What Will It Take To Transform African Agriculture 2013-2030?

David Atwood
USAID/BFS

Thom Jayne
Michigan State

Jerome Wolgin
USAID/AFR/SD
Jeanne Downing is the Senior Enterprise Development Advisor in E3’s Office of Microenterprise and Private Enterprise Promotion (MPEP). Downing was in charge of the AMAP research effort focused on fostering opportunities for micro and small firms within global, regional, and domestic value chains. She has worked on small and microenterprise development over the last 25 years, concentrating primarily on value chains, business development services, and subsector analysis/development in over 15 countries in Africa, much of the Caribbean, and a handful of countries in Latin America and Asia. Downing has taught value chain development at The Johns Hopkins School for Advanced International Studies.
Jerome Wolgin currently advises the Africa Bureau on cost-benefit analysis, growth diagnostics, growth and poverty and economic trends and emerging issues in Africa. He is currently responsible for managing the process for developing a five year strategy for the Office. In the ten years between his first and second stints with USAID, he was a Lead Economist for the World Bank, working on Nigeria and donor partnerships. In his first twenty years at USAID, Wolgin worked on economic issues, especially economic policy across Sub-Saharan Africa.
Share of Agriculture in GDP (%): 1960-2011
Urban Population as % of Total Population

- Sub-Saharan Africa
- South Asia
- Latin America & Caribbean
- East Asia & Pacific
Total Rural Population:
1960 - 2011

- Sub-Saharan Africa
- South Asia
- Latin America & Caribbean
- East Asia & Pacific
Crude Birth Rates:
1960-2010

Births per Thousand People

- Sub-Saharan Africa (all income levels)
- South Asia
- Latin America & Caribbean (all income levels)
- East Asia & Pacific (all income levels)
SSA: Agricultural and GDP Growth: 1996-2011
SSA: Poverty Change and Agricultural Growth

Change in Share of households Living in Poverty (%) vs. Percentage Growth in Agricultural Value Added
Thom Jayne has been devoted to working with African colleagues to promote effective policy responses to poverty in Africa. Jayne is Professor of International Development in the Department of Agricultural, Food, and Resource Economics and is a member of the Core Faculty of the African Studies Center at Michigan State University (MSU). His research focuses mainly on how agricultural policies and public investments can contribute to sustainable and equitable development.
Main questions:

1. How will the transformation occur?
2. Why are we seeing agricultural growth lead to poverty reduction in some countries and not in others?
3. Is it realistic to expect the bottom 50% of smallholder farmers to participate in agricultural-led transformation?
4. Which policy levers are the most important?
Why is there a variable relationship between agricultural growth and poverty reduction?
Rural headcount poverty rates, Zambia

Rural poverty rate (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Poverty Rate</th>
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<tbody>
<tr>
<td>1996</td>
<td>82</td>
</tr>
<tr>
<td>1998</td>
<td>83</td>
</tr>
<tr>
<td>2004</td>
<td>78</td>
</tr>
<tr>
<td>2006</td>
<td>80</td>
</tr>
<tr>
<td>2010</td>
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Rural headcount poverty rates, Malawi

Indaba Agricultural Policy Research Institute
Distribution of farm sizes in smallholder farm sectors

- Kenya
- Malawi
- Mozambique
- Zambia
Crop sales by farm size over time - Zambia

Source: MACO CFS 2000/1 to 2010/11 and authors’ computations

Largest smallholder farms (3%) consistently doing better
Differences in state support for agriculture and participation in growth processes – Zambia (2011 harvest)

<table>
<thead>
<tr>
<th>Total area cultivated (maize + all other crops)</th>
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<tr>
<td></td>
<td>(A)</td>
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</tr>
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*2011 vs. average of 2005-2008 harvest
Source: Ministry of Agriculture/CSO Crop Forecast Survey, 2010/11
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Public spending on agriculture, 2010

