

# From Food Quantity to Diet Quality: How the Race Against Malthus is Changing

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Tufts Research Day on Global Food Security  
25 April 2016



# Last week, more bad news from Africa:

**Hunger**

## 'It's a disaster': children bear brunt of southern Africa's devastating drought

In southern Malawi and Zimbabwe, drought is overwhelming communities, forcing families to rely on meals of leaves and watermelon soup



Lucy Lamble in Harare and Lilongwe  
Thursday 21 April 2016 05.27 EDT

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**C**hidyamakondo high school, near Masvingo in southern Zimbabwe, has won the national girls' football championships three years in a row. But that cherished record - and far, far more - is now at risk.

"Students are fainting, struggling to concentrate in lessons, dropping out of school ... we're having to shorten our assemblies and cut back on sport," says headteacher Morrison Musorowegomo.

"Some of our players would rather leave the school and get married, or they will simply stay in the villages because they have no food."

## Also, this:

### South Africa plans a new 'fat tax' on sugary drinks to combat an obesity epidemic

17 APR 2016 12:50 | AFP

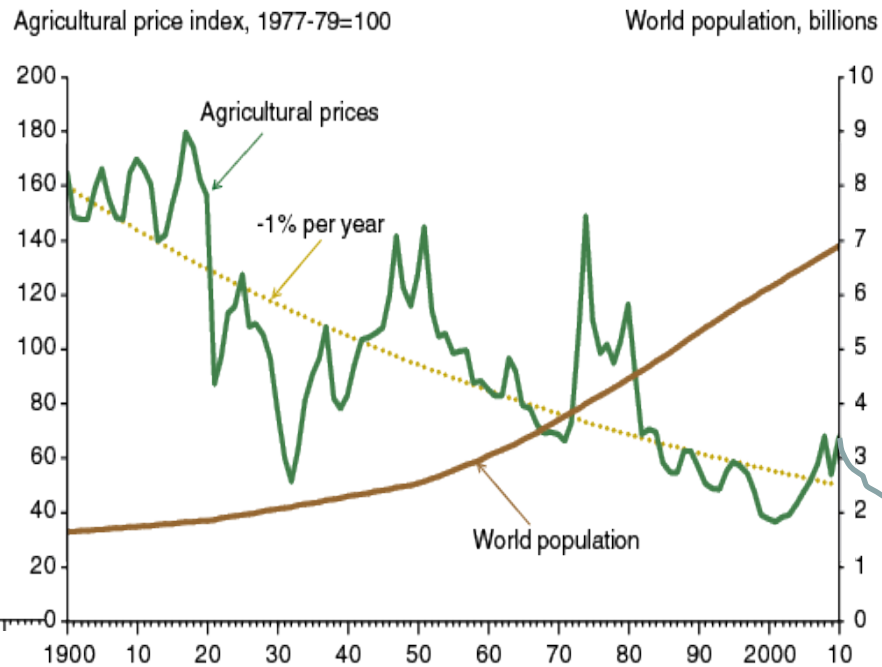
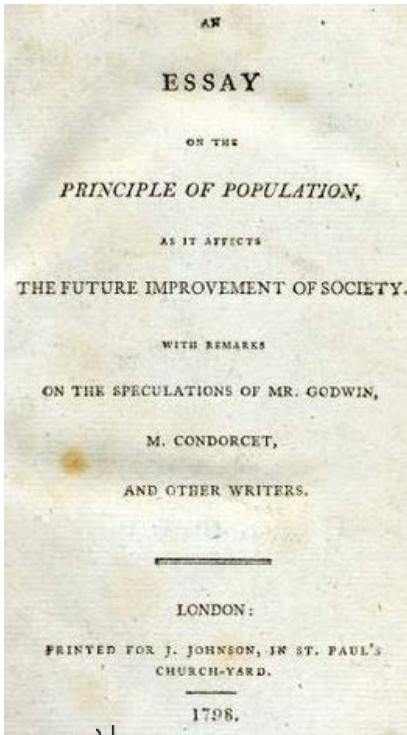
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"These are epidemic proportions," says an expert. Half of adult women and a third of adult men in South Africa are "overweight"



South Africa is joining a growing list of countries around the world, such as Britain and Mexico, trying to put a cap on fizzy drinks. (Photo/AFP).

