

Hans P. Binswanger-Mkhize and Alex McCalla

University of California, Davis

October 6, 2008

CONTEXT AND PROSPECTS FOR AGRICULTURE AND RURAL DEVELOPMENT IN AFRICA



Positive Trends in Africa



- Real per capita growth above 4 %
- Per capita agricultural growth above 1.5 %
- Armed conflicts down to 3 from 15 in 2003
- 22 countries held elections in 2007 that were declared “free and fair”
- More civil society and participation
- Faster progress in business environment than LAC and MENA
- Accelerated efforts in building of Regional and sub-Regional Institutions

Outline



- Global winds of change
- The Resumption of growth in Africa
- Growing Demand and Higher Commodity Prices
- HIV and AIDS
- The Growing Technology Divide
- Markets and Smallholder Services
- Regional Cooperation

Changing views of ARD

- Early discovery of poverty reduction potential of agriculture,
 - followed by neglect
 - then rediscovery in last few years
- Rise and fall of Integrated Rural Development and Agricultural Development Banks
- Persistence of rural poverty as dominant poverty issue, especially in Africa
- Redefinition of the role of the state in ARD, rise of private sector, local government, NGOs, farmer's organizations, and communities
- Requires focus on productivity and profitability for small farmers through access to input and output markets

New Aid Architecture

Kharas & Easterly

- Exploding numbers of players:
 - 233 multilateral agencies, 51 bilaterals, several hundred international NGOs, tens of thousands of national NGOs, including millions of CBOs
- Real volume of development assistance from traditional donors has stagnated, including for Africa, and has fragmented further
- Additional Aid is coming from emerging countries and private donors; remittances are adding just as much
- Despite 50 years of experience, still making the same mistakes, with little improvement in quality
 - ▣ Decline in tied aid and food aid are the positive trends
 - ▣ But increased fragmentation, unchanged emphasis on TA, and little or no sign on selectivity

Global Warming and Climate Change



- Man-made climate change no beyond doubt
- SSA contributes little, but will be heavily affected
- Aggregate estimate over the century is a productivity reduction of between 15 percent (with carbon fertilization) and 30 percent (without CF)
- *A one third of a percent increase in annual TF Productivity growth could offset it*

IPCC on Expected Climate Trends



- Higher temperatures
 - ▣ more so at night than during the day
 - ▣ more so at higher latitudes
- Rainfall either up or down
 - ▣ Down in Mediterranean and Southern Tip of Africa but up in Eastern Africa
 - ▣ Depending on the climate model, e.g. in the Sahel
- Extreme weather events likely to increase, but no clear trend in tropical cyclones

IPCC on predictability of climate at local level in SSA



- What is clear is that most extreme impact in North Africa and at Southern Tip
- However, there are very few regional and sub-regional climate models
- Little consistency of precipitation predictions across models e.g. in Sahel or in Southern Africa
- Predictions of runoff vary widely
- Uncertainties around length of growing season

Conclusion



- Climate change is a manageable challenge and presents opportunities
- Adaptation requires mainstreaming of climate change into a general agricultural development strategy
 - ▣ Aimed at improving *adaptation capacity, not specific adaptations*
 - ▣ Aimed at taking advantage of so far modest *carbon trading opportunities*
- *Greater capacity to develop own technology is critical*

Economy-Wide Growth

Ndulu et al. and Collier

- From distressingly low rates, African growth has steadily accelerated since mid 1990s
 - ▣ 2007: 6.1 % for SSA, 4.9 % for MENA
 - ▣ Inflation down to 10 percent range
 - ▣ Fiscal deficits transformed into surpluses
- Trend to faster growth started in early 1990s and has steadily accelerated since then (Ndulu figure 2.1)
- Growth even more impressive if weighted by population of the countries
- A consequence of high commodity prices?
 - ▣ Non-commodity countries doing almost equally well

