 out of a total of 125 countries. This is a country struggling on the model and in terms of economics and prosperity. A number of individual factor scores serve as testament to this. Somalia scores worst out of 125 nations for savings and investment. Just four countries score worse for healthcare. Both policy and institutions and education are outside the top 110.

Six factor Rank	116	/125	Somalia	Country	Median	Best	Worst
	125	Savings & Investment	Savings % GDP (10-year average)	-5,0	21,9	65,0	-52,9
			Investment % GDP (10-year average)	9,0	23,2	44,9	8,7
	10	Demography	Population Growth % (t-18)	3,5	1,4	5,2	-3,8
	114	Policy & Institutions	Budget Balance % GDP(10-year average)	-0,5	-3,1	19,7	-8,0
			Money Supply Growth % (5-year average)	8,0	8,1	-8,6	80,0
			Debt % GDP	83,0	50,6	8,4	238,0
			Central Bank Policy (0-4)	1	3	4	0
	111	Education	Schooling (Years)	4,0	8,7	1,4	14,2
	121	Healthcare	Life Expectancy (Years)	57,1	73,9	84,2	52,8
			Change in Life Expectancy % (20 years)	7,3	5,8	25,0	1,1
			Infant Mortality Rate (per 1,000 live births)	74,0	14,3	1,6	81,0
			Change in Infant Mortality % (10 years)	-24,6	-25,0	-55,7	41,0
	48	Openness	Openness	50	74	1	169
			Change in Openness % (5 years)	5,0	0,0	-44,4	126,7

Figure 6: Summary of Somalia's six-factor rank

2021-2030	Country	Median	Best	Worst
Growth Structure (% p.a.)	-1,3	2,9	6,7	-1,3
Population Growth (% p.a.)	2,9	1,4	3,8	-1,8
Per Capita Income (% p.a.)	-4,1	1,7	5,8	-4,1
GDP/Capita (% p.a. 2010 - 2019)	1,0	1,8	7,2	-7,3



-1,3% p.a
Six Factor Growth Structure

As asserted earlier, the six parts of the model provide tools upon which governments can base policy. One standout factor for Somalia is the demography ranking. Placing 10th out of 125 suggests this is a foothold upon which to generate prosperity. The demography factor in the model favours a growing proportion of young people entering the workforce, and therefore a demographic dividend. The population pyramids for Somalia and Japan are depicted in Figures 8 and 9. The Somalian pyramid is a picture of potential, while the Japanese pyramid suggests a high proportion of people retiring, with not enough young people to enter the workforce and grow in seniority. Japan has long suffered from economic stagnation (albeit at a high standard of living) and is now responding with policies enticing young immigrants (Roberts, 2018).

Like any opportunity, Somalia will need to act to ensure this factor does not become a disaster. Low scores on education and healthcare bode poorly for a young population. However, the six-factor model suggests this may be where their "bang for buck" lies. Even modest improvements in education and healthcare will be strongly enabling of a large, young population.

		1999-2018 Growth Sequence, Contributors & Structure	Angola	Botswana	DRC	Ethiopia	Kenya	Malawi	Northern Mozambique	Southern Mozzambique	Namibia	Rwanda	Somalia	South Africa	South Sudan	Tanzania	Zambia	Zimbabwe
	Growth Stability	GDP Growth (% p.a.)	4,5	4,7	4,8	8,3	4,4	4,5	6,7	6,7	3,7	7,8	2,9	2,8	5,7	6,8	6,4	3,9
		Volatility (% s.d.)	8,0	7,0	4,3	4,6	2,2	7,6	3,6	3,6	3,4	2,3	0,4	2,1	7,0	1,7	4,0	19,5
	Contributors (+/-)	Consumption	2,8	2,6	2,8	5,4	3,6	3,5	3,2	3,2	3,5	5,3	2,2	1,9	0,7	3,5	2,3	2,7
		Investment	-0,2	1,0	1,9	3,7	1,1	1,5	1,4	1,4	0,6	2,9	0,5	0,7	-0,8	3,2	3,2	0,3
		Government	0,4	0,8	0,3	0,7	0,5	0,4	2,7	2,7	0,9	1,2	0,2	0,6	4,6	0,6	0,9	1,6
		Export	1,5	1,8	2,1	0,7	0,6	1,3	3,9	3,9	1,4	1,6	0,0	0,7	1,7	0,9	3,0	0,5
		Imports	0,0	-1,5	-2,4	-2,2	-1,3	-2,2	-4,6	-4,6	-2,8	-3,2	0,0	-1,1	-0,5	-1,4	-3,0	-1,2
	Contributors (%)	Consumption	62,6	55,8	59,0	65,1	80,0	77,5	48,3	48,3	94,7	67,8	77,0	67,1	94,1	51,8	35,3	68,6
		Investment	-5,0	21,8	39,8	44,2	24,7	33,6	21,0	21,0	16,2	37,2	16,5	23,5	9,5	47,3	49,9	8,3
		Government	9,4	16,3	6,2	8,9	11,9	8,2	40,3	40,3	24,3	15,4	7,5	23,2	27,5	8,4	14,5	41,3
		Export	33,0	38,1	44,4	8,1	12,6	28,3	58,2	58,2	38,7	20,8	0,3	26,2	12,5	13,2	46,8	13,2
		Imports	0,0	-32,0	-49,4	-26,3	-29,2	-47,5	-67,8	-67,8	-73,9	-41,1	-1,3	-40,1	-43,5	-20,7	-46,6	-31,4
	Drivers (%)	C + G	72,0	72,1	65,2	74,0	92,0	85,7	88,6	88,6	119,1	83,2	84,5	90,3	92,3	60,2	49,9	110,0
		I + NX	28,0	27,9	34,8	26,0	8,0	14,3	11,4	11,4	-19,1	16,8	15,5	9,7	7,7	39,8	50,1	-10,0
	Components	Investment as % GDP (10 years)	34,8	29,0	22,9	33,3	20,3	22,9	41,0	41,0	23,6	25,4	20,1	19,9	9,5	33,5	36,4	10,8
		Government as % GDP (10 years)	17,8	18,5	12,1	8,9	13,6	9,5	24,6	24,6	24,8	14,6	8,7	20,7	27,5	9,6	12,9	19,1
		NX as % GDP (10 years)	-5,4	1,6	-5,2	-13,8	-11,2	-17,0	-32,8	-32,8	-16,1	-17,2	-1,4	-0,3	-31,0	-6,6	-0,9	-13,0

Descriptor: High growth, low volatility but truncated for 2009 - 2018; modest invetment drive; high government component and strong NX lead.