# The race against Malthus is changing as commodities get cheaper and population growth slows down



We are here (approx.)

Source: USDA, Economic Research Service using Fuglie, Wang, and Ball (2012). Depicted in the chart is the Grilli-Yang agricultural price index adjusted for inflation by the U.S. Gross Domestic Product implicit price index. The Grilli-Yang price index is a composite of 18 crop and livestock prices, each weighted by its share of global agricultural trade (Pfaffenzeller et al., 2007). World population estimates are from the United Nations.



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1800

1850

1900

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70

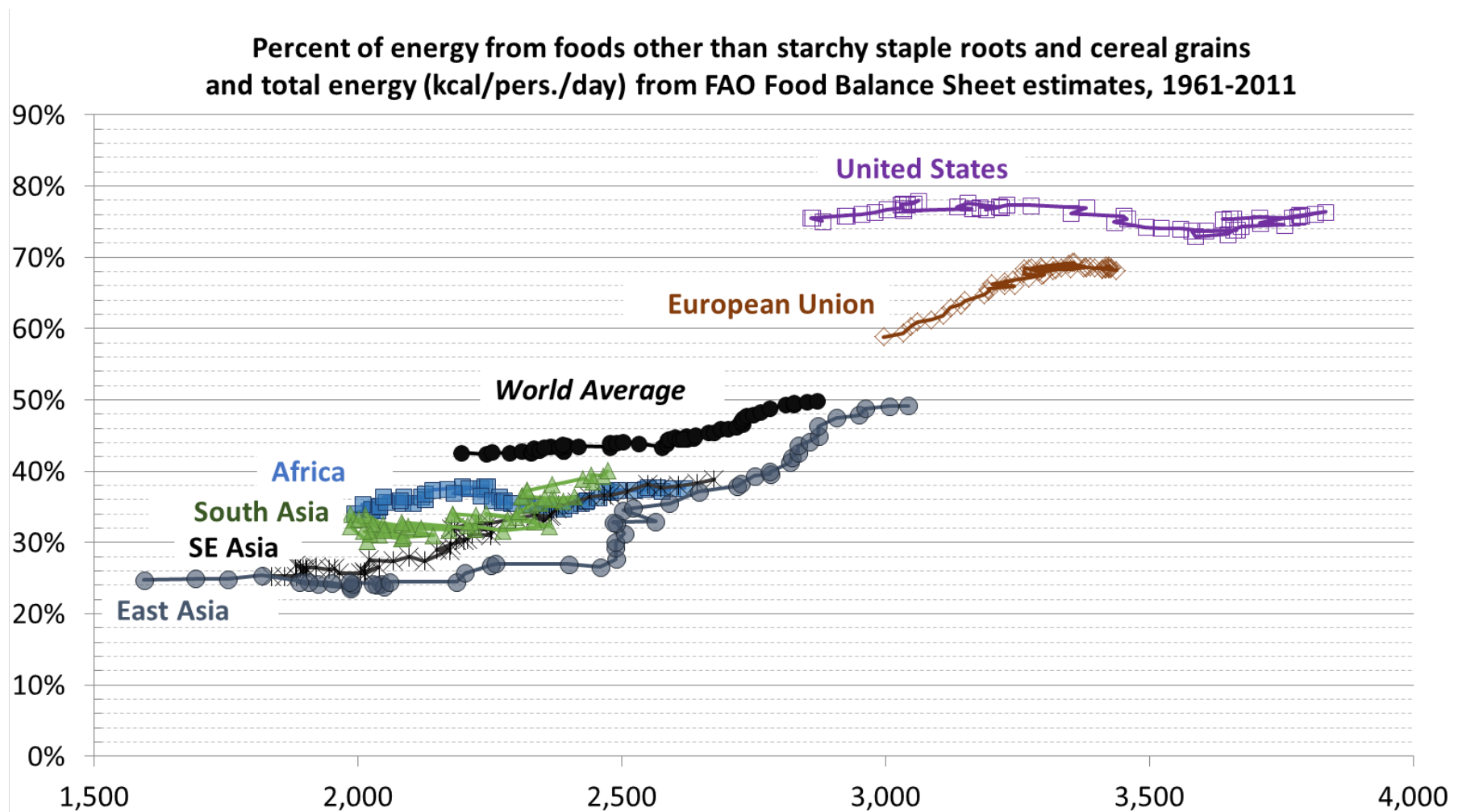
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# The race against Malthus is changing from *more food* to *more diverse foods*



