The African Century

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Executive Summary

In recent centuries, extraordinary periods of economic growth have rotated between nations scattered around the globe. Beginning with Western Europe in the 1700s, the pattern includes the post-World War II era in the United States, the export-driven Asian Tigers of the 1960s, and China's historic growth that began in the late 1970s and is only now slowing.[1]

While geography and language agnostic, the key factors of demographics, industrialization, infrastructure development, and geopolitics always served critical roles.

Global research and investment firms continuously examine and model these fundamental pillars of economic growth to optimize their investment allocations. This paper contends that the rare alignment of these time-tested variables is now occurring for Africa. They indicate the early stages of a manifestation that has seldom occurred in the past 300 years: a continent-wide, economic transformation of significantly above average growth lasting multiple decades.

If even the conservative assumptions included are correct, traditional portfolio allocation theory and practice imply that investors of all types are markedly underinvested in the continent. The repercussions are potentially less favorable results not just for the financial industry and its clients, but for the soon to be two billion Africans. Simple arithmetic proves numerous global initiatives led by the developed nations, such as de-carbonization, are likely in vain without deep and thoughtful integration of Africa's growing population and economies. As illustrated in this paper, the time to act is now.

We'll explore the reliability of the contributing factors to past periods of exceptional economic growth, apply them to Africa, and examine the continent's current and projected economic and human development.

After conducting that analysis, we'll evaluate if current capital allocations to the continent reconcile. Stress-testing of the projections is intertwined in the paper as are frequent comparisons to other periods of exceptional economic growth to provide useful context to the reader.

Economics Begins with Demographics

The global economy has experienced countless technological developments in the past 25 years. The way humans communicate, travel, learn, and transact continues to change at a pace unique in human history. And yet, the basic building blocks of an economy and who performs the work remain similar.

Let's begin with the carefully studied demographics of developed nations. We'll then compare that to Africa's current and projected characteristics.

America and Europe's average life expectancy a century ago was just under 55 for both sexes. [2] That is now roughly in line with citizens' age at peak earnings. [3] Most people in the 1920s entered the workforce as young teenagers. Today, the average entrant is nearly 10 years older. The productive window has shifted at least as much as it has widened.

Across most timelines and geographies, the proportion and growth of the net contributors to the economy, defined globally as those aged 18-64, dictate an economy's output as much as any other factor. [4] The most accretive are 25-59 years old, especially in developed nations. You'll note various iterations of this range throughout the paper depending on the source

Africa Is Growing Rapidly

1.3 Billion

Africa will add 1.3 billion people to the planet by 2050, according to a UN population report.

Over 50%

By 2050 around 2.2 billion people could be added to the global population and more than half of that growth will occur in Africa.

- Most developed and many developing nations are in the early stages of structural population decline.
- Future population growth will be concentrated in a small number of countries. Most are in Africa.
- Africa is the only continent expected to grow its working age population in the coming decades.
- New trends paint a much brighter picture for Africa in the next 30 years versus the last.

The profile of this critical segment is based on the fertility rate, infant mortality rate, median age, and average life expectancy. The boundaries of the working age population have shifted over time, but not its importance.

Looking forward, population growth will no longer be widely or evenly distributed. Eight countries are expected to account for over half global population growth through 2060. [5] Five of them are in Africa. India, Pakistan, and the Philippines are the others. None are in Europe, North America, or East Asia, which are collectively the current home for most private and public investment.

This reality is leading toward a marked decrease in the working age population and a proportional increase in those of retirement age in effectively all developed and many developing economies.

This has a profound impact on what the world will look like in the coming decades, and the spotlight will be on Africa. The U.N. projects that Africa's population will reach at least 2.5 billion by 2050, or approximately double today's figure, and close to 3 billion by 2060. It is not an overstatement to say that the continent stands alone demographically, and the gap is expanding.

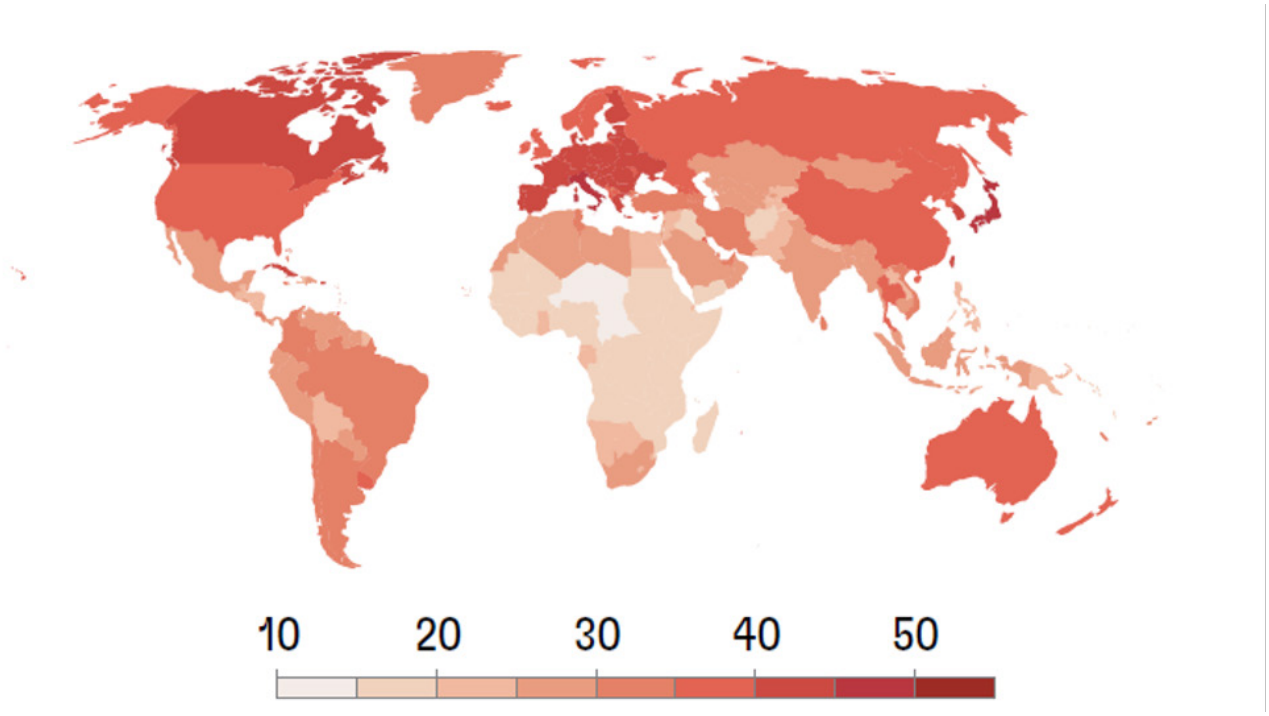
The U.S. is an interesting example as it has favorable demographics compared to other developed (and many developing) countries and has the third largest population behind only China and India. Few can guess who will replace America on the podium or when. [6]

Nigeria is anticipated to overtake the U.S., and it'll likely occur within 20 years. [7]

This matters for many reasons, including that popular national economic models consider population growth beneficial. That does not necessarily guarantee real per capita increases in income and wealth. To many, that is understandably the ultimate indicator of progress.

Africa has had a young and steadily growing population for well over a century. It's reasonable to question what is different now. The answers are several specific variables within Africa as well as outside of it, all of which we'll discuss.