Figure 7: Somalia's six factor rank in comparison

Like any opportunity, Somalia will need to act to ensure this factor does not become a disaster. Low scores on education and healthcare bode poorly for a young population. However, the six-factor model suggests this may be where their "bang for buck" lies. Even modest improvements in education and healthcare will be strongly enabling of a large, young population.

Somalia 2019

Population: 15,442,905

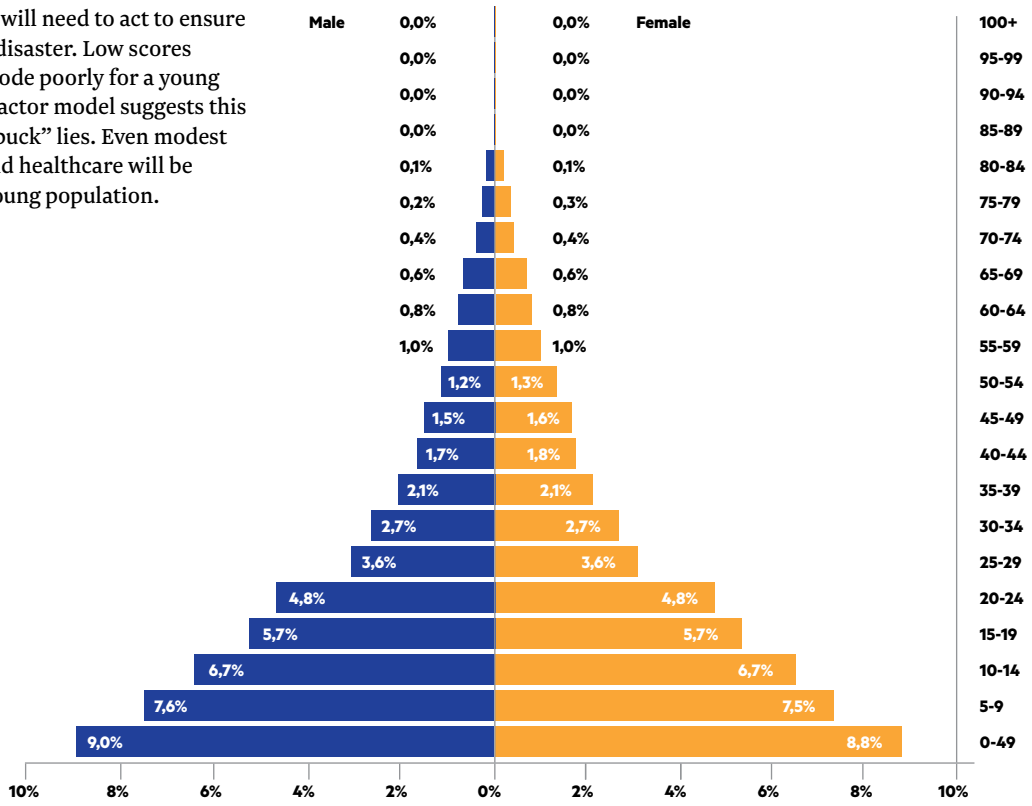
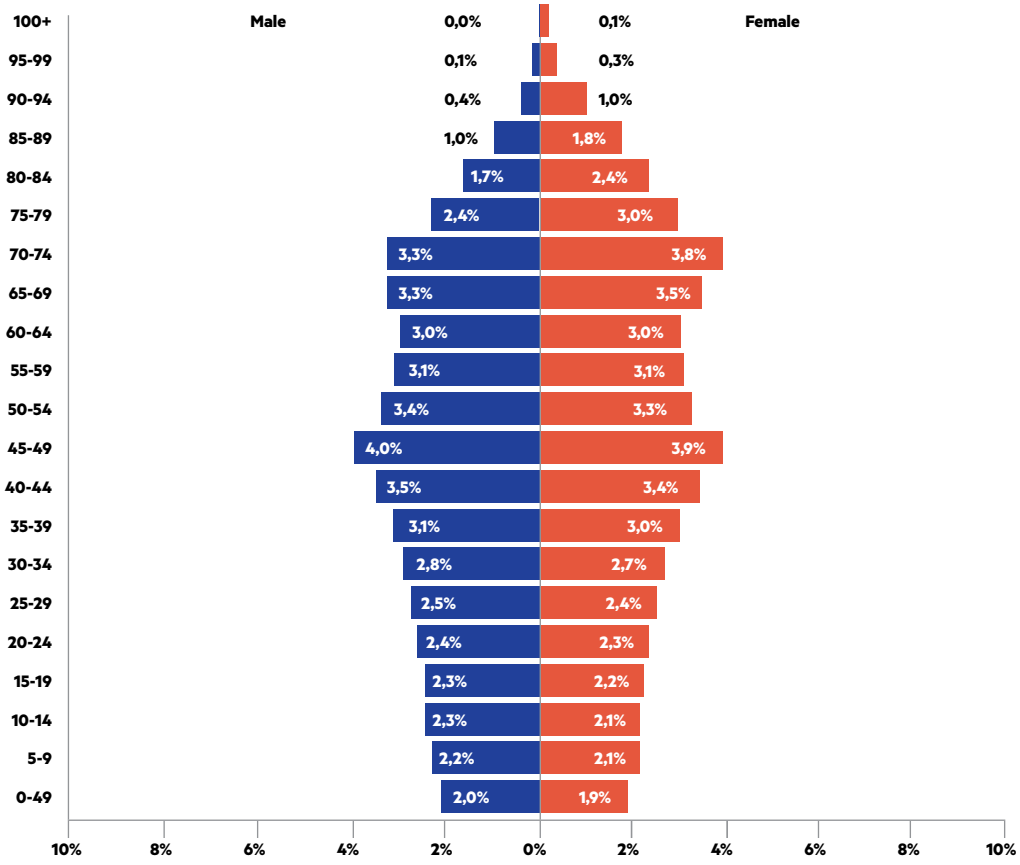
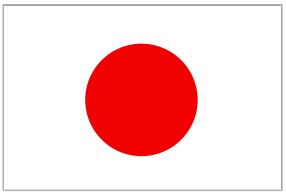


Figure 8: Population pyramid for Somalia, demonstrating high potential for a demographic dividend *(Source: PopulationPyramid.net, 2019a)*





Japan 2019

Population: 126,860,299

Figure 9: Population pyramid for Japan, demonstrating low potential for a demographic dividend *(Source: PopulationPyramid.net, 2019b)*

South Africa

South Africa has advanced politically by disasters and economically by windfalls.

