Megatrends and the Future of the Agri-food System in West Africa

BMGF’s Convening for Dryland Farming Systems in W. Africa
Dakar, Senegal
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Introduction

• W. Africa undergoing rapid transformation
  – Impressive economic growth
  – Population growth
  – Rapid urbanization
  – Rising “middle class”

• Interest in “foresighting” exercises
  – Understand drivers of economic transformation
  – Anticipate future challenges and opportunities
Objectives

• Investigate “mega-trends” shaping Agri-Food System (AFS)

• Consider how policy can influence the trends

• Recognizing
  – variation across countries
  – The trends we highlight are not the only ones
Objectives

Potential impact on agri-food system

<table>
<thead>
<tr>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
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Potential for influence via policy

Figure 1: Classification of Megatrends

According to predictability and potential influence via policy, the likelihood of arising and potential for influence via policy are as follows:

- Rising world food prices
- Youth bulge/labor force expansion
- Increased demand for land in Africa
- Land degradation
- Climate change

Moderate

Rapid/broad-based income growth

High
Seven Megatrends

1. Youth bulge/labor force expansion
2. Growth in non-farm employment
3. Urbanization and income growth
4. Food consumption outstripping production
5. Concentration of landholdings
6. Widespread soil degradation
7. Climate change
Trend #1: Youth Bulge/ Labor Force Expansion

- Strong population growth
  - 2.6% per year
  - 300m (2010) → 490m (2030)
    (UNDESA, 2011)
- Overwhelmingly young

44% <15 years old

Source: UN Pop Council, 2013
Trend #1: Youth Bulge/ Labor Force Expansion

• Looming employment challenge
  – 80 million youth to enter labor market in next decade
  – Would youthful labor force yield demographic “dividend” or “time bomb”?

• Little scope of policy to alter trajectory of trend in the short run at least
  – Policy can influence rate of growth of employment and opportunities for new entrants
  – Over a 10-15 year period, family planning policies can greatly reduce population growth rates (as in much of Asia)
Trend #2
Growth in non-farm employment

• Rapid percentage growth in non-farm employment
  – 11% per year in Mali (1998-2009)
  – 8% per year in Ghana (2005-2013) (Yeboah and Jayne 2015)

• Growth in non-farm employment < number of people entering labor force ➞ rising importance of “viable” agriculture
# of people employed in agriculture still rising

Source: Groningen Growth and Development Center
Jobs by sector, Sub-Saharan Africa

Source: World Bank (Filmer and Fox), 2014
Trend #3
Urbanization and Income Growth

• West Africa is the most urbanized region in SSA
  – Nearly half of population in urban settlement
  – Proliferation of small towns along major highways and transport corridors and near cities

• Strong migratory movements
  – Rural → urban
  – Northern Sahel → Sudano-Guinea zones
  – From inland countries → wealthier coastal states

• Urbanization rates variable within/across countries (Potts 2012)
  – Coastal region: Ghana (51%), Nigeria (50%),
  – Sahel region: Niger (18%), B. Faso (27%), Mali (35%)
Trend #3
Urbanization and Income Growth

• Emerging middle class in urban areas
  – 25% of W. Africans above US$2/day (AfDB, 2008)

• Mainly “floating middle class”
  – 14% Floating middle class (US$2-4/day)
  – 7% Lower middle class (US$4-10/day)
  – 4% Upper middle class (US$10-20/day)

• Cross-country variation
  • Ghana (46%), Nigeria (23%),
  • Niger (14%), B. Faso (13%), Mali (25%), Senegal (35%)

• Trend projected to continue but vulnerabilities remain
  – Over 50% of population live on < US$1.25/day.
  – Poverty concentrated in rural areas (2-3 times higher)
Trend #4
Food Demand Outstripping Supply

• Urbanization and rising per capita incomes in urban areas ➔ diet transformation and modernization of food system (Tschirley et al. 2015)

• Increasing demand for food products with differentiated quality
  – Potential for value addition is enormous
  – Large and rising fraction of food consumption currently being met by imports
Trend #4
Food Demand Outstripping Supply

Food trade balance: West Africa

Source: FAOSTAT
Trend #4
Food Demand Outstripping Supply

Net Export for Western Africa

Year


Millions of Tonnes

-15 -10 -5 0

Source: FAO 2014
• **Upshot:**

– Great potential for multiplier effects and job creation if rising food consumption requirements can be satisfied by local production rather than imports. How?

