



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE

**NTU-SBF**  
Centre for African Studies  
Nanyang Business School

# Africa Current Issues

Are African Numbers still Poor?

## Are African Numbers still Poor?

### Introduction

Many observers perceive the accuracy and reliability of African economic statistics to be far less than ideal.<sup>1</sup> Morten Jerven's 2013 book *Poor Numbers: How We Are Misled by African Development Statistics and What to Do about It* asserted that the statistical capacity of most African countries was weak and that a significant portion of the official data churned out involved "a great deal of guesswork".<sup>2</sup> This expert judgement was not entirely a surprise to well-informed stakeholders.

Statistics can, like any powerful tool, be used or misused. American author Mark Twain observed that "There are three kinds of lies: lies, damned lies, and statistics." The selection of a base year for economic analysis can provide an opportunity for statistical manipulation. A base year is the first of a series of years in an economic index that reflects the value of specific activity, such as FDI or GDP. It is typically set to an arbitrary level of 100. Variations in the index are expressed relative to the base year. Base years may be replaced from time to time to align data in a particular index to recent trends. Ideally, the new base year reflects a recent yet reasonably stable period. The 2008-2010 financial crisis reveals why a base-year that reflects structural change is problematic. In response to sharp declines in housing values, many U.S. banks accepted government support and changed accounting methods (for example, suspension of market-to-market accounting) during that period. The significant market disruptions and other changes during that era distorted fiscal analysis using 2009 as a base-year.<sup>3</sup>

Previous African statistical rebasing exercises reported information that, with the benefit of hindsight, may have led businesses and investors to accept greater risk. That is, after the initial scepticism about the abrupt and largely upward reviews. Kenya, Nigeria, Tanzania, Uganda and Zambia, which rebased their GDPs in 2014, had their outputs either doubled, up by a third or in some cases, a quarter.<sup>4</sup>

If reviews were more frequent, every five years being the preference of the United Nations Statistical Commission (UNSC), they might meet far less scepticism. Disbelief about the continent's economic output numbers is lower than in the past. Of course, reviews are also relatively more frequent (see Table 1). Yet the sentiment regarding what might be missing, unaccounted for, or wrongly estimated in African numbers continues to endure.

<b>Table 1: Recent Africa GDP rebasing exercises</b>				
	Year of rebasing	Previous Base year	New Base year	Increase in nominal GDP post-rebasing
Ghana	2018	2006	2013	32%
Senegal	2018	1999	2014	29%
Ivory Coast <sup>5</sup>	2020	1996	2015	40%

Source: World Bank<sup>6</sup>, Reuters

If inflation were lower than suggested by a stale base year, this error might have implications for setting interest rates. And GDP rebasing exercises have consistently resulted, at least in the African case, in economies larger than suggested by the old data. So the lack of timeliness and accuracy of African statistics not only creates uncertainty for businesses and investors, but also generates losses to the economy itself. Governments consequently lose tax revenues from what could have been greater economic activity. Thus, African statistical agencies need to address refreshment of the data they produce more seriously.

Ultimately, businesses and investors on the continent need to be much better informed about the current state of African statistics and how to manage their finances, given the available data. This article highlights and analyses recent developments in African statistics to arrive at an informed conclusion on the current quality of Africa's numbers. Have they improved?

### African statistics are improving but challenges remain

The Mo Ibrahim Foundation African Governance Report (MIFAGR) measures and monitors governance performance in African countries. Its latest “Agendas 2063 & 2030: Is Africa on track?,” published in October 2019, reports that statistical capacity in Africa, defined as “a nation’s ability to collect, analyse, and disseminate high-quality data about its population and economy,” is improving but remains low. The annual average trend score of the World Bank’s governmental statistical capacity IAG sub-indicator for Africa increased by 0.60 in 2014-2017, well above the longer and older range score increase of 0.43 in 2008-2017 (MIFAGR, 2019). Yet Africa’s statistical capacity underwhelms on data coverage and openness, and on funding (see Table 2).