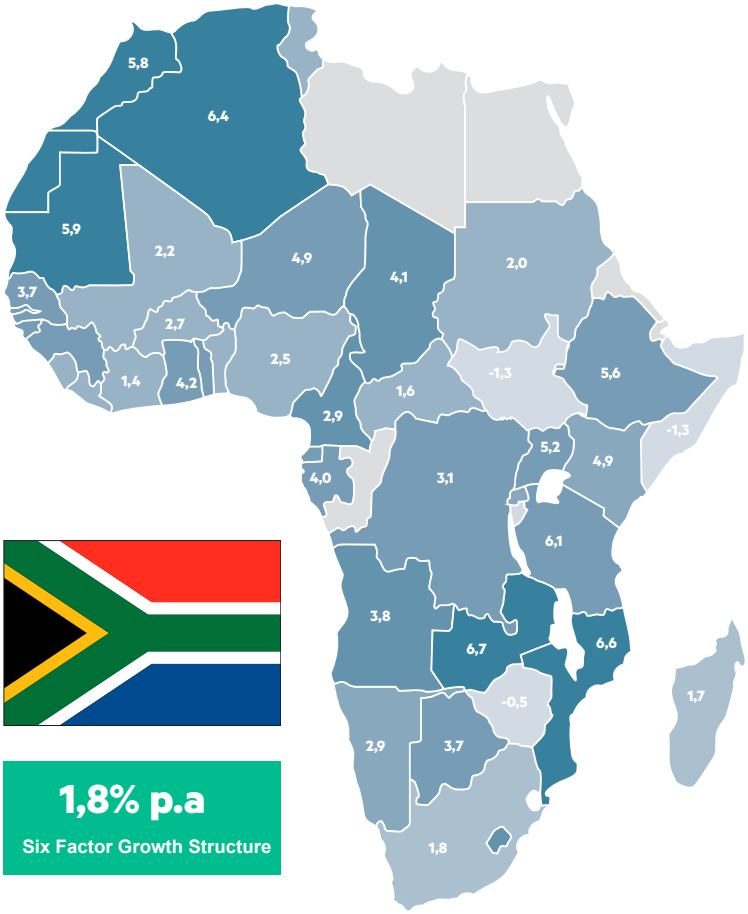
~ C.W. de Kiewiet, Historian

Long the economic powerhouse of Africa, South Africa falls in the lower-middle region of six-factor scores in 2021, with a structural growth rate of 1.8% per annum. Notably, this is only modestly ahead of the population growth estimated at 1.3% per annum, which translates into per person income growth trapped at 0.5% per annum. Although South Africa is the most industrialised, technologically advanced and diversified economy on the African continent, factors point to the country being "trapped". Lacking any extreme individual scores, the lowest-ranking factor of healthcare at 107 of 125, indicates the key importance of the ongoing debate around universal access to effective healthcare. Against the backdrop of a high-quality private healthcare system, to which fewer than 17% of South Africans have access (Stats SA, General Household Survey, 2018), the National Health Insurance Bill (Parliament of the Republic of South Africa, 2019) proposes a nationally provided system for healthcare.

If anything, the distance between policy (43 out of 125) and effective impact is evidenced by the distance to healthcare (107) and education (56), where South Africa boasts the highest level of public-sector spend as a percentage of GDP amongst its income category globally. The low saving-and-investment score (97) also identifies stubbornly low investment confidence in the critical factor of GDFI, including public- and private-sector spend on infrastructure. Squaring up to these two elements of healthcare and investment would see South Africa leapfrog the table.

Six factor Rank	89	/125	South Africa	Country	Median	Best	Worst
	97	Savings & Investment	Savings % GDP (10-year average)	19,5	21,9	65,0	-52,9
			Investment % GDP (10-year average)	19,5	23,2	44,9	8,7
	67	Demography	Population Growth % (t-18)	1,3	1,4	5,2	-3,8
	43	Policy & Institutions	Budget Balance % GDP(10-year average)	-4,5	-3,1	19,7	-8,0
			Money Supply Growth % (5-year average)	7,1	8,1	-8,6	80,0
			Debt % GDP	62,2	50,6	8,4	238,0
			Central Bank Policy (0-4)	4	3	4	0
	56	Education	Schooling (Years)	9,3	8,7	1,4	14,2
	107	Healthcare	Life Expectancy (Years)	63,9	73,9	84,2	52,8
			Change in Life Expectancy % (20 years)	5,5	5,8	25,0	1,1
			Infant Mortality Rate (per 1,000 live births)	27,5	14,3	1,6	81,0
			Change in Infant Mortality % (10 years)	-24,7	-25,0	-55,7	41,0
	59	Openness	Openness	56	74	1	169
			Change in Openness % (5 years)	12,0	0,0	44,4	126,7

Figure 10:Summary of South Africa's six-factor rank



2021-2030	Country	Median	Best	Worst
Growth Structure (% p.a.)	1,8	2,9	6,7	-1,3
Population Growth (% p.a.)	1,3	1,4	3,8	-1,8
Per Capita Income (% p.a.)	0,5	1,7	5,8	-4,1
GDP/Capita (% p.a. 2010 - 2019)	0,2	1,8	7,2	-7,3