Age Distributions Are Shifting



Source: United Nations, World Population Prospects (2022), and Our World in Data

The median age and its change over time is an effective measure to estimate age distribution. Africa has the lowest globally at 19 years. [8] That has increased from 17 in the year 2000 and is anticipated to be 21 by 2025 and 25 by 2050.

Let's compare that to historical numbers to better understand present Africa. The global median age in 1950 was 22.2 or roughly Africa's in 2030. Many nations now considered economic heavyweights, including China, Brazil, and India, had median ages below that of present Africa's well into the 1970s. These developing nations subsequently enjoyed sustained periods of above-average economic growth and per capita real income growth. In short, while Africa's median age may seem low today, it was normal 30-50 years ago.

The formula for optimal economic growth is a gradual rise in the median age from the bottom of the productive working age window, e.g. 18, with the fewest people in retirement, e.g. 60 and above. It is also the foundation for all modern examples of rapid economic growth.

This is more significant given demographic analysis is one of the few social sciences that can be calculated with precision and has a long, detailed track record. [9]

At any point in time, the number of individuals of a given age is fixed globally and nationally. Birth rates and immigration do influence the populations of specific nations over time, but their influence is manageable and predictable from a statistical perspective. The 281 million

immigrants globally in 2022 represented 3.6% of the population, and a substantial portion are classified as temporary. [10] Since most of the activity occurred between a small number of countries, coupled with the fact a few wealthier nations were the recipient of most immigrants, the impact of immigration on Africa is unlikely to materially change its profile over time. [11]

Trends in birth rates, often to the frustration of governments, are remarkably resilient. In recent years, that has meant a systematic decline in fertility globally with few exceptions. [12] In the West, a common justification is the increasing financial burden of having children. Yet it is areas with the highest incomes, wealth, and disposable incomes that usually have the lowest fertility rates and vice versa. Of the 38 nations belonging to the Organization of Economic Co-operation and Development (OECD), only one, Israel, has a birth rate above replacement level. [13]

Birth rates declined temporarily during recessions, unlike in the past, there was no meaningful recovery post-2008's Great Recession. There are clearly other variables involved.

Aggressive government tax and stimulus programs offsetting the cost of children have had minimal impact on fertility rates. [14] In Russia, for example, the direct payments received for having two children was increased to be 67.7% of the average annual income in 2023, or the equivalent of $40,233 if applied to the U.S. Studies suggest there is minimal evidence that Russia's incentives improved fertility rates. [15] These programs were initiated by the government in 2007 and expanded over time.

Median age is a powerful indicator of a nation's demographics and economic potential. Maximizing the size of the work force and minimizing retirees is economically optimal.

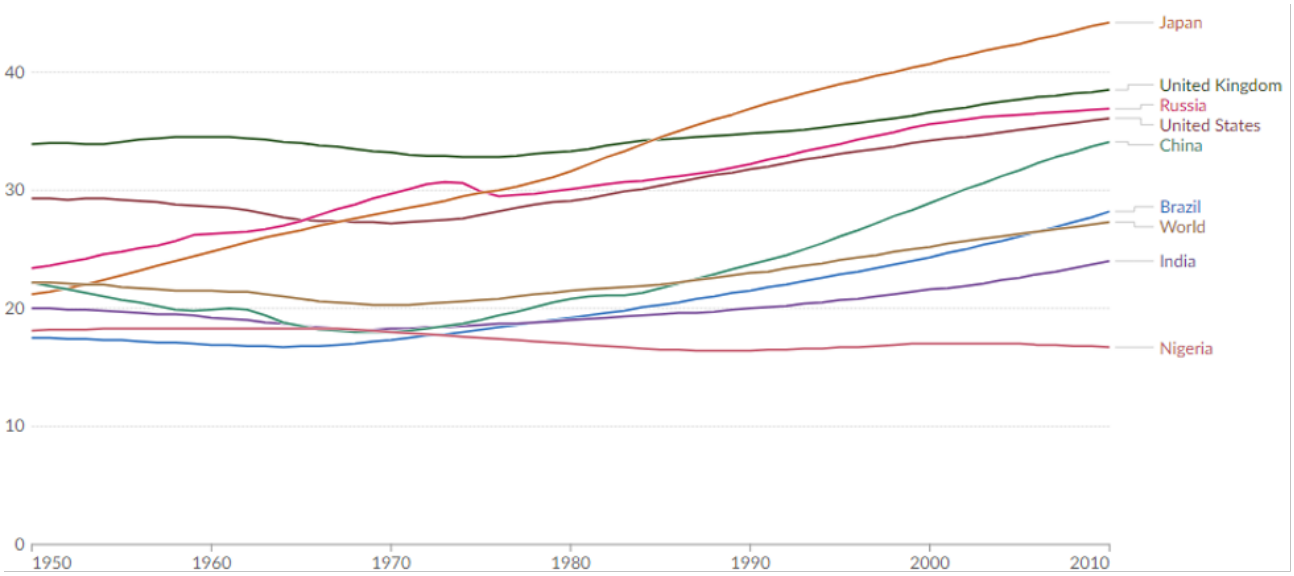
Africa's median age of 19 is the lowest globally and by a wide margin. It is progressing in the right direction and at a favorable pace.

Today's global powers had a comparable demographic profile to present Africa at the inception of their periods of rapid economic

Birth rates are predictable and resilient. Efforts to change their trajectory by outside forces haven't been successful at scale.

An Economic Pillar Across Time

Let's take a closer look at how demographics changed as today's economic powers developed. This gives us insight into Africa's potential and path.



Source: ourworldindata.org

At the start of the post-World War II boom era, the U.S.'s median age was 29 versus a global average of 24. [16] For context, the U.S.'s median age is now approximately 38.9 years and the nation's population is expected to enter structural decline (more deaths than births net of immigration) by 2038, or in less than 15 years. [17] This would have already occurred without immigration.

Although far younger than today, the U.S.'s relatively high median age at the start of its most rapid growth period is an anomaly. Demographic impacts of World War II, including delayed family formation rectified by the Baby Boom of the mid-1940s through mid-1960s, coupled the U.S. being catapulted to global hegemon, caused the U.S. to begin its modern boom era with a moderately older population.

This is reinforced by the fact the U.S.'s median age declined to a 75-year low of 27 in the early 1970s when most other large nations in not only the West but also Asia were 10-20 years into their structural aging cycle that continues to this day. If not for the drastic improvement in average lifespans occurring over the same period, many more nations would have declining populations. [18] This is, of course, a one-time phenomenon and has its own set of mostly negative implications.

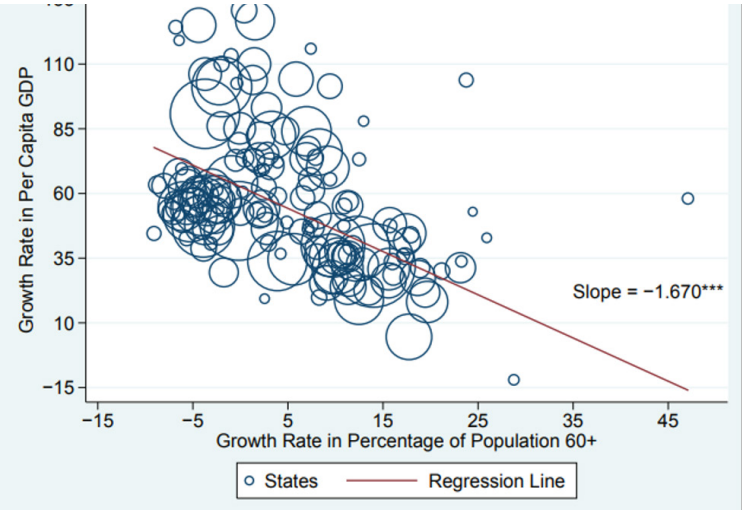
Since both children and the elderly consume more resources than they produce, relative growth of the 25–59-year-old population is historically the major driver of economic development. This contributes to the vast amount of research on the impact on Gross Domestic Product (GDP), labor productivity, and the size of the workforce due to changes to the population aged 60 and older. This is one reason why Africa's GDP is expected to grow approximately 33% from 2020 through 2027 and 835% between now by 2050.