Determinants and Opportunities



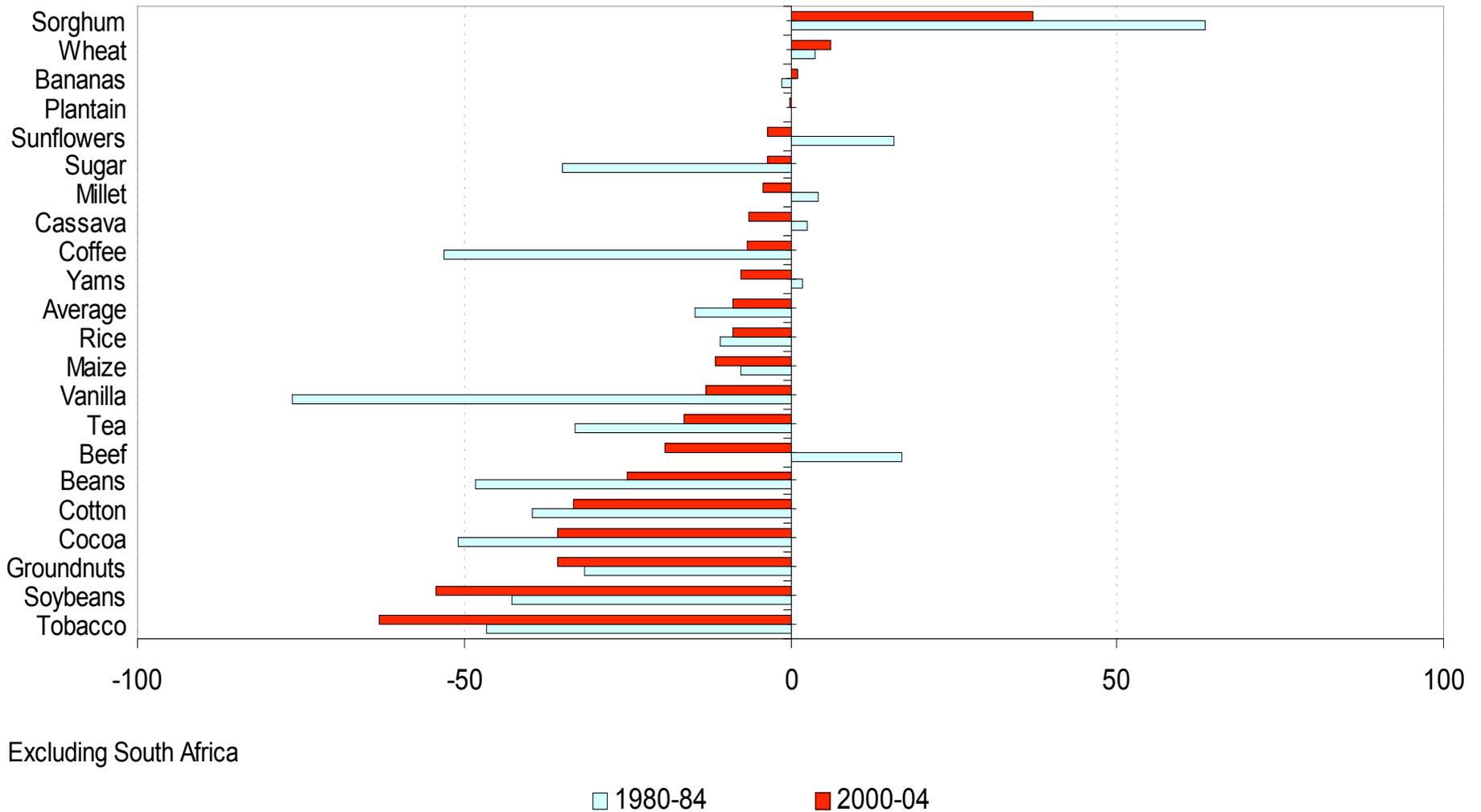
- **Macro-economic management and policies were critical in improving growth**
 - but now present fewer additional opportunities
- **Current major constraints:**
 - Governance and business climate
 - Infrastructure and regional integration
 - Poor financial sectors, and low savings
 - Poor institutional capacities
 - Except in ministries of finance, central banks