1,8% p.a

Six Factor Growth Structure

		1999-2018 Growth Sequence, Contributors & Structure	Angola	Botswana	DRC	Ethiopia	Kenya	Malawi	Northern Mozambique	Southern Mozzambique	Namibia	Rwanda	Somalia	South Africa	South Sudan	Tanzania	Zambia	Zimbabwe
	Growth Stability	GDP Growth (% p.a.)	4,5	4,7	4,8	8,3	4,4	4,5	6,7	6,7	3,7	7,8	2,9	2,8	5,7	6,8	6,4	3,9
		Volatility 9% s.d.)	8,0	7,0	4,3	4,6	2,2	7,6	3,6	3,6	3,4	2,3	0,4	2,1	7,0	1,7	4,0	19,5
	Contributors (+/-)	Consumption	2,8	2,6	2,8	5,4	3,6	3,5	3,2	3,2	3,5	5,3	2,2	1,9	0,7	3,5	2,3	2,7
		Investment	-0,2	1,0	1,9	3,7	1,1	1,5	1,4	1,4	0,6	2,9	0,5	0,7	-0,8	3,2	3,2	0,3
		Government	0,4	0,8	0,3	0,7	0,5	0,4	2,7	2,7	0,9	1,2	0,2	0,6	4,6	0,6	0,9	1,6
		Export	1,5	1,8	2,1	0,7	0,6	1,3	3,9	3,9	1,4	1,6	0,0	0,7	1,7	0,9	3,0	0,5
		Imports	0,0	-1,5	-2,4	-2,2	-1,3	-2,2	-4,6	-4,6	-2,8	-3,2	0,0	-1,1	-0,5	-1,4	-3,0	-1,2
	Contributors (%)	Consumption	62,6	55,8	59,0	65,1	80,0	77,5	48,3	48,3	94,7	67,8	77,0	67,1	94,1	51,8	35,3	68,6
		Investment	-5,0	21,8	39,8	44,2	24,7	33,6	21,0	21,0	16,2	37,2	16,5	23,5	9,5	47,3	49,9	8,3
		Government	9,4	16,3	6,2	8,9	11,9	8,2	40,3	40,3	24,3	15,4	7,5	23,2	27,5	8,4	14,5	41,3
		Export	33,0	38,1	44,4	8,1	12,6	28,3	58,2	58,2	38,7	20,8	0,3	26,2	12,5	13,2	46,8	13,2
		Imports	0,0	-32,0	-49,4	-26,3	-29,2	-47,5	-67,8	-67,8	-73,9	-41,1	-1,3	-40,1	-43,5	-20,7	-46,6	-31,4
	Drivers (%)	C + G	72,0	72,1	65,2	74,0	92,0	85,7	88,6	88,6	119,1	83,2	84,5	90,3	92,3	60,2	49,9	110,0
		I + NX	28,0	27,9	34,8	26,0	8,0	14,3	11,4	11,4	-19,1	16,8	15,5	9,7	7,7	39,8	50,1	-10,0
	Components	Investment as % GDP (10 years)	34,8	29,0	22,9	33,3	20,3	22,9	41,0	41,0	23,6	25,4	20,1	19,9	9,5	33,5	36,4	10,8
		Government as % GDP (10 years)	17,8	18,5	12,1	8,9	13,6	9,5	24,6	24,6	24,8	14,6	8,7	20,7	27,5	9,6	12,9	19,1
		NX as % GDP (10 years)	-5,4	1,6	-5,2	-13,8	-11,2	-17,0	-32,8	-32,8	-16,1	-17,2	-1,4	-0,3	-31,0	-6,6	-0,9	-13,0

Descriptor: Low growth, low volatility; driven by consumption spending and government spending; moderate-to-low investment contribution; NX supportive.

Figure 11:South Africa's six-factor rank in comparison

Botswana

Awake, awake ... awake!

...

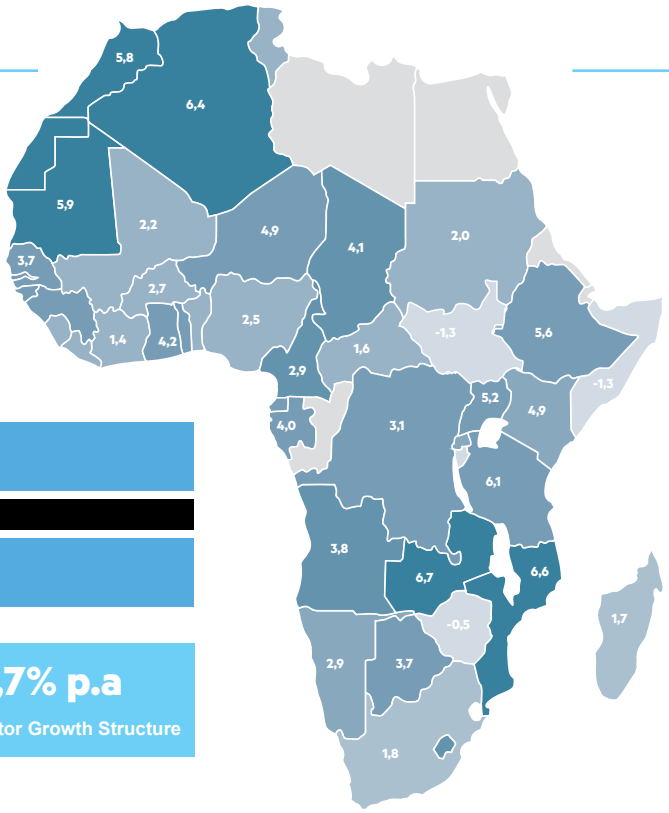
Together we'll work and serve This land, this happy land!

~ Chorus to "Fatshe leno la rona", Botswana's national anthem, written and composed by Kgalemang Tumediso Motsete and adopted at independence in 1966

At 46 out of the 125 countries scored on the six-factor model, Botswana can boast a six-factor growth structure of 3.7% that is meaningfully higher than a population growth of 2.2%. This suggests a time horizon of around 19 years for a doubling of GDP and 48 years for a doubling of GDP per capita. This contrasts with a figure of nearly 40 years for doubling the South African economy and almost 150 years based on South Africa's per capita growth rate. However, it is worth considering that Botswana's growth applies to a substantially higher per capita income ($7 894 adjusted for purchasing power parity) than its economically bigger neighbour ($6 120).

