Agriculture

Impact of food insecurity on development progress

Jakkie Cilliers
Impact of food insecurity on development progress

Hunger, malnutrition and low levels of educational attainment are well-established causes and symptoms of Africa’s underdevelopment. Insufficient access to calories is a driver of undernutrition and stunting and, together with a lack of access to improved water, sanitation and hygiene (WaSH) facilities, can lead to various health problems and subsequent psychosocial and learning challenges (also see Theme 3). [26]

Although sub-Saharan Africa has until recently had a similar number of calories available per capita to South Asia, the region has fallen behind since 2015 and performs significantly poorer than South America (Chart 4).

Given the continent’s massive geographic expanse and diverse climate, agriculture potential and production differs vastly from country to country:

- In 2019, the agricultural sector in West Africa was the largest (at US$184 billion). According to the Current Path forecast, it is expected to experience solid growth, increasing to US$223 billion (21%) by 2043.

- Although agricultural growth in East Africa is expected to be smaller, it will likely be more rapid than what is expected for West Africa.

- At US$30 billion in 2019, the agricultural sector in Southern Africa is the smallest on the continent. Although it too is expected to grow by 21%, it will amount only to US$36 billion by 2043.

The pedestrian improvement in agricultural productivity in Africa amidst rapid population growth contributes to the slow rate of poverty reduction, although relatively high levels of inequality also contribute. Changing dietary preferences also contribute to food insecurity in that African countries import ever-larger quantities of food every year.

In 2019, Africa’s annual agricultural trade deficit stood at roughly US$64 billion per annum. The Current Path forecast is that it will increase almost fourfold, to about US$276 billion, by 2030 and then again more than double, to approximately US$652 billion, by 2043.

Chart 5 shows the agricultural trade deficit for the five African regions in a stacked area graph. It indicates that much of the increase will come from West and Central Africa, although all regions will experience deteriorating agricultural trade deficits long into the future. In the Current Path forecast, Africa could be importing more than a third of its food requirements by 2040, which leaves the continent extremely vulnerable to fluctuations in food prices.
Endnotes


5. T Lewis, *Transatlantic slave trade*, 2018


14. World Bank, *Aggregated LPI*

15. World Bank, *Aggregated LPI*

16. Embassy of the DR Congo, *Invest in DRC, Agriculture*


19. In 2003, the New Partnership for Africa’s Development (now called the African Union Development Agency) published its Comprehensive Africa Agriculture Development Programme, with ambitious goals, namely to: allocate at least 10% of national budgets to agriculture; reach rural growth rates of 6% annually by 2015; integrate and invigorate regional and national agricultural markets; significantly increase agricultural exports; transform Africa into a ‘strategic player’ in global agricultural science and technology; practise sound environmental and land management techniques; and reduce rural poverty (see: M Fleshman, *Boosting African farm yields*, 2014).

20. The commitment to devote at least 10% of national budgets to agriculture and rural development was also included in the 2003 Maputo Declaration by African heads of state and reiterated in the 2014 Malabo Declaration on Accelerated Agricultural Growth and Transformation in Africa.

21. On aggregate, Africa spends only 5–7% of national budgets on agriculture, although a 2018 study found that 11 African countries did manage to allocate 10% or more of their budgets to agriculture in some years since 2005, with Ethiopia, Kenya, Mozambique and Sierra Leone achieving 6% agricultural...

22. AllAfrica, *Communique: Africa food security leadership dialogue*, August 5, 2019

23. IPPMedia, *Value add in Africa: First steps in a long journey*, 2019; also see: African Cashew Alliance, *About us*

24. The world cocoa industry is worth more than US$100 billion annually; also see: Y Adegoke, *Why Europe dominates the global chocolate market while Africa produces all the cocoa*, 2018; D Philling, *The African farmers taking on big chocolate*, *Financial Mail*, 16 December 2019; H Fofack, *Overcoming the colonial development model of resource extraction for sustainable development in Africa*, 2019