- FRA: 61%
- FISP: 30%
- Other: 9%

Source: Min. Finance Yellow book

- Seed improvement
- Farm extension / training programs
- Irrigation systems
- Responding to climate change
- Policy analysis
- Rural electrification
- Road-rail-port infrastructure
- Land grant university system
Variation in farmers’ efficiency of fertilizer use on maize, Agroecological Zone IIa, Zambia

Note: Zone IIa is a relatively high-potential zone suitable for intensive maize production.
<table>
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## Ranking with respect to *poverty reduction*: Evidence from Asia

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David Atwood
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David Atwood serves as Food Security Policy Advisor in USAID’s Bureau of Food Security. He retired from the Senior Foreign Service with USAID in 2011, having served in a variety of roles managing expert development teams, including Director of Africa Bureau’s Sustainable Development Office, short-term Deputy Director in Haiti of the USG Office of Earthquake Response Coordination, acting Deputy Assistant Administrator of the Europe and Eurasia Bureau (E&E), and Director of the E&E Office of Democracy, Governance and Social Transition.
What Will An African Agricultural Transformation Look Like

• Fundamentally similar to the agricultural transformations of Asia, Europe, US:
  ▪ Primarily small-farmer based
  ▪ Higher labor and land productivity
  ▪ Farmers create employment/income links off-farm
  ▪ Mechanization increases
  ▪ Larger and fewer farms; marginal farms exit
  ▪ Migration from rural to urban areas
How Long Will it Take?

• How and when are key in poverty impact
  ▪ Policy and investment can facilitate these processes in ways that either help or hurt rural people

• Percent vs absolute numbers in agriculture:
  ▪ Ag *Share* of GDP declines but *absolute* ag GDP grows
    • So labor demand, and wages, increase with higher ag GDP
  ▪ Rural pop *share* declines, but *absolute* rural pop grows
    • So more rural people need employment/income

• Food security = food *and* employment/income
How to Get There: Causes vs Consequences

• Mechanization/large farms/migration: cause or consequence
  ▪ Rising wage rates will make mechanization competitive
  ▪ Successful farmers wanting more income expand
  ▪ Push (poverty) and pull (wages/services) factors drive migration

• Don’t treat these important consequences as causes of agricultural transformation.
  ▪ Seeing mechanization, migration, or farm consolidation as levers to modernize agriculture can foreclose employment and income opportunities for rural people.
  ▪ Rototiller example Southeast Asia vs. Bangladesh
What Don’t We Know About the Transformation of Agriculture in Africa?

• How to achieve large scale transformation with high crop diversity and limited irrigation?

• Which small farmers can meet new quality/safety demands of globalization?
  - Can Africa’s farmers compete with imports to meet increasingly stringent urban demand?

• Which scale of small farms can adopt more productive technologies or specialize?

• What policy levers can increase off-farm employment?
How Will It Happen?

The bad way:
- Subsidies or special treatment for larger farms, mechanization
- Drive people off land and consolidate farm size

The good way: High-impact investments to increase small farmer productivity
- Productivity/technology
- Lower transport/marketing costs
- Farmer education so farmers can meet increasing technology/mkt demands
- Connect farmers to viable commercial value chains

The “virtuous” trajectory of agricultural transformation:
- Small farmers spend their money on other rural services
- This leads to increased labor demand, employment, higher wages
- These economic forces push towards consolidated farms and more off-farm employment.
Questions?
Eric Postel, USAID’s new Assistant Administrator for the Bureau of Economic Growth, Agriculture, and Trade, was approved by the Senate on March 3rd. Postel has helped support economic development in more than 45 developing countries on four continents. Postel strongly supports President Obama’s call to “elevate broad-based economic growth as a top priority” of U.S. overseas development efforts and looks forward to helping with Agency reforms. In particular, he plans to focus on helping field missions to create “measurable, sustainable impacts in partner countries yielding concrete development results.”
Thank you for joining us!

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Stay In Touch
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datwood@usaid.gov
Thom Jayne:
jayne@anr.msu.edu
Jerome Wolgin:
jwlgin@usaid.gov

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