Six factor Rank	46	/125	Botswana	Country	Median	Best	Worst
	15	Savings & Investment	Savings % GDP (10-year average)	31,4	21,9	65,0	-52,9
			Investment % GDP (10-year average)	32,6	23,2	44,9	8,7
	49	Demography	Population Growth % (t-18)	1,9	1,4	5,2	-3,8
	24	Policy & Institutions	Budget Balance % GDP(10-year average)	-1,0	-3,1	19,7	-8,0
			Money Supply Growth % (5-year average)	8,2	8,1	-8,6	80,0
			Debt % GDP	15,1	50,6	8,4	238,0
			Central Bank Policy (0-4)	3	3	4	0
	56	Education	Schooling (Years)	9,3	8,7	1,4	14,2
	54	Healthcare	Life Expectancy (Years)	69,3	73,9	84,2	52,8
			Change in Life Expectancy % (20 years)	17,3	5,8	25,0	1,1
			Infant Mortality Rate (per 1,000 live births)	32,3	14,3	1,6	81,0
			Change in Infant Mortality % (10 years)	41,0	-25,0	-55,7	41,0
	114	Openness	Openness	147	74	1	169
			Change in Openness % (5 years)	2,8	0,0	-44,4	126,7

Figure 12: Summary of Botswana's six-factor rank



2021-2030	Country	Median	Best	Worst
Growth Structure (% p.a.)	3,7	2,9	6,7	-1,3
Population Growth (% p.a.)	2,2	1,4	3,8	-1,8
Per Capita Income (% p.a.)	1,6	1,7	5,8	-4,1
GDP/Capita (% p.a. 2010 - 2019)	3,0	1,8	7,2	-7,3

3,7% p.a
Six Factor Growth Structure

		1999-2018 Growth Sequence, Contributors & Structure	Angola	Botswana	DRC	Ethiopia	Kenya	Malawi	Northern Mozambique	Southern Mozzambique	Namibia	Rwanda	Somalia	South Africa	South Sudan	Tanzania	Zambia	Zimbabwe
	Growth Stability	GDP Growth (% p.a.)	4,5	4,7	4,8	8,3	4,4	4,5	6,7	6,7	3,7	7,8	2,9	2,8	5,7	6,8	6,4	3,9
		Volatility 9% s.d.)	8,0	7,0	4,3	4,6	2,2	7,6	3,6	3,6	3,4	2,3	0,4	2,1	7,0	1,7	4,0	19,5
	Contributors (+/-)	Consumption	2,8	2,6	2,8	5,4	3,6	3,5	3,2	3,2	3,5	5,3	2,2	1,9	0,7	3,5	2,3	2,7
		Investment	-0,2	1,0	1,9	3,7	1,1	1,5	1,4	1,4	0,6	2,9	0,5	0,7	-0,8	3,2	3,2	0,3
		Government	0,4	0,8	0,3	0,7	0,5	0,4	2,7	2,7	0,9	1,2	0,2	0,6	4,6	0,6	0,9	1,6
		Export	1,5	1,8	2,1	0,7	0,6	1,3	3,9	3,9	1,4	1,6	0,0	0,7	1,7	0,9	3,0	0,5
		Imports	0,0	-1,5	-2,4	-2,2	-1,3	-2,2	-4,6	-4,6	-2,8	-3,2	0,0	-1,1	-0,5	-1,4	-3,0	-1,2
	Contributors (%)	Consumption	62,6	55,8	59,0	65,1	80,0	77,5	48,3	48,3	94,7	67,8	77,0	67,1	94,1	51,8	35,3	68,6
		Investment	-5,0	21,8	39,8	44,2	24,7	33,6	21,0	21,0	16,2	37,2	16,5	23,5	9,5	47,3	49,9	8,3
		Government	9,4	16,3	6,2	8,9	11,9	8,2	40,3	40,3	24,3	15,4	7,5	23,2	27,5	8,4	14,5	41,3
		Export	33,0	38,1	44,4	8,1	12,6	28,3	58,2	58,2	38,7	20,8	0,3	26,2	12,5	13,2	46,8	13,2
		Imports	0,0	-32,0	-49,4	-26,3	-29,2	-47,5	-67,8	-67,8	-73,9	-41,1	-1,3	-40,1	-43,5	-20,7	-46,6	-31,4
	Drivers (%)	C + G	72,0	72,1	65,2	74,0	92,0	85,7	88,6	88,6	119,1	83,2	84,5	90,3	92,3	60,2	49,9	110,0
		I + NX	28,0	27,9	34,8	26,0	8,0	14,3	11,4	11,4	-19,1	16,8	15,5	9,7	7,7	39,8	50,1	-10,0
	Components	Investment as % GDP (10 years)	34,8	29,0	22,9	33,3	20,3	22,9	41,0	41,0	23,6	25,4	20,1	19,9	9,5	33,5	36,4	10,8
		Government as % GDP (10 years)	17,8	18,5	12,1	8,9	13,6	9,5	24,6	24,6	24,8	14,6	8,7	20,7	27,5	9,6	12,9	19,1
		NX as % GDP (10 years)	-5,4	1,6	-5,2	-13,8	-11,2	-17,0	-32,8	-32,8	-16,1	-17,2	-1,4	-0,3	-31,0	-6,6	-0,9	-13,0

Descriptor: Strong growth structure, underpinned by investment component, but volatility driven up by large (volatile) NX sector.

Figure 13: Botswana's six-factor rank in comparison

Botswana's position of 15 out of 125 for the factor of saving and investment suggests ample investment capital available to build productive capacity. Like Somalia, one factor presents itself as the obvious area for the most efficient application of policy levers in Botswana. At 114 out of 125, Botswana's openness factor is the country's only one outside of the top half – and just one place outside the bottom 10 countries. This factor is explained by the country's economic relationship with other economies being explained overwhelmingly by a single element, namely diamonds.