For comparison, PWC estimates global GDP growth from 2020 through 2050 to be less than 130%. [19] If we remove Africa, the gap between its projected economic growth the rest of the world is even more dramatic. Excluding Africa from long-term allocation considerations conflicts with decades of portfolio management theory and real-world investment returns.

Let's examine the relationship between demographics and economic growth. According to the International Monetary Fund (IMF), GDP growth increases approximately linearly with the labor force. [20] The opposite is also true, which is a challenge facing effectively all developed and many developing nations. The same PWC report estimates the European Union's share of global GDP will fall by roughly 50% by 2050 with unfavorable demographics and its negative externalities the major drivers. These nations are forced to rely on productivity growth, often through diminishing returns on additional leverage in the financial system, to offset unfavorable demographics. Global public debt is nearing $100 trillion, and that excludes a comparable amount in unfunded liabilities such as Medicare/Medicaid in the U.S. and other government supported healthcare systems in many other developing countries. [21]

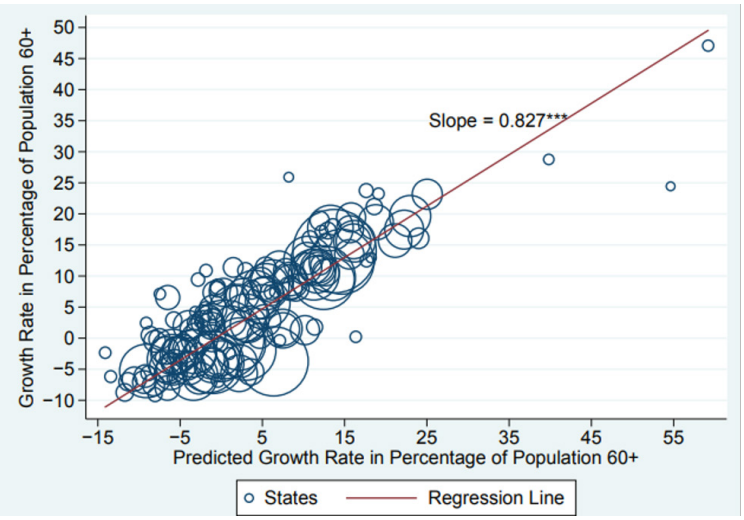
The large data set spread across time and geography has allowed the models estimating the impact of changes in the demographic profile to be continuously refined and improved.

This chart shows the correlation between the proportional growth in those aged at least 60 years old in the U.S. and per capita GDP growth. Although the relationship varies by state, the trend is reliable with statistically predictive value. On average, per capital GDP declines by 1.67% for each 1% growth in the percentage of population aged 60 or higher and vice versa.



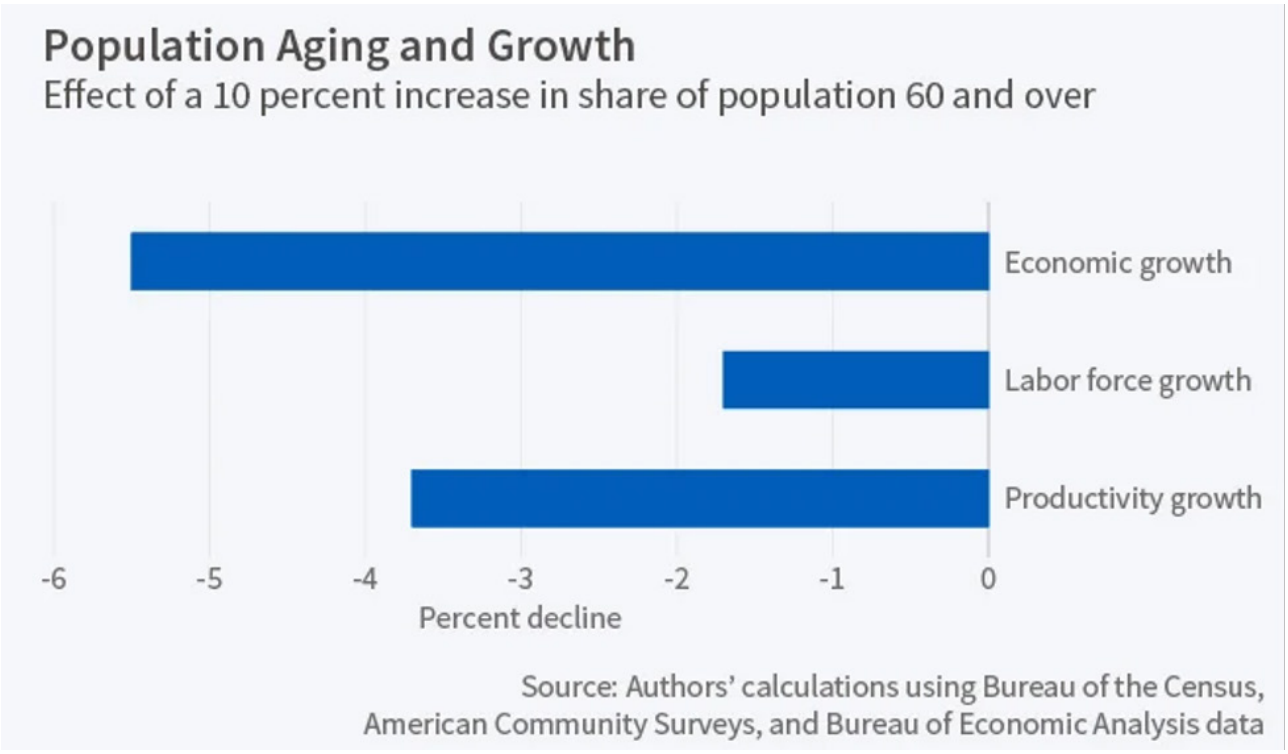
Source: RAND

The usefulness of the models is heavily dependent on their accuracy, which is illustrated in this chart. As shown above, researchers have achieved an 0.827 correlation between predicted and observed aging trends in the U.S. The methodology and reliability aren't materially different for estimates applied to other regions based on substantial research conducted in other areas. This makes sense given similar if not identical parameters apply. Such a strong correlation (1.0 is perfect) proves that researchers have accurately modeled changes in not only regional and national populations over time, but specific segments.



Source: RAND

Like a basic algebra problem, it is not necessary to calculate the exact value of each variable to solve the equation. Fertility rates are sticky and easy to model. Retirement ages change gradually over long periods of time. By understanding these two components, for example, predicting the size and proportion of the working age population that powers the economy (as well as those who are net consumers on each end of the spectrum) is straightforward.