<b>Table 2: Statistical Capacity Assessment</b>			
		<b>Africa</b>	<b>World</b>
<b>Planning</b>	Statistical Society Presence	50.9	42.5
	Statistical plan implemented	76.5	71.9
<b>Production</b>	Data coverage & openness	33.4	45.2
<b>Use</b>	Statistical capacity indicator	57.3	62.3
	Statistical literacy indicator	13.3	13.2
	Use of statistics index	27.0	25.8
<b>Investment</b>	Total commitments	\$4.9M	\$2.5M
	Statistical plan fully funded	31.4%	60.9%

Source: Partnership in statistics for development in the 21<sup>st</sup> century (PARIS21)<sup>7</sup>

Even with marked improvements in African statistics over the years since Jerven (2013), the trends to underfund this essential activity are disturbing. And while the significant distinctions among countries on the continent make it incorrect to generalize, exemplars like South Africa have lately given cause for great concern.

For instance, the state slashed the Statistics South Africa (Stats SA) budget by 160 million rand in 2015, and imposed a hiring freeze. In mid-February 2020, the South African Statistics Council reported that the country’s statistics agency required at least US\$13 million more than budgeted to continue publishing accurate data.<sup>8</sup> The implications of such long-term budget cuts include smaller survey sample sizes, leading to wider margins of error.

<b>Table 3: Building block data remains poor &amp; inadequate but improving</b>		
<b>Social statistics</b>	<b>Status (2014)(CGD &amp; APHRC)</b>	<b>Status (2019)(MIFAGR)</b>
Births & deaths	<p>5.3% of countries have more than 90% coverage of death registration from data sources newer than 2005</p> <p>7.1% of countries have more than 90% coverage of live birth registration from data sources newer than 2005</p>	<p>5.6% of 54 African countries or 3 of the 16 African countries with 2009-2018 data by UNStats had a death registration system with a coverage of 90% or more</p> <p>14.8% of 54 African countries or 8 of the 42 African countries with 2009-2018 data by UNStats had a birth registration system with a coverage of 90% or more</p>
Growth & poverty	<p>63% of countries conducted a household survey between 2005 &amp; 2014</p> <p>82% of countries conducted a census between 2005 &amp; 2014</p>	<p>Between 2009-2018, 83% or 45 of 54 African countries conducted at least one form of household survey</p> <p>Between 2009-2018, 70% or 38 of 54 African countries conducted a population &amp; housing census (PHC).<sup>9</sup></p> <p>Between 2015-2018, 9 African countries conducted a PHC, with 15 more planning to conduct one as at July 2019</p> <p>Steady rise in PHCs over the years; 1990 (44 countries), 2000 (38 countries), &amp; 2010 (47 countries)</p>
<p>Source: Centre for Global Development &amp; African Population &amp; Health Research Centre (2014) or CGD &amp; APHRC (2014), Mo Ibrahim Foundation African Governance Report (2019) or MIFAGR (2019), Author's research</p>		

Funding gap for statistics are not unique to South Africa. Underfunding is a recurring theme for many African statistics agencies. For example, Nigeria's statistics agency consistently complains about underfunding, and in 2019 received only about 40 per cent of its data production budget request.<sup>10</sup>

To improve the accuracy of its statistics while cutting costs, Nigeria's National Bureau of Statistics (NBS) automated most of its data production process. The agency now publishes more of its previously paper-based reports electronically.

Some positive trends emerge. More than 70 per cent of African countries either have a national statistics strategy in place or are implementing one (see Table 4). Still, many issues continue to weigh on the development of African statistical capabilities.

<b>Status (May 2019)</b>	<b>Number of African countries</b>
No strategy	1
Completed, awaiting adoption	5
Implementation	37
Expired	11
Total	54
Source: MIFAGR (2019), PARIS21	

CGD & APHRC (2014) identify six key challenges to timely and accurate African data by the continent's statistics agencies viz. (1) Lack of legal & functional independence (2) inadequate budgets (3) lack of autonomy (4) misaligned incentives (5) relative dominance of donor priorities over national priorities and (6) limited access and usability of data.<sup>11</sup>

They report that only 12 of the 54 member countries of the African Union have legally and functionally independent statistical agencies. On the challenge of inadequate budgets, only two countries viewed themselves as adequately resourced. Quite palpably, African statistical agencies do not as yet still enjoy the importance they deserve in the priority lists of their governments. And even relatively meagre budgetary allocations are often cut. In some cases, international donors and aid agencies fill this gap to some extent. Unfortunately, the divergence of goals and interests among donors and governments can be problematic (see Table 5).