Unlike Somalia's standout factor of demography, which is deeply embedded, Botswana faces a lever that policy can rapidly alter. Flows of trade and capital and the movement of people and ideas are more rapidly and inexpensively changed today than ever before. This ingredient is Botswana's needle mover.

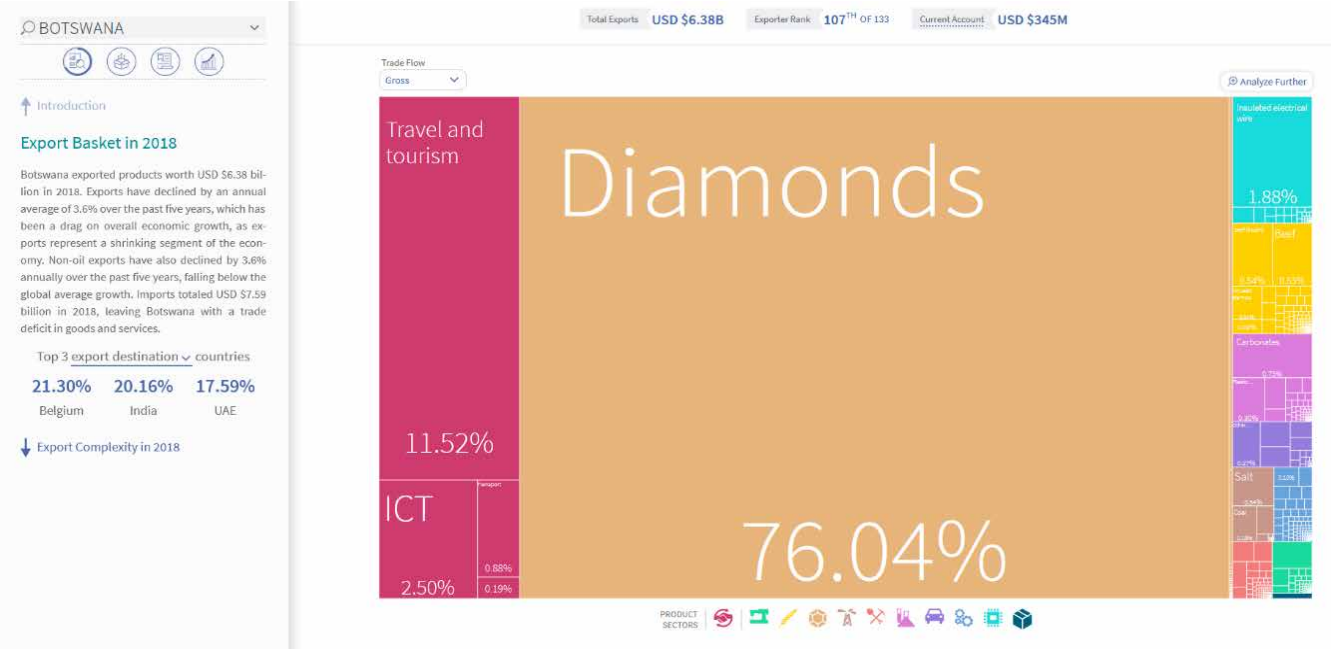


Figure 14: Botswana's concentrated export basket *(Source: Growth Lab at Harvard University)*

Harmonising African economies and trade

It may have gone under-reported by the world's media amid the COVID-19 dominance of airwaves, but the African Union (2018) recently announced a bold agreement to embrace one of the phenomena touted by the six-factor model. On 1 January 2021, the African Continental Free Trade Agreement (AfCFTA) came into effect, where the goal: "Enhance competitiveness of services through: economies of scale, reduced business costs, enhanced continental market access, and an improved allocation of resources including the development of trade-related infrastructure" (African Union, p. 36). Or, in terms used by the six-factor model, the goal is to: build connectedness, openness, and economic integration. The AfCFTA creates the largest free-trade area by number of participating countries since the establishment of the World Trade Organization, including more than 1.2 billion people, covering a combined GDP of some $2.5 trillion (International Monetary Fund, 2019).

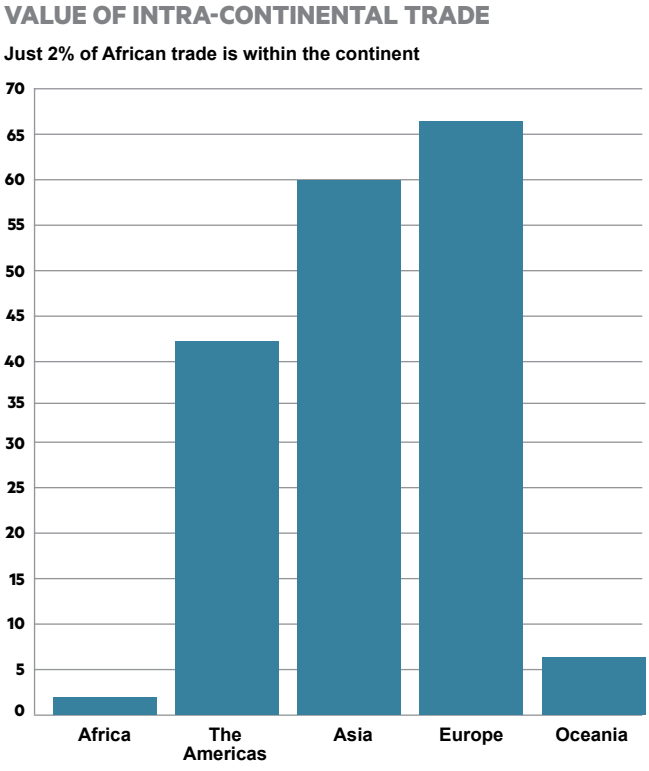


Figure 15: Value of intra-continental trade by continent, measured as an average between 2015 and 2017 *(Source: UNCTAD)*

The International Monetary Fund (2019) estimates that eliminating tariffs to 90% of existing intra-Africa trade flows – that being the most ambitious target under the AfCFTA – would boost regional trade by approximately 16% of current volumes, over time.