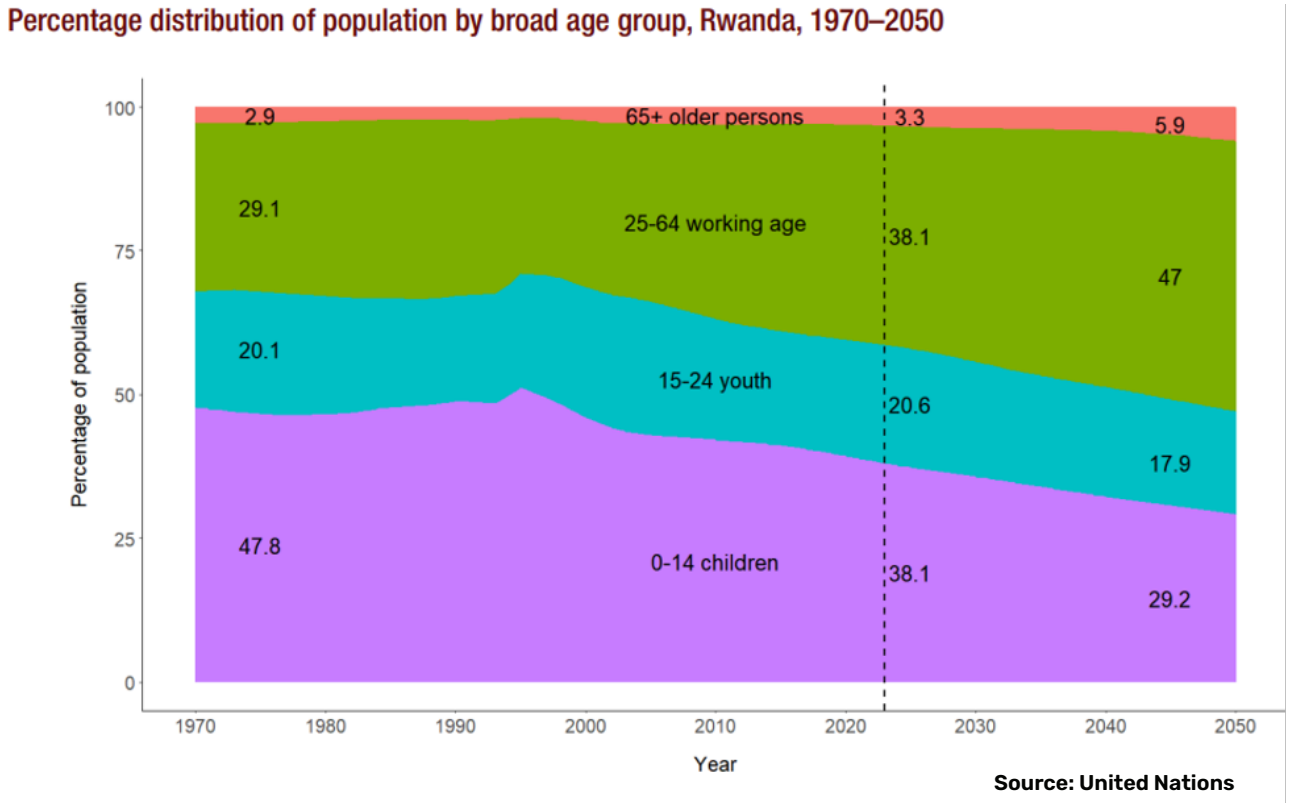
Source: nber.org

The next stage of the analysis combines these elements. Aggregate economic growth can be measured by the size of the labor force multiplied by its productivity. This is intuitive as it incorporates all capital expenditures, technological innovations, and other variables that are difficult to separate from broader economic activity.

It does not, however, account for government or consumer debt or assets, which may be meaningful contributors to a nation's financial health. Examples include the rich hydrocarbon assets of several nations in the Middle East or the $120 trillion in long-term unfunded liabilities on the U.S. balance sheet according to the Congressional Budget Office (CBO). [22]

That said, from a gross output perspective, the results are clear. A 10% increase in the share of population aged 60 and over causes aggregate economic output to decline by approximately 5.5%. If the long-term expenses associated with this shift were accurately captured, at least based on U.S. data, the real decline is likely higher. A greater ratio of citizens in the 15-59 years old working age category lowers the financial burden for both families and governments and provides a larger pool of labor.

The difference between Africa's demographic profile and most of the rest of the world is staggering: Africa has approximately 34 million or 2.3% of its population aged 60 or older compared to 14% in Asia Pacific, 17.3% in the U.S, and 21.3% of the European Union (all end of 2023 data). Critically, less than 10% of Africa's population is projected to be above 60 years old in the next 25 years. Detailed projections in a recently published United Nations report of Rwanda, a middle-income country in East Africa, are provided below.



Children and the elderly consume more than they produce. Economies and government budgets require a relatively large workforce to remain balanced.

The disproportionate increase in citizens aged over 60 on the economy is well studied. A 10% increase in retirees decreases aggregate economic output by approximately 5.5%.

2.3% of Africans are at least 60 years old compared to all other major regions falling between 14% and 21.3%.

The precent of Africans in this category will rise to 5%-6% by 2050. By this time, the portion for the average advanced country will be at least one third.

No society has attempted to support that percentage of retirees and many developed nations already contend with record levels of debt, much of it derived from programs supporting current retirees.

As opposed to all developed and most developing nations, The United Nations estimates that Rwanda's demographic profile will continuously improve (larger share of 25-64 year old prime working age population) through 2050.

Notably, this is a one-time 20-30-year demographic tailwind. The large portion (nearly 50%) of children aged 0-14 in past decades allows for the disproportionate size of the working age population through 2050, which is optimal for economic growth and government budgets.

This is a key example of how Africa's trajectory has changed. Infant mortality rates have reduced dramatically, coupled with a stabilized birth rate on most of the continent around four children per woman. [23] This allows for a gradual and predictable increase in the size and proportion of the working age population, which brings with it greater capacity for domestic savings and allocated to education, infrastructure, and other key areas of the economy. [24]

The same applies for those in retirement. Instead of funding pension and healthcare programs through current tax receipts, that capital can also be invested. Rwanda's circumstances are unique given the genocide in the 1990s, but its demographic profile compared to most other parts of Africa is not remarkable.

From a global allocation perspective, this advantage is far more significant than it would be in decades past. 50 years ago, there were many large nations in North America, South America, Europe, and Asia with reasonably favorable demographics. Today, it's only Africa.

GDP & Labor Productivity

Let's understand why these demographic trends greatly influence economies. Gross Domestic Product (GDP) and its variants are the most used measures of national economic activity. The formula for GDP can be calculated in three ways (Output, Income, and Expenditure methods) and considers four core variables (government spending, consumption, net exports, and business investment).

These calculations can obfuscate what GDP represents. In practice, GDP is the size of the labor force multiplied by its productivity. We'll use two prominent examples to explain this relationship and how it impacts the outlook for Africa.

China's labor productivity per hour increased from $3.8 in 2005 to $15.4 in 2023 using constant 2017 USD exchange rates. [25] Applying the same methodology, the U.S.'s figure was $112.1 per hour in Q4 2023. [26] Although in steady decline since 2014, the Chinese labor force ended 2023 at 740.4 million compared to the United States' 167.12 million. [27] [28] Multiplying hourly productivity times the work force results in $11.4 billion per hour worked in value created by the Chinese economy versus $18.7 billion for the U.S. As a testament to how accurate this simple methodology is, the 64% larger figure for the U.S. closely mirrors the delta in aggregate GDP in 2023 between the two nations ($27.4 trillion versus $17.5 trillion). [29] [30]

This demonstrates that changes in the labor force, even when keeping productivity constant, have a substantial influence on aggregate economic activity. In many cases, it is the fulcrum upon which a nation begins its journey from an unsophisticated to developed economy. Forward GDP estimates reflect Africa's stabilizing birth rate, massive surge in the working age population, and low ratio of retirees.