	<b>Size</b>	<b>Scope</b>	<b>Frequency</b>
<b>Governments</b>	Large-sample surveys	Fewer key indicators	High
<b>Donors</b>	Small-sample surveys	More key indicators	Low
Source: CGD & APHRC (2014)			

The downside impacts of misaligned incentives are clear. They include political considerations, as when unfavourable but accurate data can cost elections or widen rifts among communities or tribes. This data may lead to suppression or falsification. From another perspective, the orientation of donors towards performance targets may push some governments to game official statistics to attract or retain aid.

There are also knotty access and usability issues. Many African statistical agencies are believed to literally hide sensitive data. "Only 56 per cent of the microdata from household surveys conducted between 2000 and 2014 are available to the public", for instance (CGD & APHRC, 2014). Budgetary and staff constraints may provide justifiable reasons for this reality. The fear of being second-guessed is another potential motivation for a lack of transparency. Although African statistical agencies increasingly publish more of their data online, data hoarding remains prevalent.

Unusual circumstances may lead to unintentional measurement inaccuracies. For instance, African statistical agencies released inflation data for March and April 2020 that failed to show the effects of obvious and pervasive price hikes, gouging, and hoarding of essential goods and services owing to COVID-19-induced lockdowns. These behaviours would ordinarily raise their headline inflation rates significantly. Put simply, this data was likely inaccurate and unreliable. This is not a uniquely African problem.

Advanced economies similarly released economic statistics for those periods that likely failed accuracy and reliability tests. Consider consumer inflation measures. With most economies around the world in some form of lockdown, a significant portion of their consumer baskets inadvertently failed to capture current realities. Many services were literally shut down. Many goods, ranging from meats to toilet paper, were in short supply. Few of these should have been included in the consumer price index (CPI) basket for the period of the lockdowns.

In the above cases, headline inflation figures for this period were distorted to the downside.<sup>12</sup> Some statistical agencies owned up to the problem. India chose not to publish inflation data for April 2020, due to its inability to conduct the requisite fieldwork during the nationwide lockdown.<sup>13</sup> Although changes in CPI weightings may not always be optimal or even feasible, agencies should not publish data that is wrong without including clear caveats.

Even in less volatile times, weighting-led errors occur. Such issues also arise in advanced economies. Consider for example the raging debate about the Euro-Area CPI basket of goods and services: some economists insist that more accurate weightings would show higher inflation.<sup>14</sup> <sup>15</sup> The underlying technicalities are not relevant to our inquiry. The facts are that statistical errors, by African agencies or otherwise, may arise not from sloppiness but from difficulties in classifications or other methodological issues. Some of the identified deficiencies in African statistics should be viewed in this context.

Statistical agencies sought solutions to the challenges posed by the COVID-19 pandemic. Some adopted innovative approaches to data collection. In France, on-the-ground data collection and observations of behaviour were literally impossible: French citizens were stuck at home. Instead, France relied on credit card data and other alternative measures to compute the relevant statistics.<sup>16</sup> Similarly, with face-to-face data collection constrained owing to a countrywide lockdown, *Statistics South Africa* will collect data for its Q2-2020 labour force survey via telephone.<sup>17</sup>

The key point for African businesses and investors, or for firms doing business on the continent, is that numerous alternative measures are available to gauge the accuracy of published official data in the event that official statistics for variables of interests are unavailable or appear inadequate.

### **We cannot as yet vouch for African numbers**

Rebasing exercises for both GDP and inflation data across the continent are now more frequent. Consequently, changes to the upside are less dramatic than in the past. Ivory Coast finally rebased its GDP this year, changing the base year to 2015 from 1996. South Africa also plans a GDP rebasing exercise for September, with the base year to be changed to 2015 from 2010, using new sector weights.<sup>18</sup>

Kenya and Ghana recently updated their inflation model, using new household surveys to weight the consumer price index (CPI) basket of goods and services, and adopting more recent base years. While these changes represent improvements, they still rely on what we may still deem more than ideally lagged price and consumption data on the one hand and insufficiently long historical data for the new bases on the other.