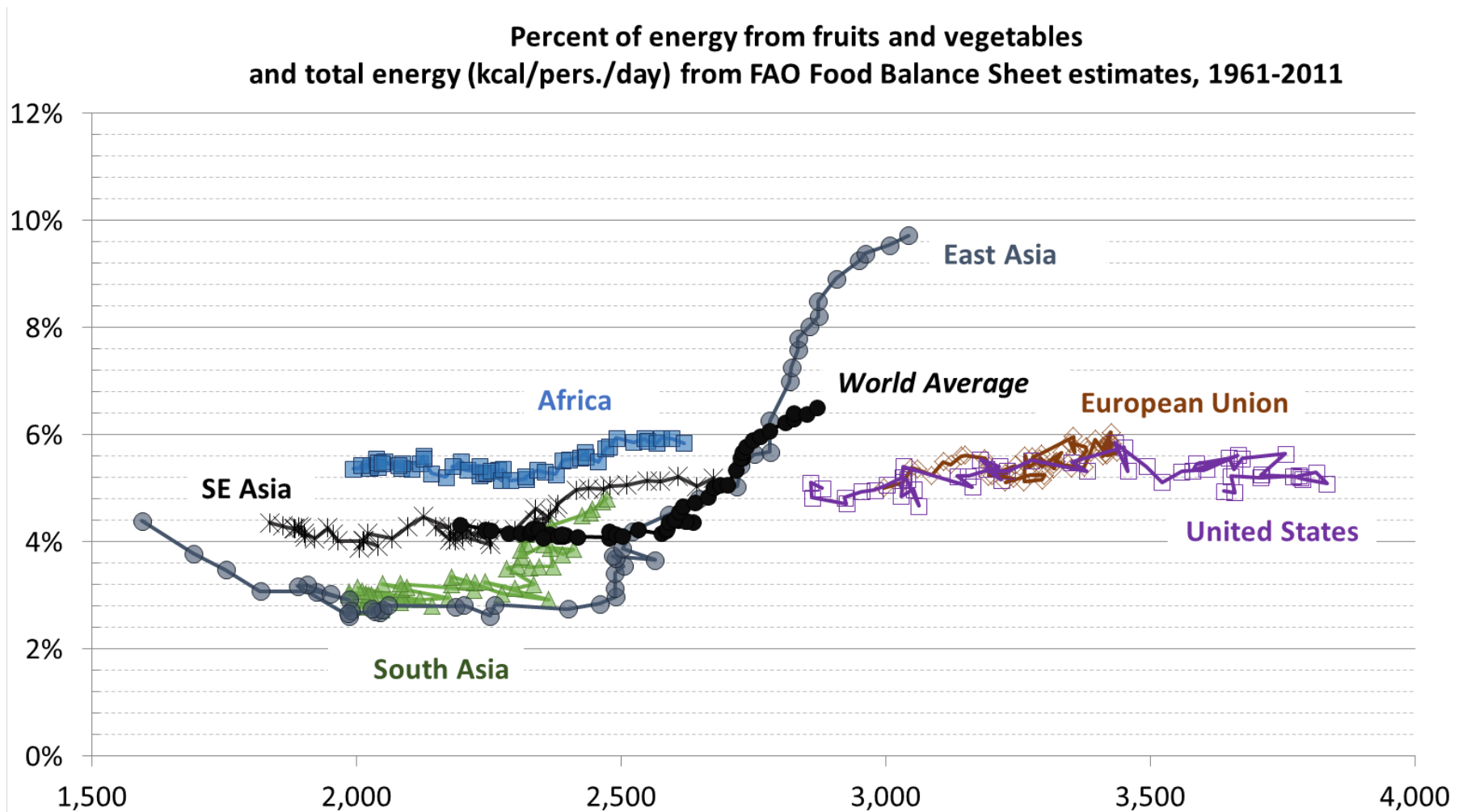
Source: Calculated from FAO Food Balance Sheet data, [faostat3.fao.org/download/FB/FBS/E](http://faostat3.fao.org/download/FB/FBS/E)