Connectedness, AfCFTA, and CAGE

The heightened connectedness that AfCFTA foretells will present opportunities and challenges to individual companies. One powerful tool to aid executives in navigating a more connected continent is the CAGE model developed by Pankaj Ghemawat (Ghemawat & Altman, 2016). With professorships at the IESE Business School in Barcelona and the Stern School of Business at New York University, Ghemawat maps this challenge using the "distance" between two countries based on cultural, administrative, geographic, and economic (CAGE) issues.

Literal distance, the geographic element or "G", is self-explanatory. A business is less likely to succeed in a new country that is a longer flight distance away, more of a climatic contrast, and which disrupts sleep patterns to speak with another on the phone or via Zoom.

Administrative and cultural distance are ignored to one's peril, according to Ghemawat. In his MBA course, Globalisation of Business Enterprise (2020), he cites myriad examples of companies that entered foreign markets, confident of their offerings, that end up losing vast sums because of some cultural or administrative incompatibility. CAGE provides a checklist of potential barriers for a business to analyse ahead of any expansion.

Economic distance is one with greater nuance. While all elements of C, A, and G are better when the difference is smaller, that is not the case with E. There is little to gain from expansion into an economically identical market. More enticing is a market where the cost of labour will lower costs of production, or per capita income makes goods and services more affordable or more highly desired. A tech start-up may chase a labour force with better technological savvy, or a miner may expand for access to mineral resources. Culturally, administratively, geographically, and economically, Africa is a vastly diverse place. While AfCFTA will bring African countries closer by trade rules and institutions, this will make the management of CAGE elements more important than ever.

CAGE DISTANCE FRAMEWORK (*)

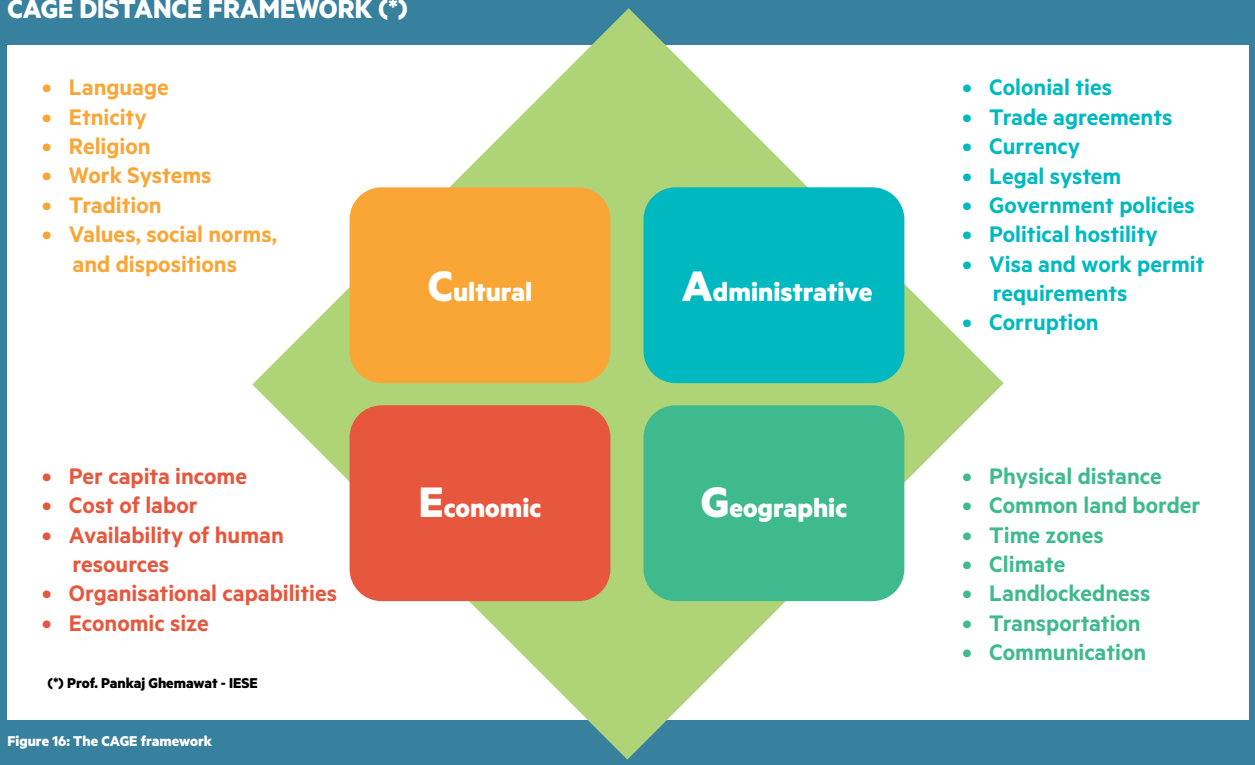


Figure 16: The CAGE framework

Connectedness, AfCFTA, and non-market strategies

Business managers and executives often think of the world – and target markets – in terms of market strategies. This is the world of competitors, customers, and suppliers; of supply and demand; and of formalised "rules of the game". However, there is an environment too frequently ignored that has just as much scope for the creation and generation of competitive advantage. The non-market environment is that of media, activists, citizens, non-governmental organisations (NGOs), regulators, and governments. In this world, it is non-market strategies that yield benefits.

Non-market strategies also have heightened relevance in Africa. In developed countries where formal institutions are strong, non-market strategies are largely institutionalised. The rules of the game are well known and the outcomes generally are more predictable. Think of lobbyists in Washington DC. In markets where traditional, formal institutions are weak, as is the case in much of Africa, the non-market environment is larger and less formalised, and so has greater capacity for adaptation. As AfCFTA connects more African countries at deeper levels, non-market strategies will become more critical still.

At the heart of non-market strategies is the understanding that companies do not always have to be mere subjects of their environment. Regulators can be engaged; local communities can be brought on board; governments can be partners; and activists can be assets.