Agricultural Growth

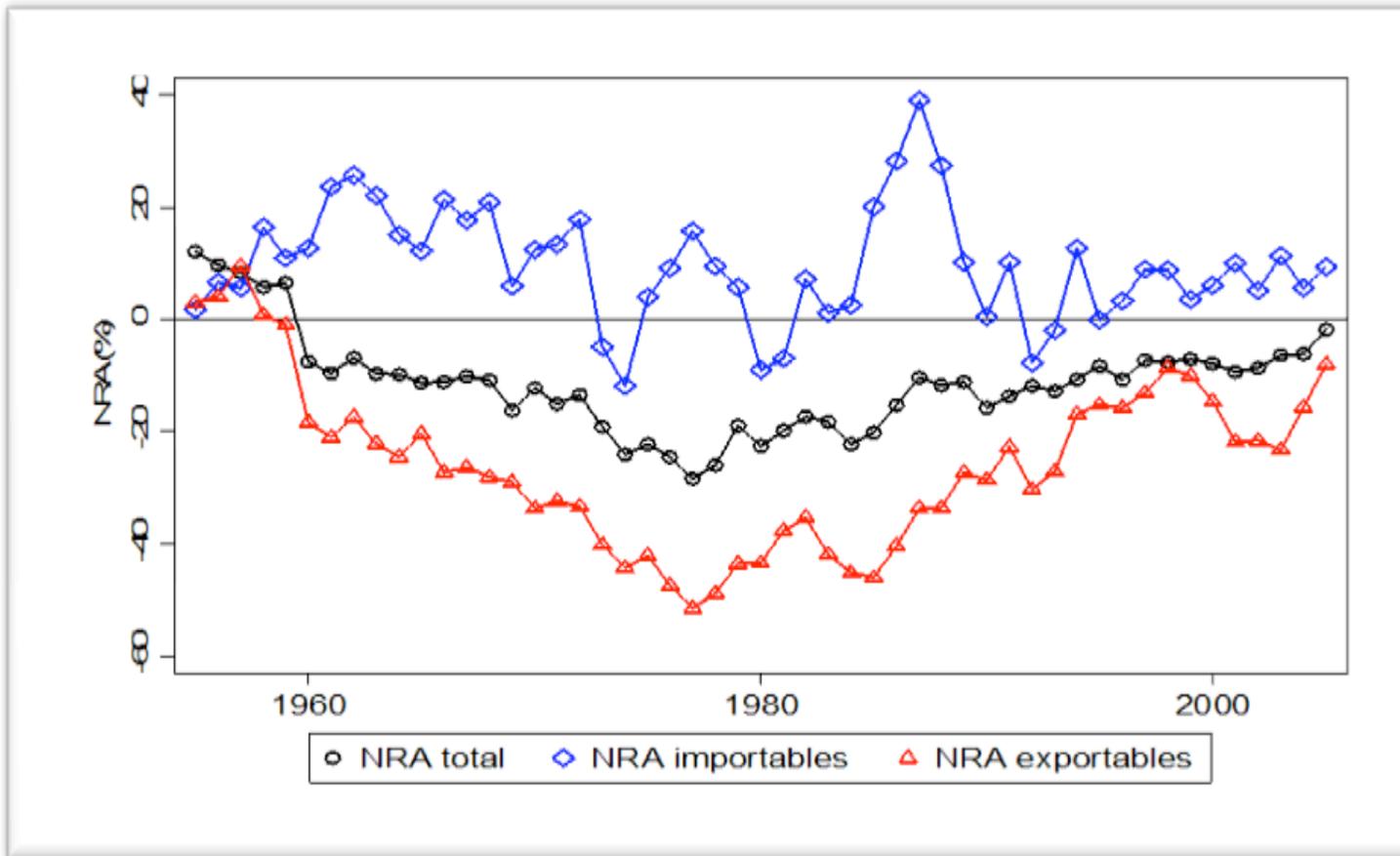


- SSA **per capita** agricultural growth now at 1.5% per year
 - ▣ But by area expansion, not via productivity growth
- Fuelled by the same factors as economy-wide growth
 - ▣ And not by special agricultural programs
- And fuelled by the sharp reduction of taxation of agriculture
- *But sub-Saharan farmers still face the lowest incentives in the world*

NRAs still need improvement in many commodities



NRAs In Africa Over The Past 50 Years



Source: ibid

Higher international prices: opportunities for Africa

- World prices are expected to settle at higher levels than in first half of decade
- Will help offset adverse OECD policies
- Will transmit themselves to domestic economies in Africa
- Combined with better policies, they will lead to higher farm gate prices
- Higher profits, investments, farm growth
- Higher nonfarm incomes and rural wages
- *If there is no backsliding on policies!*

Where are market opportunities for Africa

- Food staples and livestock products for domestic and regional markets
 - ▣ Farmers can compete at import parity prices rather than lower export prices
 - ▣ Lower quality and phyto-sanitary standards
 - ▣ Can re-conquer markets lost to the rest of the World
- Much larger opportunities than for niche developed country export markets
- Longer term opportunities
 - ▣ mainly in South-South Trade
 - ▣ Bio-fuels in sugar-ethanol, cassava, jathropa
- *Requires Regional Infrastructure & Integration*

Where are the production opportunities



- Large reserves of moderately fertile land
 - ▣ Guinea Savannas cover three times the Cerrado of Brazil, which has so far only utilized half of its agricultural land
- Underutilized irrigation potential
- Intensification and yield growth
- *Requires investment in infrastructure, irrigation and technology*

Challenges



HIV and AIDS

- Fight against HIV and AIDS is still lagging, and especially in rural areas
- Counterintuitive findings
 - ▣ Better nutritional status does not significantly reduce HIV incidence, or prolong life after infection. Only prevention and ARV therapy do
 - ▣ Households which experience an AIDS death quickly replace adult members and are more short of land and capital than labor
 - ▣ Not all orphans are vulnerable: Only orphans in households with more than one orphan are under-nourished. But their number growing rapidly