30. World Bank, *Agriculture in Africa: Telling facts from myths*

31. World Bank, *Agriculture in Africa: Telling facts from myths*


33. World Bank, *Agriculture in Africa: Telling facts from myths*

34. In contrast to the tripling in growth cited earlier, this was an improvement across the entire country, so the growth is understandably much smaller; see: JY Lin, *The Household Responsibility System in China's Agricultural Reform: A Theoretical and Empirical Study*, *Economic Development and Cultural Change*, 36:53, 1988, S199–S224

35. China-Africa Project, Chinese and African agriculture have a lot more in common that most people think: *Interview with Xinqing Lu, Associate Programme Officer for Alliance for a Green Revolution in Africa*, 3 December 2019

36. *OEC, Brazil*


38. L Abboud, *The robot revolution down on the farm*, 2018


40. R Kimani and P Bosire, *FarmDrive*, 2019

41. In most of rural Africa, precise location of a farm is objectively unknown so the location is determined via a series of SMS questions (e.g. time to walk to different primary schools). The more schools a farmer is familiar with in their area, the easier it is to hone in on their specific location.

42. J Bird, *'Smart' insurance helps poor farmers to cut risk*, *Financial Times*, 5 December 2018; also see, for example, https://agrocenta.com/ and https://www.zenvus.com/.

44. S Gebre, AGRA plans to invest $500 million in African seed companies, Bloomberg, 7 September 2016

45. The Alliance for Food Sovereignty in Africa and its allied organisations argue that ‘AGRA has unequivocally failed in its mission to increase productivity and incomes and reduce food insecurity, and has in fact harmed broader efforts to support African farmers.’ See: Various co-signatories, Open letter: The Green Revolution in Africa has unequivocally failed, 15 September 2021


47. Ammonia manufacturing contributes 1% of worldwide carbon dioxide emissions. See LK Boerner, Industrial ammonia production emits more CO2 than any other chemical-making reaction. Chemists want to change that, *Chemical & Engineering News*, 15 June 2019


49. Indorama Petrochemicals, About IEPL, Port Harcourt


54. Food and Agriculture Organization, *Food wastage: Key facts and figures*

55. InspiraFarms, Our team

56. The improvements in yields are similar in magnitude to the improvements seen in South Asia between 1980 and 2020, and in a similar timeframe. Indeed, South America achieved a much more rapid increase between 2000 and 2010, moving from roughly 7.8 tons per hectare to about 11.8 tons.

57. Chart 14 presents the reduction in extreme poverty in African countries across the low- and middle-income categories. The reduction in extreme poverty in Seychelles, Africa’s only high-income country, is negligible.

58. The contribution of agriculture as a proportion of the Seychelles’ economy, the continent’s only high-income island state, was about 4% in 2019.

59. Some of these constraints can be overcome through technology, such as the use of precision irrigation and application of precise amounts of fertiliser exactly where they are required. Then there is also the potential of vertical farming, which could produce 180 m tons of food globally, according to some analysts.


61. Food and Agriculture Organization, *Government expenditure on agriculture*, 2019


63. Intergovernmental Panel on Climate Change, Working Group II: Impacts, adaptation and vulnerability, 2018


65. The International Institute of Tropical Agriculture does particularly impressive work in this regard. See: https://www.iita.org/
Reuse our work

• All visualizations, data, and text produced by African Futures are completely open access under the Creative Commons BY license. You have the permission to use, distribute, and reproduce these in any medium, provided the source and authors are credited.

• The data produced by third parties and made available by African Futures is subject to the license terms from the original third-party authors. We will always indicate the original source of the data in our documentation, so you should always check the license of any such third-party data before use and redistribution.

• All of our charts can be embedded in any site.

Cite this research

About the authors

Jakkie Cilliers is the founder and former executive director of the Institute for Security Studies (ISS). He currently serves as chair of the ISS Board of Trustees and head of the African Futures and Innovation (AFI) programme at the Pretoria office of the ISS. His 2017 best-seller *Fate of the Nation* addresses South Africa’s futures from political, economic and social perspectives. His two most recent books, *Africa First! Igniting a Growth Revolution* (March 2020) and *The Future of Africa: Challenges and Opportunities* (April 2021), take a rigorous look at the continent as a whole.

About African Futures