Consider the Kenyan case; its new CPI, which now has a base period of February 2019, is based on a 2015/16 household budget survey.<sup>19</sup> In the Ghanaian case, its rebased CPI, which now has a base year of 2018 (previously 2012), shows only the revised historical data from August 2019 on its website (based on author's checks in early May 2020).<sup>20</sup> As Kenya and Ghana are major African economies, these deficiencies could be said to be representative of a broader phenomenon in this regard across the continent.

In general, disaggregated African data is often not readily available; and rarely for newly rebased data.<sup>21</sup> Unsurprisingly the ongoing Covid-19 pandemic complicated many planned African rebasing and survey exercises for the remainder of 2020. Agencies have announced delays in statistical data releases. Some exercises are postponed altogether, with methodologies changed to ensure publication within the year.<sup>22</sup> Despite the turmoil, the statistics of more African countries are now more regularly refreshed. Both businesses and investors can expect them to reflect a reasonably accurate base case for the current state of the economy of interest.

Facing critical decisions, there is clearly a need to validate official numbers by triangulating them with other more real-time and down-to-earth data. As noted earlier, censuses, while now relatively more frequent on the continent, still reflect significant time lags.<sup>23</sup> There is as yet no certainty regarding when the next Nigerian census will take place, for instance. The South African census has been reset to 2021.

In the period between censuses, investors and businesses still need up-to-date and accurate data. In some cases, emerging techniques for using openly available spatial data show promise for bridging temporal gaps.<sup>24</sup> Mobile phone subscription data are useful to assess consumption patterns across income classes. Data on mobile phone use and spending often provides far better insights into the spending patterns of an African country's population than do official poverty statistics. Most African statistical agencies now source and publish data from their telecommunications regulators.

Social media data can also be reliable for filtering some official statistics. Considered “the largest enumeration of people in history,” with more than 2.4 billion active users, Facebook data can provide a sense of a country's population.<sup>25</sup> Whitby (2020) argues Facebook is tantamount to a census because much of the information it collects is modelled after United Nations census core guidelines. These include name, birthday, gender, cities of residence and origin, high school and college attended, employer and relationship status. Even though many of the poor in the informal economy might not have Facebook accounts, a firm looking to target the portion of the African population with disposable income might find Facebook data quite useful.

Firms can also now capture some key African economic statistics. Real-time prices for African consumer goods and services are increasingly available on the Internet. Private sector economists in advanced economies use this data. Given the rising growth of online retailing of both goods and services in Africa, use of this data is increasingly convenient and inexpensive for making investment decisions on the continent. *The Economist* recently noted that statistical organisations around the world had begun “scraping web pages,” a practice once shunned, but now adopted as the Covid-19 pandemic inhibits many conventional data collection methods.<sup>26</sup>

The illustrative examples above reveal how firms and investors now deploy various creative techniques to overcome the challenges of obtaining valid data. Still, these additional efforts to gauge opportunities and make investment decisions clearly add to the costs of doing business on the continent. Add to this the risk of realities on the ground turning out to be outside any considered scenarios. Understandably, some firms might choose not to make the effort. Thus, despite ongoing improvements in acquisition, production and distribution of African statistics in recent years, we choose to err on the side of caution and advise users to adopt multiple data sources.

### **Summary & Conclusion**

Many statistical agencies on the continent face a sceptical audience, even when analysis is performed in collaboration with international agencies, in accordance with best practices, and results in better representations of reality.<sup>27</sup> This is partly due to the history of overnight increases in the reported size of national economies, and partly to a lack of transparency. More regular rebasing and survey exercises now meet less jarring responses. Unfortunately, such best practices are less frequent and consistent than desired. As *The Economist* recently observed, businesses and investors still “take shots in the dark when investing in new markets” on the continent.

The importance of the quality of African statistics to investment and development decisions cannot be overemphasized. Clearly in light of still undesirable realities, the World Bank is dedicating its 2021 World Development Report (WDR) to “Data for Development”, its first WDR on the subject.<sup>28</sup> The Bank will put its money where its mouth is. In late March 2020, the World Bank allocated US\$379 million to seven West African countries (Burkina Faso, Cabo Verde, Cote d'Ivoire, Ghana, Liberia, Sierra Leone and Togo) to strengthen their statistical systems.<sup>29</sup>

These resources are necessary and urgent. Even more funding and increased capacity for national statistical agencies may be necessary, yet insufficient to overcome the root causes of failures to produce valid and reliable statistics in Africa. Kinyondo & Pelizzo (2018) find that even well-funded and highly distinguished global institutions and think tanks find the task of producing valid and reliable African statistics to be herculean.<sup>30</sup> These institutions lack neither funds nor expertise, they argue. Kinyondo & Pelizzo's intuition is that the lack of “a proper research culture” on the continent may be the root cause. While this notion is all very well and good, cultural change is slow at best. What should businesses and investors do in the interim?