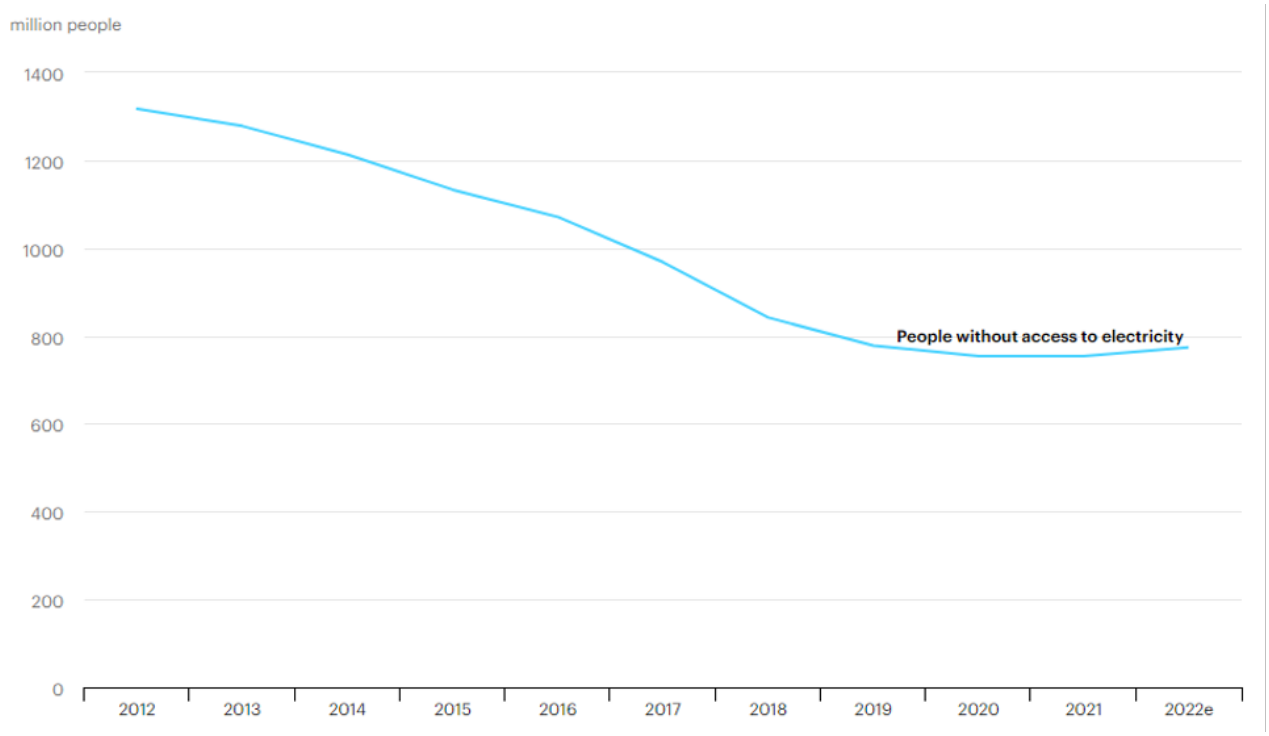
- GDP can be simplified as the size of the labor force multiplied by productivity.
- China's integration of its large population into the formal work force coupled with moderate gains in productivity generated 10% average annualized GDP growth for 30 years. India's story began later but has the same chapters.
- Africa will be home to most of the growth in the world's labor force through at least 2050.
- Coupled with low per capita GDP of approximately 1,700 USD, the potential for long-term GDP growth in Africa is historic.

Africa's 2023 GDP is estimated at $3.1 trillion. By 2050, this is anticipated to reach $29 trillion according to several Wall Street firms and established NGOs. [31] A chief contributor to this is the potential to increase the average African's productivity by an order of magnitude in a short period of time.

If achieved, it will take the crown as the most rapid long-term economic growth in recorded history. Even if the continent achieves only 50% of this growth target, that statement may still be accurate.

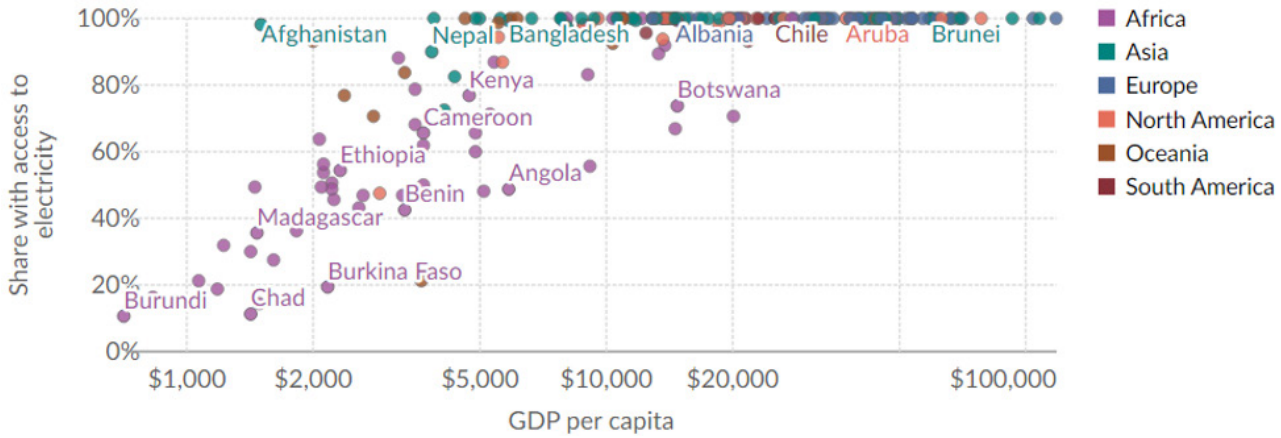
Energy Infrastructure & Consumption

One of Africa's greatest weaknesses is simultaneously one of its greatest strengths from a growth perspective. Approximately 600 million people in Sub-Saharan Africa do not have access to reliable power. That is 77.4% of all those in this category globally according to the IEA. [32]



Source: EIA 2022, People without access to electricity, License: CC by 4.0

Without reliable power, manufacturing, healthcare, education, and all other key economic sectors suffer. It is a major reason why Sub-Saharan Africa's per capita GDP of approximately $1,700 is the lowest globally by a significant margin. [33]