One iconic example of a non-market strategy in a major African market is the way South Africa-based network provider MTN has dealt with regulators and government in Nigeria. The company faced political opposition and several large, high-profile findings and allegations for falling foul of regulations (Wöcke & Beamish, 2017), which was hardly an issue to be addressed with market strategy. MTN's economics and offerings were successful, and the company responded with two impactful non-market strategies. The company listed in Nigeria, sending the message of commitment to the country. It also established an international advisory board. This body, which featured South Africans and Nigerians, including the likes of former presidents, provided a platform for advice and discussion on potential challenges before reaching the stage of potential fines (Onaji-Benson, 2019).

South Africa-based cement-maker PPC displayed similar non-market acumen in its dealings in Rwanda. In addition to a fruitful relationship with the host government, PPC employed a "community relational political strategy to train and empower local community members to get the required tailor training, start their businesses and register a cooperative to support them" (Onaji-Benson, 2019, p. 184). This was a non-market strategy in building constituencies and legitimacy in a foreign context.

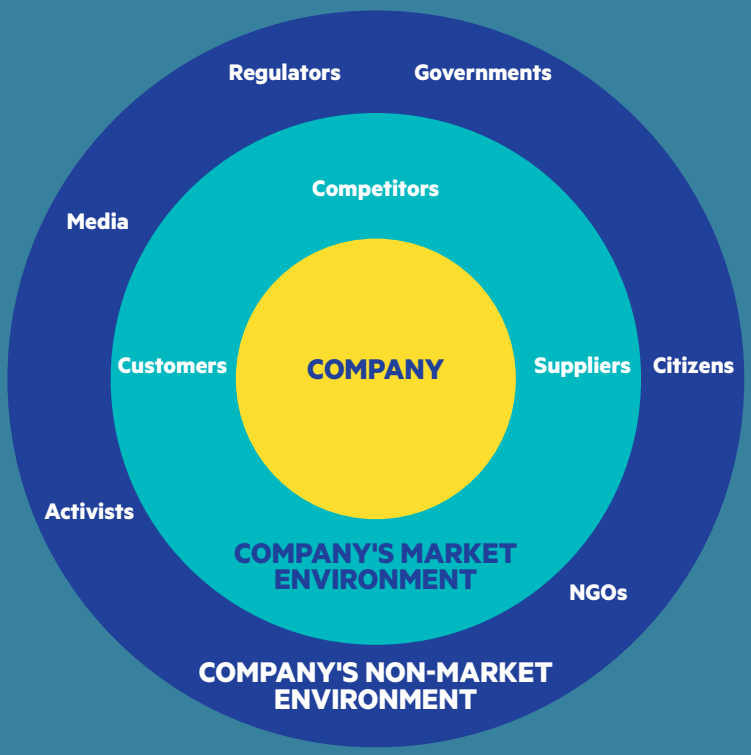


Figure 17: Graphical representation of a company situated within a market environment and a non-market environment

Conclusion

Our research on African economies and the potential for prosperity highlights six factors as key to economic growth, namely: savings and investment; policy and institutions; demography; education; healthcare; and openness. A focus on these six factors by African economies is poised to facilitate and catalyse the recovery from the pandemic setbacks. Our findings further reiterate the role of policymakers, and business leaders in the agency towards African prosperity. With an understanding of what is needed for prosperity, we recommend that further research and action must proffer steps towards how these macro actions need to be effectively implemented for the overall economic and social development of the continent.

References

African Union. (2018). *Agreement establishing the African Continental Free Trade Area*. Retrieved from https://au.int/sites/default/files/treaties/36437-treaty-consolidated_text_on_cfta_-_en.pdf

The Economist. (2013, September 2). What was the great divergence?

Ferguson, N. (2011, July). *The 6 killer apps of prosperity* [Video file]. Retrieved from https://www.ted.com/talks/niall_ferguson_the_6_killer_apps_of_prosperity?language=en

Ferguson, N. (2012). *Civilization: The West and the rest*. New York, NY: Penguin.

Ghemawat, P. (2020). GLOBE Course. Retrieved from https://www.ghemawat.com/globe-course

Ghemawat, P., & Altman, S. A. (2016). Emerging economies: Differences and distances. AIB Insights, 16(4), 7–10.

Growth Lab at Harvard University. (2020). Atlas of Economic Complexity. *Regional economic outlook: Sub-Saharan Africa*. Retrieved from https://atlas.cid.harvard.edu/ International Monetary Fund

Maddison Project Database. (2021). *Maddison historical statistics*. Maddison Historical Statistics | Groningen Growth and Development Centre | University of Groningen (rug.nl)

Onaji-Benson, T. (2019). *Host-country risk, corporate political strategies and the subsidiary performance of South African market multinationals in wider Africa*. Johannesburg: Gordon Institute of Business Science, University of Pretoria.

Parliament of the Republic of South Africa. (2019). National Health Insurance Bill (B 11–2019). *Government Gazette*.

Pinker, S. (2018). Enlightenment now: *The case for reason, science, humanism, and progress*. United States. Penguin.

PopulationPyramid.net. (2019a). *Somalia: 2019*. Retrieved from https://www.populationpyramid.net/somalia/2019/

PopulationPyramid.net. (2019b). *Japan: 2019*. Retrieved from https://www.populationpyframid.net/japan/2019/

Qureishi, J. (2021, January 27). *AfCFTA: Short-term pain but with long-term gains: Excerpts from the African Markets Revealed (AMR)*. Standard Bank. Retrieved from https://cutt.ly/gkMI4r7

Roberts, G. S. (2018). An immigration policy by any other name: Semantics of immigration to Japan. *Social Science Japan Journal, 21(1)*, 89–102. https://doi.org/10.1093/ssjj/jyx033

Servén, L., Loayza, N., & Schmidt-Hebbel, K. (1999). *Saving: –What do we know and why do we care?* (Report No. 28). Retrieved from World Bank Group: https://openknowledge.worldbank.org/handle/10986/11468

United Nations. (2021). Ending poverty. Retrieved from https://www.un.org/en/global-issues/ending-poverty

Wöcke, A., & Beamish, P. W. (2017). *MTN and the Nigerian fine*. Canada. Ivey Publishing.

World Bank. (2021). *COVID-19 to add as many as 150 million extreme poor by 2021*. Retrieved from https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021

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