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# ...but not always *healthier* foods



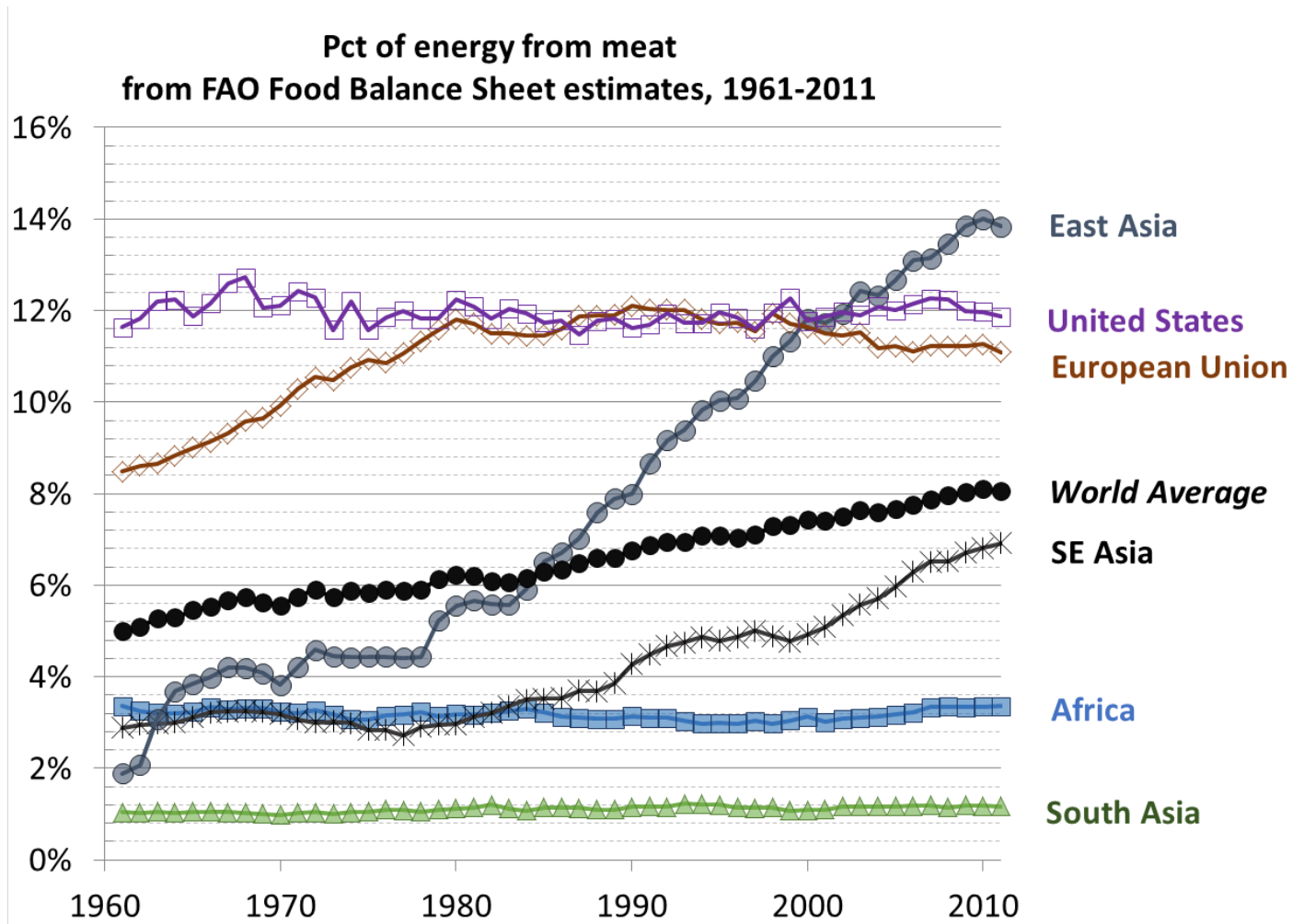
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# ...and diverse trajectories over time