We established that African statistics, both social and economic, are improving, albeit sometimes relatively poor and often inadequate. Understandably, businesses and investors continue to view the data with a certain level of distrust. During one of this author's enquiries, one professional recounted needing to discount one key African country's population data by about 40-50%, after geospatial analysis revealed a high differential between reality and official data. This respondent prefers to aggregate African GDP data from its smaller components to arrive at a national figure, which in his experience tends to be lower than the official number.

One surprising outcome of the present enquiry is the counterintuitive observation that official African GDP data may sometimes be overestimations. Ordinarily, an underestimation for inflation is understandable, as stale surveys, old base years and so on will necessarily skew inflation data. But for GDP, the conventional wisdom has always been that infrequent GDP rebasing exercises should instead lead to underestimations rather than overestimations; at least in the African context.

In sum, our view is that before making capital allocation decisions, businesses and investors must examine multiple sources of data and if they have the resources, conduct their own surveys. Inevitably, a risk-based approach may be their best bet. What does this mean? Upon assessing official datasets and comparing them with readily available real-time data such as mobile phone subscriptions, spatial data, and so on, the prospective investor or firm can do little else except to take the plunge and invest in the country and sector of interest! A small-scale pilot venture would in many cases generate the information needed to determine whether or not to take the bigger risk to scale up.

Certainly, the lead-time for the full investment decision is longer, and incurs the risk that a decision may be made not to venture at all, with losses of potential income and jobs to the host country and its government. But that is the reality. There are cautionary tales of international firms that overestimated the consumption potential of many an African country, then later had to roll back their ambitions when evidence on the ground proved otherwise.<sup>31</sup> And in some of these examples, the subject firms had operated on the continent for decades.

Finally, African statistical agencies clearly need to do much more to gain the trust of their data users. And until current and prospective businesses and investors on the continent are able to implicitly trust the data they produce, a long road lies ahead.