• Crop science and R&D
• Improve market access conditions for farmers
• Promote land allocation patterns that will maximize agricultural productivity and efficiency
• Potential for irrigation expansion
• Rural electricity and roads
• Promoting more efficient use of fertilizers
• Dealing with massive soil fertility problems
Trend #4: Concentration of Landholdings

• Rising interest in Africa’s arable land
  – Meteoric rise of medium-scale farms (5-20 ha)
  – Urban-based HHs own between 10-30% of national agricultural landholdings (DHS data)

• Gini coefficient of land distribution rising
  – Much higher than green revolution Asia and approaching levels in Latifundia Agric System (Jayne et al. 2015)
  – E.g. Ghana: 0.54 (1992) → 0.70 (2013)
• Anticipate
  – Development of land markets
  – Rising land prices
  – Increasing land scarcity and conflicts
  – Increased pressure to convert customary land into statutory land

• Pace of land concentration dependent on policy on land ownership

• Is rapid land acquisition by medium/large farms foreclosing smallholder-based agricultural development?
Trend #6
Widespread Soil Degradation

Deficiencies in SOC & Micronutrients / acidification → Reduced fallows / increased fertilizer use → Low crop response rates to N → Land pressure / incentives to intensify → Population growth
Trend #6
Widespread Soil Degradation

• Extent of degradation
  – 65% of arable land
  – 30% of grazing land
  – 20% of forests

• Net soil nutrient losses in W. Africa
  – 41 kg/ha/yr in Senegal to 73 kg/ha/yr in Guinea Bissau (Morris et al., 2007b).

• Trend amenable to policy
  – Will W. Africa transition into sustainable agricultural intensification? How?
Trend #7
Climate Change

• Precise impact of climate change on AFS uncertain
  – Greater variability in agricultural production
  – Possible decline in crop productivity \(\text{(Schlenker and Lobell, 2010)}\)

• Reductions in annual rainfall and higher temperature predicted for Sahel regions of W. Africa \(\text{(IPCC, 2007)}\)

• Effect of climate change largely exogenous
Classification of Trends

Potential impact on food system

High
Moderate
Low

Potential for influence via policy

Concentration of landholdings
Urbanization and income growth
Food demand outstripping production

Soil degradation
Growth in non-farm employment

Youth bulge
Climate change
Summary

• Don’t accept all these trends as inevitable
  – some trends are highly uncertain, and dependent on the time path of other trends
  – Policy can influence future trajectory of some trends

• Agriculture will remain an important source of employment for the expanding labor force at least in the next few decades
Recommendations

- Invest to improve productivity throughout the AFS
  - re-capture the burgeoning urban and regional markets for local farmers/producers
  - promote value addition to agricultural products
  - generate growth multipliers (e.g. Off-farm job creation)

- Critical areas
  - Agricultural research and extension
  - Infrastructure (e.g. roads, electricity, market infrastructure)
  - Institutional capacity building to improve policy implementation
  - Promoting more efficient use of fertilizers
  - Dealing with massive soil fertility problems
  - Education to upgrade skills of labor force
  - Potential for irrigation expansion
Recommendations

• Consider agricultural growth, poverty reduction and employment objectives in coordinated manner
  – Strengthen linkages between MoFA and related ministries (Finance, Road and transport) to achieve broad objectives

• Consider the effects of land policies on inclusive growth and poverty reduction
  – Promote land allocation patterns that will maximize agricultural productivity and efficiency

• Include resilience agenda in agricultural growth strategies
  – Growth highly vulnerable to shocks (natural and man-made disaster)
  – Vulnerability to volatile commodity prices
Thank You