Source: Calculated from FAO Food Balance Sheet data,  
[faostat3.fao.org/download/FB/FBS/E](http://faostat3.fao.org/download/FB/FBS/E)

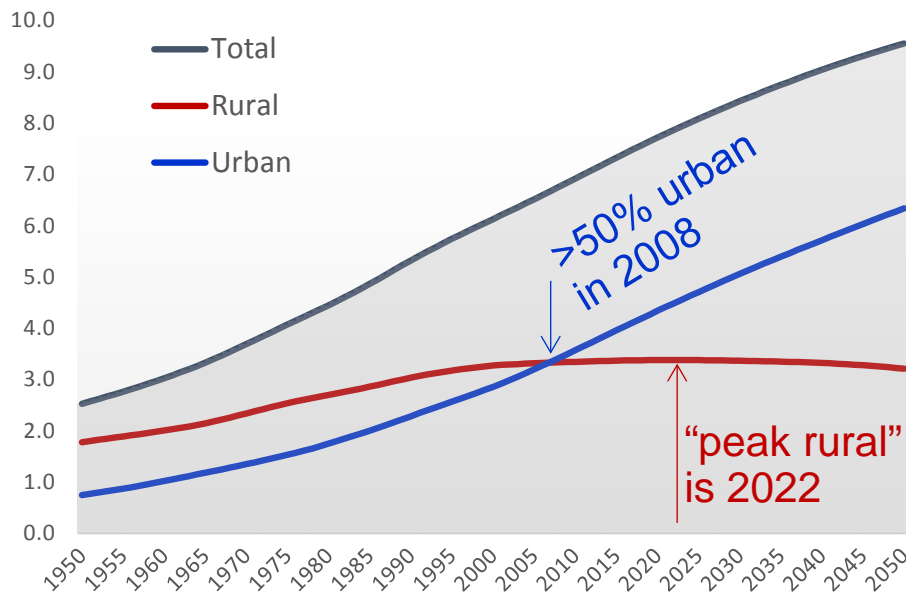


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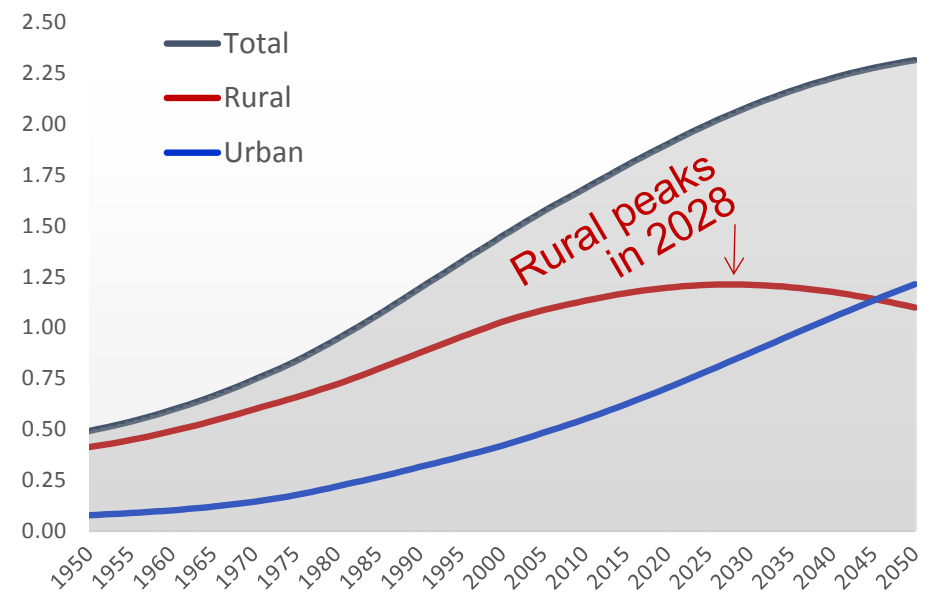