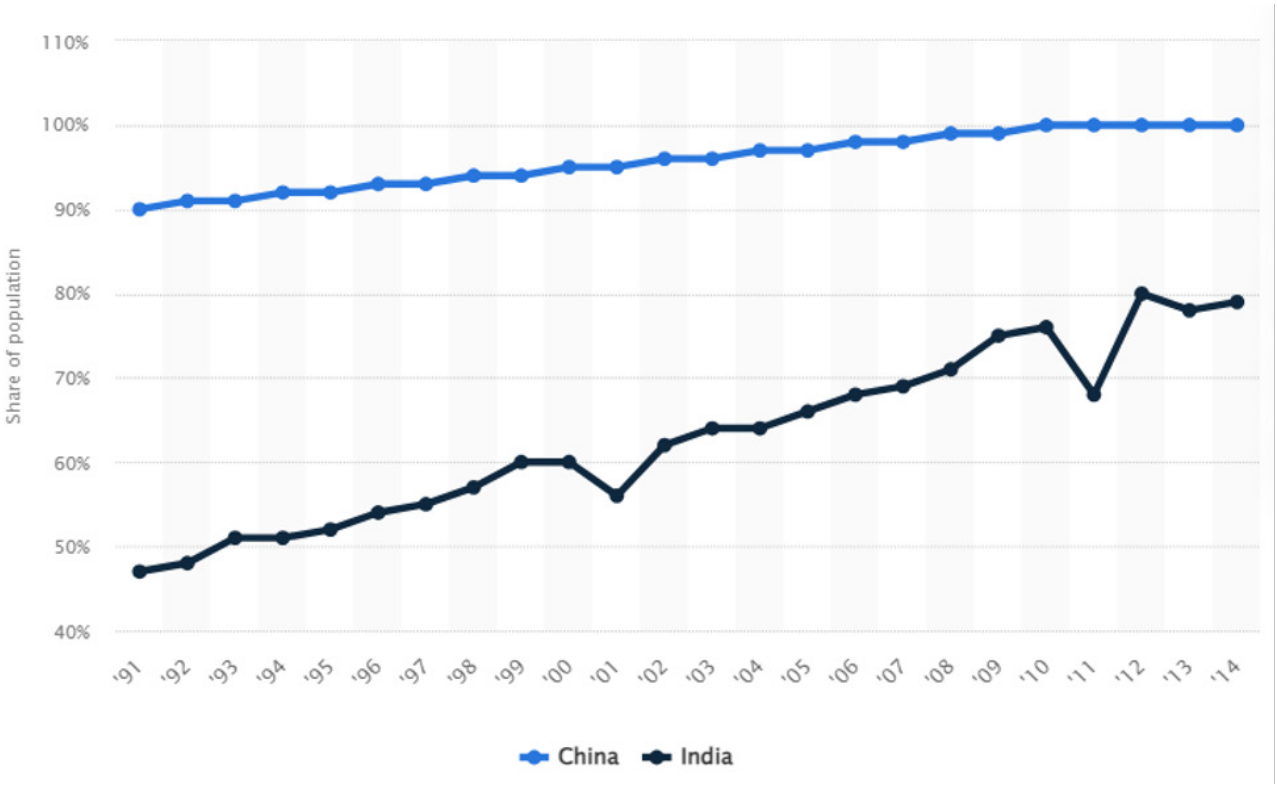
Source: Our World in Data, Access to Electricity vs GDP Per Capita 2021 at 2017 Prices

Haiti is the single exception to the otherwise African dominated area of the chart where low GDP per capita intersects the percentage of the population with access to electricity. This reconciles with the fact not a single nation has achieved middle-income status without reliable electricity.

The spark that set off industrialization arguably occurred in Great Britain in 1712 with the invention of the single-piston steam pump by Thomas Savery. That allowed not only the rapid utilization of coal for usable energy, but also the pumping of water out of coal mines for faster extraction.

China and India are fascinating case studies. First, both experienced rapid periods of economic growth in the past 50 years from very low levels. Second, they began without widespread electrification or industrialization. Third, their populations were massive and included hundreds of millions of less skilled and less educated workers. Lastly, albeit from starting points about 10 years apart, their paths were exceedingly similar.

Most importantly for this analysis, at the inception of their historic growth periods, their demographic, education, per capita income, poverty rates, and electrification were much like present Africa.



Source: Statista, Access to Electricity in India and China from 1990-2014

The reliability of data from China prior to 1990 is poor, but it is estimated that approximately 50% of the population did not have access to reliable power in the late 1970s when its period of rapid industrialization commenced. That is the same figure as India in the early 1990s when it began modernizing. Within 25 years, however, at least 80% of both countries had reliable access to power. Economic growth and electrification went hand in hand, just as it did in Europe and North America a century prior. [34]

Africa's combination of modernization and electrification is completely unique. Smartphone adoption in Sub-Saharan Africa stands at two thirds, which is a higher percentage than those with reliable access to power in many areas. [35] More developed nations, like Nigeria, often have a significantly greater number of internet users than people with reliable power. [36]

A pioneering study employing 56 developing economies using data from 1991 to 2013 focused on the nexus of economic growth and access to electricity. [37] A primary finding was "access to electricity (in KWH per capita) plays an important role in ensuring progress and prosperity of human kinds in multifaceted ways". This study and many others indicate that Africa can expect a multiple in labor productivity as the rate of electrification increases toward global norms.

How Africa will achieve this is likely to differ significantly than in the past. While Libya, Nigeria, Angola, and Algeria have crude oil reserves of at least 10 billion barrels each, they are all coastal nations, none are in East Africa, and only Angola is in Southern Africa. [38] Unsurprisingly, the continents' primary refineries are also located in these nations.

In the event the resources are developed more fully, for geographic, infrastructure, and economic reasons, there is a high probability they are exported rather than consumed domestically. Africa's estimated hydrocarbon reserves are among the lowest of any continent and approximately 10% of global totals, although offshore resources have not been well studied. The pipelines alone needed to adequately connect the continent are estimated to cost $89 billion. [39] As of December 2022, only $4 billion was allocated to projects under construction. 24,000 km of gas pipeline projects are technically under development, but less than 2,000 km are under construction.

109.2 gigawatts of operating gas-fired power plants exist in Africa with 64.1 gigawatts in capacity under development. These projects also face financing difficulties and are at best a partial solution to Africa's projected power needs. It is worth remembering that a 100% increase in power availability brings Africa to global norms, and that is before considering embedded population growth or greater industrialization, both of which are all but certain.

Thankfully for Africans and the rest of the world, the continent's potential for renewable energy generation is among the highest globally. As the continent's grids mature, it is uniquely suited for commercial solar projects. Solar power is inherently difficult to integrate into national grids, however, and that remains a challenge. Many coastal areas have winds exceeding six meters per second, which is the threshold for economic wind energy operations.

The assimilation of cryptocurrency mining into renewable energy projects is an interesting adaptation occurring in many areas. This is especially valuable for rural energy development. Energy project underwriting in Africa should consider the forecasted population and economic growth, but incorporating excess capacity creates even greater financing challenges and potentially longer payback periods.

Cryptocurrency mining operations are a potentially excellent solution. They do not require especially good internet connectivity. Starlink more than solves that challenge. [40] Nor do they require large footprints, specific environmental conditions, extensive on-site construction, modern road networks, or skilled staff. In fact, access to low-cost electricity and periodic inspections are generally sufficient. This makes them perfect for paring with many small-scale energy projects in Africa.

Consider a theoretical run-of-river hydroelectric project proposal located outside Nairobi, Kenya. The developers have immediate power demand coinciding with a single turbine, but the river's capacity easily supports two turbines. Local leaders would strongly prefer the excess installed capacity given the area's projected economic and population growth rates, in part due to the steady growth of the nearby capital city. They do not, however, have the financial resources to help make the additional investment by the developer financially justified like Western or Asian governments might.

This example, which is typical across Africa, is well suited for incorporating cryptocurrency mining operations. They can serve as both a reliable and variable off-taker to allow for the local economy to grow into the power station's installed capacity. When local demand changes, power is automatically diverted to or from the on-site cryptocurrency mining facility. It is also invaluable in combatting the inherent instability of generation from some sources of renewable power like solar and wind. It is arguably far more efficient, economical, and environmentally friendly than attempting large-scale battery storage.