How to fight rural AIDS is fairly well understood

- Rural prevention efforts must be mainstreamed via CDD programs and approaches
- Mortality can only be reduced by ARV therapy, and scaling it up in rural areas is both possible and a major priority
- However, food and agricultural interventions can be powerful tools for care and support, and household recovery
- Prevention, ARV therapy, and care and support require deep community involvement, a comparative advantage of IFAD.
- More mainstreaming of all three components into CDD operations

Removing Barriers To Trade And Improving Markets



- Progress in Regional Integration has been very limited, and barriers to food trade remain high
- This adds to high input prices, reduces output prices, and reduces development of competitive markets all around
- Infrastructure, competition policy, and farmer organization involvement are also necessary
- The critical issues of expanding use of improved seeds and fertilizers, and access to markets cannot be addressed without the above improvements

On top of the current technology lag, a high risk of a growing divide



- Heterogeneity implies fewer opportunities to borrow from outside and within
- Private sector entry and intellectual property rights increases complexity
- Severe and persistent under-funding of public research
- Research is fragmented into
 - ▣ 400 public and private entities and universities
 - ▣ 3600 poorly funded agricultural scientists
 - ▣ 12 CGIAR institutions active in Africa
- The CGIAR is growing slowly pursuing too many priorities

Impacts of Research in African Agriculture are less than elsewhere

- Median rates of return in Africa are 34 % compared to Global median of 46 % (Alston et al.)
- Evenson showed a contribution of CGIAR to African yields of 0.11-0.13 per year
 - ▣ Against 0.30 to 0.33 for all developing regions
- In absence of CGIAR, total food production would be 1-2 percent less, and area planted 0.6-1% more (Evenson & Rosegrant)
- Nevertheless, the CGIAR has created enough returns in Africa to pay for itself (Maredia and Raitzer)
 - ▣ But 90 percent came from only one set of innovation, biological pest control in Cassava
 - ▣ Farming systems and policy research have generated few measurable returns, but continues to be widely promoted

While there is considerable adoption of improved seeds in SSA...