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# The food system's race against Malthus runs through rural population growth

Globally, the whole world's rural population is already near its peak and will soon decline

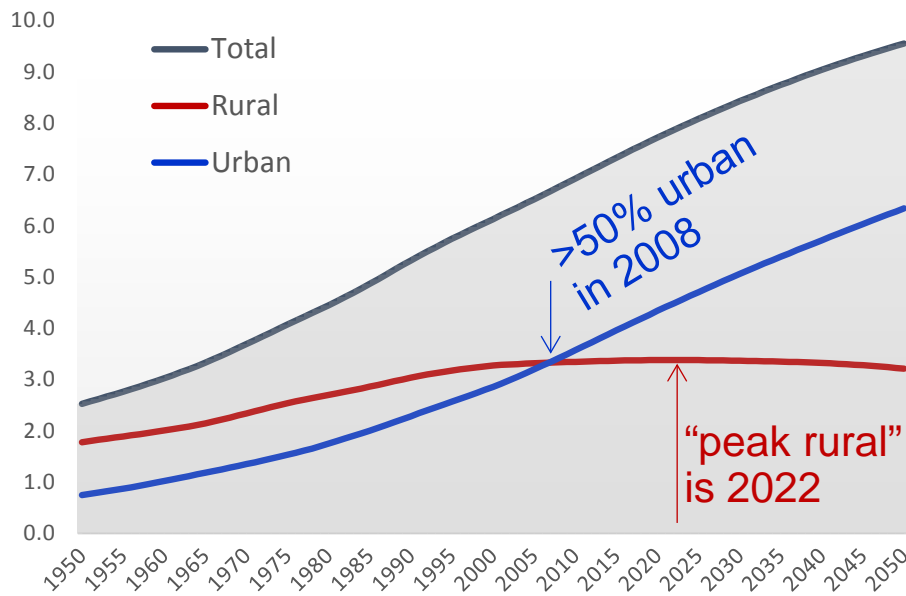


South Asia's rural population will peak and decline after 2028, due to fertility decline