Local African leaders have even gone so far as to curtail solar development by international investors until grid stability improves. Companies like Gridless operate remote and small-scale bitcoin mining operations to mitigate this exact issue in an environmentally and financially sustainable manner (Disclosure: CommonGood has a business relationship with an investment fund that has a business relationship with Gridless). [41]

Given Africa is expected to be home to the greatest population and economic growth of any region over at least the next 20-30 years, it is likely that aggressive adoption of hydroelectric, solar, wind, and potentially nuclear will be required for the U.N.'s goal of a 45% reduction in global greenhouse gas emissions by 2030 and to reach net zero by 2050 to have any reasonable probability of success. [42]

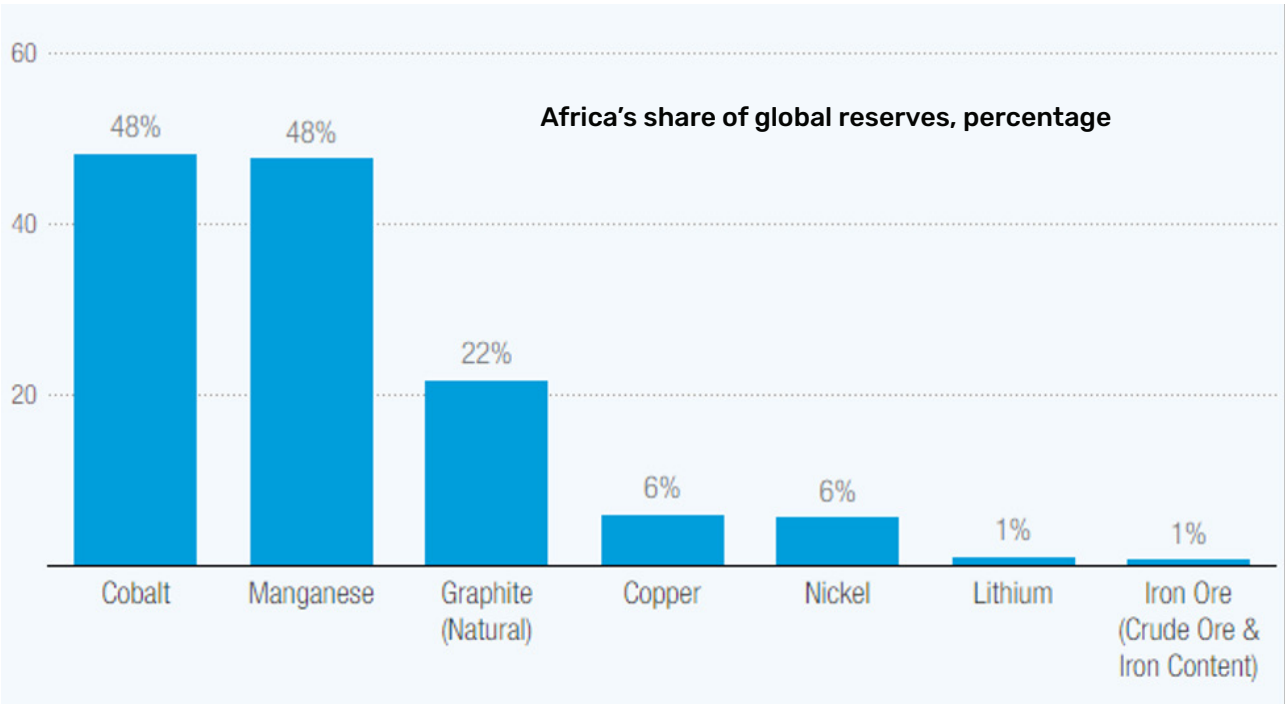
Africa's adoption of renewables and contributions of key natural resources, often called transition minerals, are critical to the expansion of the clean energy industry that is essential to meeting these goals. Responsible and strategic investment into these projects is vital to their safe, environmentally conscious, and financially sustainable development.

- India and China's industrialization coincided with electrification. No nation has achieved economic success without reliable energy.
- Roughly half of Sub-Saharan Africa, or 600 million people, do not have access to reliable electricity.
- Coal and natural gas are likely a needed bridge, but investment is far below what's required to power the continent.
- The continent is blessed with renewable energy potential matching its immense need for power. Thoughtful investment and planning is needed to reliably power Africa and achieve the U.N.'s climate goals.

More Untapped Potential

Africa has the largest reserves of cobalt, platinum, and uranium, as well as 65% of the world's arable land. [43] Several African nations rank high in lithium reserves and rare earth minerals.

Critical Minerals: Africa has an abundance of metals needed for electric vehicles



Source: UNCTAD calculations, based on data from the Knoema database, 2023

Electric vehicles accounted for around 18% of all cars sold in 2023 compared to 2% in 2018. [44] Although still less than one fifth of sales, this growth contributed to lithium supply concerns and a price increase of more than sixfold between early 2021 to late 2022. [45]

Cobalt, another key mineral, has experienced two separate periods of 400% price increases in less than two years since 2017. [46] Manganese has been more stable, but has still experienced five instances of at least 50% increases in its market value in the past decade.

The responsible development of these transition minerals is critical to Africa's economic future as well as the world's ability to progress toward a lower carbon future.

The continent is home to roughly 60% of the world's arable land. The sector is the largest employer and provides incomes for 35% of Africans. And yet, Africa is a net exporter of food and many nations, including Zimbabwe, Guinea, and Sudan spend more than 100% of their annual foreign currency deposits on agricultural imports. These challenges are not insurmountable and the underinvestment in Africa's agriculture is yet another truly massive opportunity.

Despite being in the early stages of electrification, the key materials involved have already experienced extreme volatility and price increases.

Africa contains many of the world's largest reserves of transition minerals. Their responsible development is critical to Africa's wellbeing and the world's ability to reach electrification goals.

The continent has 60% of the world's arable land but has lacked the planning and investment needed to capitalize on it.

Developing and modernizing the agricultural sector could provide widespread employment and allow Africa to earn and preserve precious foreign currency.

According to the African Development Bank, moderate investment could see its combined food and agriculture market rise from $280 billion a year in 2023 to $1 trillion by 2030. [47] Improvements in supply chains, assisting small-scale farmers with better techniques and technology, and addressing infrastructure gaps are among the mechanisms needed. With the surge in Africa's population already underway, the investments in these key sector cannot come soon enough.

Africa's human development potential is no less striking. [48] Infant mortality has decreased from around 15% 25 years ago to 3-4% today. 66% of girls completed primary school compared to 61% for boys. [49] In 2000, only 44% of girls did so. Africa's education scores in lower and upper secondary school completion are still both an issue and straightforward opportunity to advance the population's wellbeing and productivity.

According to the Brooking's institute, Africa boasts the world's highest rates of entrepreneurship. [50] More than 20% of working age Africans have started a new business and more than three fourths of young people aim to become entrepreneurs within five years. This bodes well for the nation's ability to absorb and deploy investment capital effectively.

Investment Community's Allocation Logic and Positioning

Allocation models vary but the financial services industry has developed standards based on regulatory guidance, client demand, and the optimization of risk-adjusted returns. Gaining exposure to economies generating GDP growth and avoiding those that do not is a foundational element of modern portfolio management. This is generally described at a high level as allocations to the equities and fixed income of developed and emerging markets.