- Adoption of new varieties in SSA now around 30 %
- It has resulted in lower yield gains than elsewhere
- The lower yield gains are a consequence
 - ▣ of limited returns to agriculture in general
 - ▣ limited payoffs to irrigation and inputs
- The latter are associated with
 - ▣ Poor technology
 - ▣ High costs of irrigation, inputs

Misallocation of research resources away from core plant & animal stressors



- There are more crops, more environments more pests and diseases than in any other continent
 - ▣ Requiring more scientific, basic and applied research
- CGIAR priorities are no longer on genetic improvement, bio-technology, and animal pests and diseases
- The proposed Africa Challenge Program is not focused on these stressors, but on systems improvements, where payoffs have been minuscule
- The Gates Foundation has started to fill the gap,
 - ▣ but it has given mixed signals on Biotechnology
 - ▣ it cannot finance it alone

Biotechnology and Privatization of Agricultural Research

- Biotechnology presents great opportunities
- Africa is lagging badly behind China, India, and Brazil
 - ▣ Has created four regional centers for biotech, that remain underfunded
 - ▣ Held back in part by donors, and in part by its own inadequate funding, capacities
- Access to BT is complex and expensive, and requires access to intellectual property often held by private sector
- Critical mass in research and regulation requires Regional and sub-Regional collaboration

The Technology Agenda



- NEPAD, FARA, and Sub-Regional Research Organizations have taken the lead in proposing action
 - ▣ On reform of research policy and systems
 - ▣ On increasing funding
- But their proposals remain under-funded
- Excessive reliance on donors has been a break or progress in the past
- Unless African countries start paying for research themselves, they will never be in the lead
- They should use some of the greater fiscal space they now have

The Challenge of Improving Input, Output, and Financial Markets

- Their poor development are caused by unfavorable material factors
 - ▣ low population density
 - ▣ land-lockedness and poor infrastructure
 - ▣ covariance of risk
 - ▣ Small markets as a consequence of low input use
- Limited competition, and illegal extractions along the road are partly a consequence of the underlying conditions
 - ▣ *but also of poor policy choices and implementation*
- *If more failure is to be avoided, the “how” of improving these markets needs to take account of the material factors*

The imperative of strengthen regional and sub-regional capacities

All countries have an incentive to shirk in contributions to Regional Public Goods

*Can only be overcome by **Regional or International Funding arrangements co-financed by multilateral or other donors, probably in association with ECA, the African Union and FAO***

- Small land locked countries depend on regional integration
- Regional trade is good for growth, farmer's income, regional foods security and the private sector;
- Requires harmonization of standards and sanitary measures, and sub-regional and regional capacities to implement them;
- Regional infrastructure critical for access to each other and external markets;
- Reversing land degradation and desertification and preserving biodiversity require trans- boundary collective action;
- Defense against plant and animal disease epidemics require collective responses at sub-regional and regional levels;
- Agricultural research is far better done on a regional or sub regional basis –FARA and the SRO's are on the right track;
- Bio technology is complicated and expensive requiring a large critical mass;
- Indigenous scientific capacity is better fostered by regional institutions which have critical mass and necessary financial support.

The way forward



- There are many challenges that Africa faces. The most pressing ones are
 - Removing agricultural dis-protection in lagging countries and lagging commodities
 - Closing the widening technology gap
 - Development of Markets and Smallholder Services
 - Development of Regional Cooperation for Agriculture