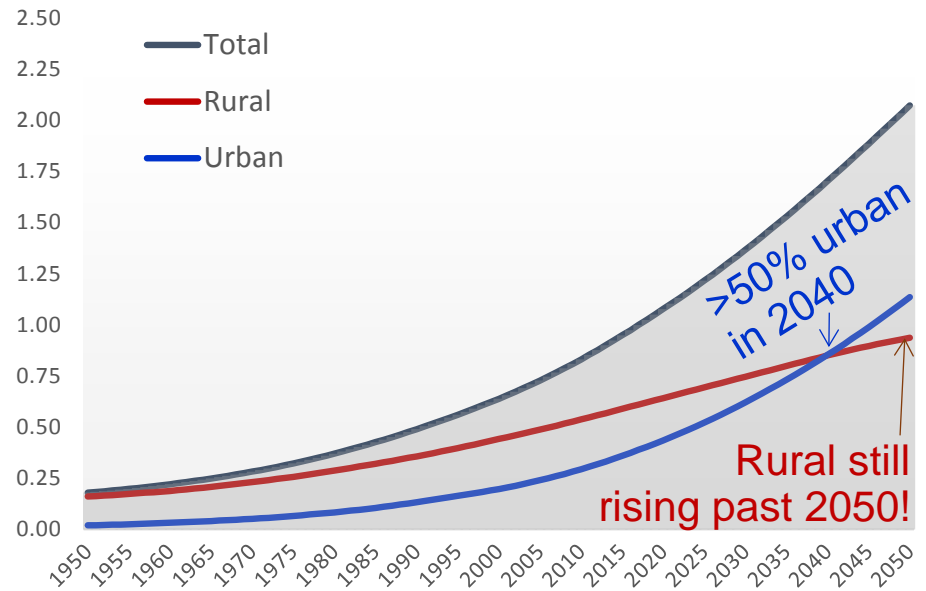


# The most delayed demographic transition is in Sub-Saharan Africa

Globally, the whole world's rural population is already near its peak and will soon decline

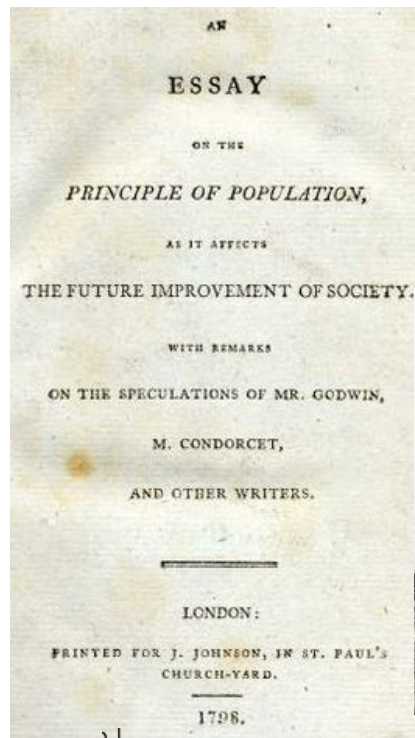


Sub-Saharan Africa's rural population will keep growing past 2050, despite rapid urbanization





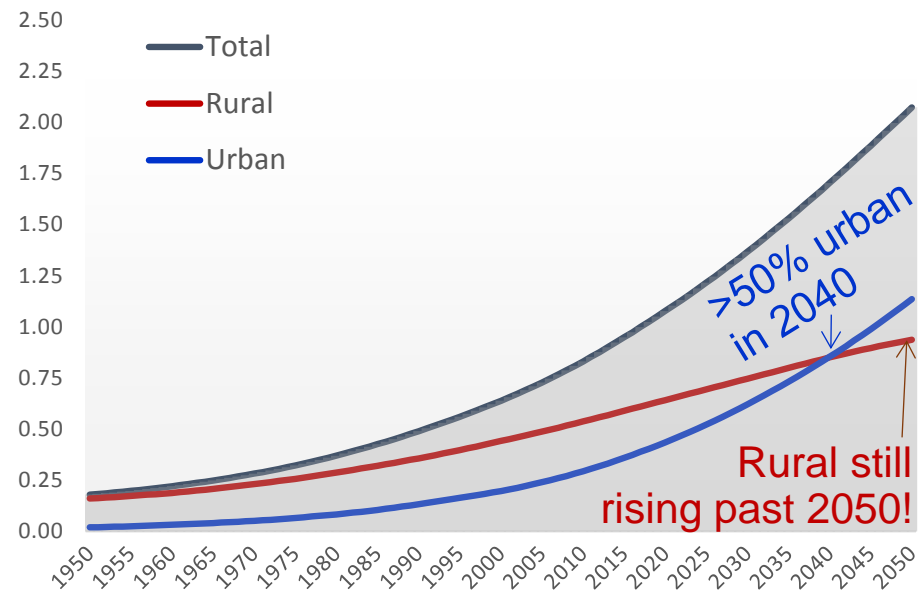
# Despite its fast-growing cities, Africa is the last frontier of Malthusian rural population growth