Author: Rafiq Raji

Editor: Dr. A. Lee Gilbert

Editor-in-chief: Prof. Sam Park



## References

- <sup>1</sup> Lacking data, many African governments make policy in the dark. (2020, May 7). *The Economist*. Retrieved from <https://www.economist.com/middle-east-and-africa/2020/05/07/lacking-data-many-african-governments-make-policy-in-the-dark>
- <sup>2</sup> Jerven, M. (2013). *Poor Numbers: How We Are Misled by African Development Statistics and What to Do about It*. Ithaca & London: Cornell.
- <sup>3</sup> <https://www.investopedia.com/terms/b/base-year-analysis.asp>
- <sup>4</sup> Sy, Amadou. (2015, March 3). *Are African countries rebasing GDP in 2014 finding evidence of structural transformation*. Brookings. Retrieved from <https://www.brookings.edu/blog/africa-in-focus/2015/03/03/are-african-countries-rebasing-gdp-in-2014-finding-evidence-of-structural-transformation/>
- <sup>5</sup> Revision to GDP methodology gives boost to Ivory Coast's reported economy. (2020, March 12). *Reuters*. Retrieved from <https://www.reuters.com/article/ivorycoast-economy-gdp/revision-to-gdp-methodology-gives-boost-to-ivory-coasts-reported-economy-idUSL8N2B55IT>
- <sup>6</sup> Bhaskar, B., Kalimili, N. & Pirlea, F. (2019, September 10). Many African economies are larger than previously estimated. *World Bank*. Retrieved from <http://datatopics.worldbank.org/world-development-indicators/stories/many-economies-in-ssa-larger-than-previously-thought.html>
- <sup>7</sup> <https://statisticalcapacitymonitor.org/country/2>
- <sup>8</sup> Naidoo, P. (2020, February 18). South Africa data credibility at risk from budget cuts, council says. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2020-02-18/s-africa-data-credibility-at-risk-from-budget-cuts-council-says>
- <sup>9</sup> Mo Ibrahim Foundation (2019). *African Governance Report - Agendas 2063 & 2030: Is Africa on track?* London: Author. Retrieved from [https://mo.ibrahim.foundation/sites/default/files/2019-10/African\\_Governance\\_Report\\_2019.pdf](https://mo.ibrahim.foundation/sites/default/files/2019-10/African_Governance_Report_2019.pdf)
- <sup>10</sup> Channels TV (2020, February 25). *Yemi Kale Defends NBS Methodology For Gathering GDP Data* [Video file]. Retrieved from <https://www.youtube.com/watch?v=UG3h6jW9ItQ>
- <sup>11</sup> Centre for Global Development & African Population & Health Research Centre (2014). *Delivering on the data revolution in Sub-Saharan Africa – Final report of the data for African Development Working Group*. Authors: Washington DC. Retrieved from <https://www.cgdev.org/sites/default/files/CGD14-01%20complete%20for%20web%200710.pdf>
- <sup>12</sup> The impossibility of measuring inflation in a pandemic. (2020, April 25). *The Economist*. Retrieved from <https://www.economist.com/britain/2020/04/25/the-impossibility-of-measuring-inflation-in-a-pandemic>
- <sup>13</sup> Nag, A. (2020, May 14). Missing India inflation data turns focus to RBI forecast models. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2020-05-14/surveys-can-guide-india-rate-setters-amid-missing-inflation-data>
- <sup>14</sup> Eiglsperger, M., Goldhammer, B. (2017). Consumer price indices, owner-occupied housing and measures of underlying inflation in monetary policy of selected central banks. *Paper prepared for the "Meeting of the Group of Experts on Price Indices"*, 7-9 May 2018, Geneva, Switzerland. Retrieved from <https://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.22/2018/ECB.pdf>
- <sup>15</sup> White, T. & Takeo, Y. (2019, November 7). Europe's inflation is underestimating housing prices. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2019-11-07/clues-to-ecb-s-inflation-dilemma-could-lie-very-close-to-home>
- <sup>16</sup> Horobin, W. (2020, April 6). France uses new measure to calculate 35% of economy is shut. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2020-04-07/france-s-radical-economic-estimate-shines-a-light-in-virus-fog>
- <sup>17</sup> Statistics South Africa (2020, April 28). *Statistics South Africa to use telephonic data collection for Quarterly Labour Force Survey (Q2) 2020* [Press release]. Retrieved from <https://www.gov.za/speeches/statistics-south-africa-uses-telephonic-data-collection-quarterly-labour-force-survey-q2>
- <sup>18</sup> Naidoo, P. (2020, January 20). South Africa to overhaul its GDP data from September. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2020-01-20/south-africa-to-overhaul-its-gdp-data-from-september>
- <sup>19</sup> Kenya National Bureau of Statistics (2020). *Consumer price indices and inflation rates for April 2020*. Nairobi: Author. Retrieved from [https://www.knbs.or.ke/?wpdmpro=consumer-price-indices-and-inflation-rates-for-april-2020&wpdmid=5841&ind=QaSpqBMhgLzzXAS7Q0XOMrTWt5SK\\_jVC1Aye-C7TA4Ejd0dDe25EHBTvzV6ZW7lc](https://www.knbs.or.ke/?wpdmpro=consumer-price-indices-and-inflation-rates-for-april-2020&wpdmid=5841&ind=QaSpqBMhgLzzXAS7Q0XOMrTWt5SK_jVC1Aye-C7TA4Ejd0dDe25EHBTvzV6ZW7lc)
- <sup>20</sup> Ghana Statistical Service (2020). *Newsletter Consumer Price Index (CPI) March 2020*. Accra: Author. Retrieved from [https://statsghana.gov.gh/gssmain/fileUpload/Price%20Indices/Newsletter\\_CPI\\_March\\_2020.pdf](https://statsghana.gov.gh/gssmain/fileUpload/Price%20Indices/Newsletter_CPI_March_2020.pdf)
- <sup>21</sup> Beguy, D. (2016, August 20). Poor data hurts African countries' ability to make good policy decisions. *Quartz*. Retrieved from <https://qz.com/africa/762729/poor-data-is-hurting-african-countries-ability-to-make-good-policy-decisions/>