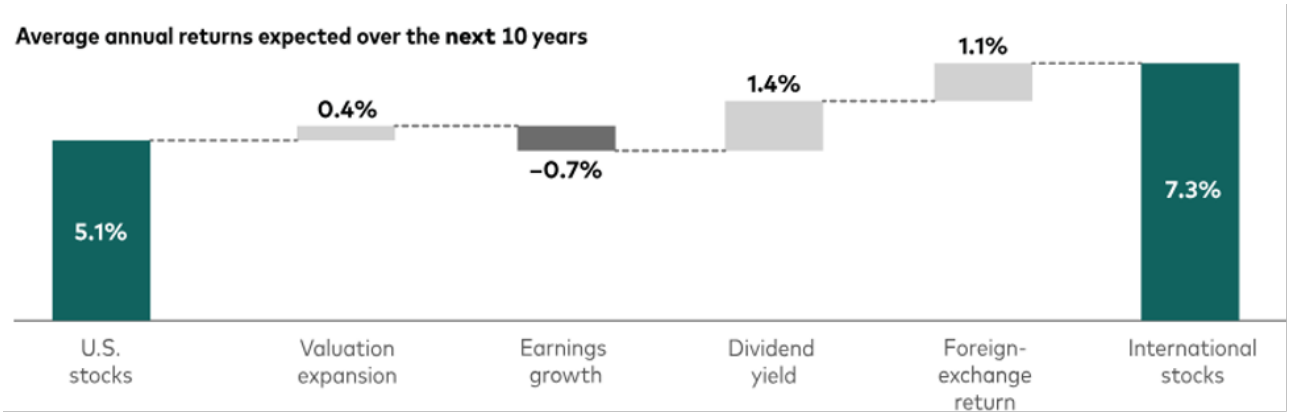
Smartasset.com and Capital Group's asset allocation models are used as proxies for industry norms. Recommended international exposure ranges from 5% for the lowest risk profile to 30% for the "very aggressive" classification within Smartasset.com's ETF models. Capital Group's most conservative model (Capital Group Active-Passive Conservation Income) incorporates 11.31% non-U.S. equities and bonds with the growth model (Capital Group Active-Passive Global Growth) at 43.64%. Almost all (43.44%) are non-U.S. equities.

These result in substantial recommended allocations to emerging and frontier markets. The most popular ex-U.S. international equities fund is the Vanguard Total International Stock ETF (VXUS). Based on a survey of the top funds in this category as recommended by Morningstar, allocations by country are similar. [51]

The country of Taiwan has less than 25 million citizens and its percentage of VXUS is larger than all 54 African nations with a combined population of 1.5 billion. [52] Africa's $3.1 trillion GDP is also over four times larger than Taiwan's. Similar math applies to Australia, Switzerland, and several other countries in the 10 largest market allocations in the most popular international investment fund.

Africa's projected GDP growth exceeds that of all VXUS's top 10 markets, with the possible exception of India in the short-to-medium-term. In most cases, Africa's growth is anticipated to be at least double the other markets commonly found in the top 10 of any diversified global fund. And for institutional and high-net worth investors with a generational mindset, the gap in economic performance is expected to widen even further over time.

- GDP growth is a fundamental metric used to allocate capital globally.
- Models by preeminent investment managers allocate 35-45% to non-U.S. investments.



Source: Vanguard, Making the Case for International Equity Allocations, May 05, 2023

International stocks also trade at comparably more favorable valuations than in the past with better earnings growth. Vanguard and most other investment firms expect international stocks to outperform U.S. stocks by roughly 50% for the next 10 years.

A major reason for underinvestment in regions like Africa despite attractive growth prospects and even the recommendations of major investment firms is the lack of developed public markets. Most wealth is concentrated in societies with stock markets roughly reflecting their economies. While private investments form up to 40% of allocations in high-net worth and institutional investors, that is not represented in the more common and accessible ETF and mutual fund industry.

The total market capitalization of the 29 African exchanges is approximately $1.6 trillion with the largest in South Africa, Nigeria, and Egypt. [53] For comparison, the U.S. stock market's capitalization was $53.8 trillion as of April 2024, or almost exactly double 2023's GDP of $27.4 trillion. Africa's stock markets, on the other hand, are almost exactly half that of the continent's 2023 GDP. One explanation is the fact many firms listed on U.S. exchanges are global in nature while most African firms are more domestically focused.

To close this gap, a combination of more developed African capital markets and private investments is necessary. In the short and medium-term, increased private investments from foreign high-net worth and institutional investors are likely mandatory to satisfy their own portfolio allocation goals and Africa's internal capital requirements until Africa's public markets develop and the domestic investor base grows.

- Most of that is currently allocated to nations with less growth and more expensive valuations than Africa.
- A contributor to this is the lack of developed capital markets in Africa.

Conclusion

Data from the likes of BlackRock indicate that the average investor has an allocation to emerging market equities of 4-6%. [54] For fixed income, the figure is even lower. U.S. investors, for example, are at 1-2%. While Foreign Direct Investment (FDI) in Africa was a healthy $48 billion in 2023 (near the record set in 2021), non-institutional U.S. investors are not well represented. By all metrics, be it fixed income, public equities, or private fund vehicles, investors from developed nations are heavily underweight Africa. Compared to Europe, which has closer historical and cultural ties, the U.S. is even more underweight.

Environmental challenges, the lack of strong institutions, internal and regional conflicts, the availability of foreign and domestic investment capital, and ineffective government policy are among the many risks to The African Century.

But it's easy to forget most of these same challenges applied to Western Europe, the U.S., Japan, South Korea, and most other nations as they transitioned from undeveloped, primarily agrarian societies to among the richest nations per capita in history. And those nations were often war torn and did not enjoy the same advancements in medicine, technology, and communications that Africa does.

The continent's tailwinds are formidable. It is on the cusp of the ideal demographic boom while most of the world struggles to maintain their populations. Connectivity via widespread cell phone adoption, services like Starlink, and new technologies like cryptocurrencies are not incorporated into the economic models of the past.

Labor productivity and per capita GDP in most African nations is starting from low levels. This does not make life easier for Africans today but results in even greater long-term growth potential. The adoption of proven manufacturing and infrastructure systems coupled with greater access to electricity are likely to cause labor productivity to multiply over a short period of time. As discussed, worker productivity times the size of labor force is the heart of every economy. Advancements in the electrical grid and other proven infrastructure investments are always accretive, but their implementation in Africa may result in the greatest and fastest gains to the greatest number of people in history.

Entrepreneurship is a vital part of the African culture and economy. That's fortunate because it is needed as the availability of formal jobs to the population is not expected to keep pace with population growth. A historic level of FDI from individuals and institutions oscillating between public and private investment as needed, coupled with sound policy decisions in the 54 nations that form Africa, are needed to achieve many of the world's goals. Africa is integral

to solving many of the world's greatest challenges ranging from the elimination of extreme poverty to building a sustainable energy system to combatting climate change. Many believe Africa is at the early stages of its own 30–40-year expansionary cycle that is likely to rival and may even exceed the height and breadth of today's economic superpowers. We are among them.

Disclosures

Information obtained from third-party sources, which we believe to be reliable but not guaranteed for accuracy or completeness.

The information provided should not be relied upon as investment advice or recommendations, does not constitute a solicitation to buy or sell securities and should not be considered specific legal, investment or tax advice.

The information provided does not take into account the specific objectives, financial situation or particular needs of any specific person.

Diversification does not ensure a profit or protect against a loss in a declining market. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income.

Investing entails risk including the possible loss of principal and there is no assurance that the investment will provide positive performance over any period of time.

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