1800

1850

Sub-Saharan Africa's rural population will keep growing past 2050, despite rapid urbanization



Source: Calculated from UN World Urbanization Prospects, 2014 Revision.

Released July 2014 at <http://esa.un.org/unpd/wup>.

# Much to discuss today!

Hunger

## 'It's a disaster': children bear brunt of southern Africa's devastating drought

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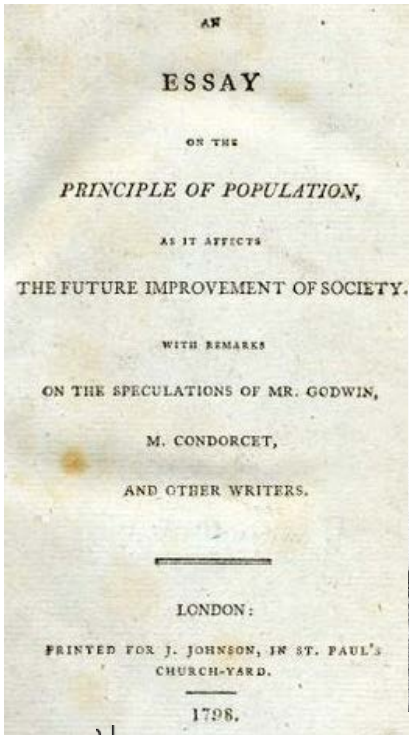
South Africa is joining a growing list of countries around the world, such as Britain and Mexico, trying to put a cap on fizzy drinks. (Photo/AFP)



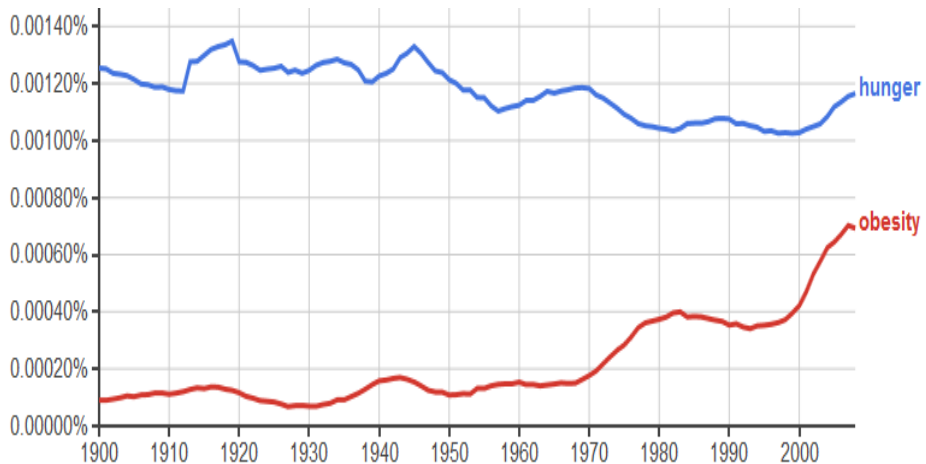
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# The race against Malthus is changing



In English language books,  
“hunger” declined after 1945  
but rose again after 2005,  
“obesity” rose in 1970s and since 2000



Source: Google Books ngram viewer,  
[https://books.google.com/ngrams/graph?content=hunger,obesity&year\\_start=1900&year\\_end=2015](https://books.google.com/ngrams/graph?content=hunger,obesity&year_start=1900&year_end=2015)



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