<sup>22</sup> Statistics South Africa (2020, April 17). *Covid-19 lockdown impacts publication of economic statistics* [Press release]. Retrieved from <http://www.statssa.gov.za/?p=13228>

<sup>23</sup> <https://unstats.un.org/unsd/demographic-social/census/censusdates/>

<sup>24</sup> Kummu, M., Taka, M. & Guillaume, J.H.A. (2018). Gridded global datasets from gross domestic product and human development index over 1990-2015. *Scientific Data*, 5 (180004), pp. 1-15. Retrieved from <https://www.nature.com/articles/sdata20184>

<sup>25</sup> Whitby, A. (2020). *The sum of the people: How the census has shaped nations, from the ancient world to the modern age*. New York: Basic Books.

<sup>26</sup> Crisis measures: The pandemic could lead statisticians to change how they estimate GDP. (2020, May 30). *The Economist*. Retrieved from <https://www.economist.com/finance-and-economics/2020/05/30/the-pandemic-could-lead-statisticians-to-change-how-they-estimate-gdp>

<sup>27</sup> Nigeria's GDP – Step change. (2014, April 12). *The Economist*. Retrieved from <https://www.economist.com/finance-and-economics/2014/04/12/step-change>

<sup>28</sup> Goldberg, P. (2020, January 7). World Development Report 2021 – Data for Development. *World Bank Blogs*. Retrieved from <https://blogs.worldbank.org/developmenttalk/world-development-report-2021-data-development>

<sup>29</sup> World Bank (2020, March 26). *Harmonizing and improving statistics in West Africa* [Press Release]. Retrieved from <https://www.worldbank.org/en/news/press-release/2020/03/26/harmonizing-and-improving-statistics-in-west-africa>

<sup>30</sup> Kinyondo, A. & Pelizzo, R. (2018). Poor quality of data in Africa: What are the issues? *Politics & Policy*, 0 (0), pp. 1-27. Retrieved from [http://www.academia.edu/download/57883105/Poor\\_Quality\\_of\\_Data\\_Paper.pdf](http://www.academia.edu/download/57883105/Poor_Quality_of_Data_Paper.pdf)

<sup>31</sup> Fick, M. (2017, June 12). Nestle switches Africa focus to lower-income consumers. *Financial Times*. Retrieved from <https://www.ft.com/content/8bdd8222-4c58-11e7-919a-1e14ce4af89b>



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE

**NTU-SBF**  
Centre for African Studies  
Nanyang Business School

## NTU-SBF Centre for African Studies

The NTU-SBF Centre for African Studies (CAS) is to develop thought leadership and capacity for doing business in Africa. It includes bringing Africa to Southeast Asia and Singapore and helping Singapore to be positioned as the gateway into Southeast Asia. As such, CAS aims to build and expand its local and international profile by means of publications, conferences, seminars and business forums through collaboration with local businesses, other research entities and business schools in Singapore and Africa.  
<http://www.nbs.ntu.edu.sg/Research/ResearchCentres/CAS>



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE

**Nanyang Centre for  
Emerging Markets**  
Nanyang Business School

## Nanyang Centre for Emerging Markets

The Nanyang Centre for Emerging Markets (CEM) is a new initiative by Nanyang Business School to establish global thought leadership on business-related issues in emerging markets. It conducts research on pressing and timely business issues in emerging markets through a global research platform of leading scholars and institutional partners. It closely interacts with corporate partners to identify research topics and manage the research process. Its research outputs include valuable and relevant implications for sustained profitable growth for local and multinational companies in emerging markets. It delivers a variety of research reports and organizes forums, seminars, CEO roundtables, conferences, and executive training programmes for broad dissemination of its research outputs.  
<http://www.nbs.ntu.edu.sg/Research/ResearchCentres/CEM>

## Partner Organizations



## Contact Information:

Que Boxi

Email: [cas@ntu.edu.sg](mailto:cas@ntu.edu.sg)

Phone: +65 65138089

Address: S3-B1A-35 Nanyang Business School

Nanyang Technological University

50 Nanyang Avenue Singapore 639798