

# Underappreciated Facts about African Agriculture:

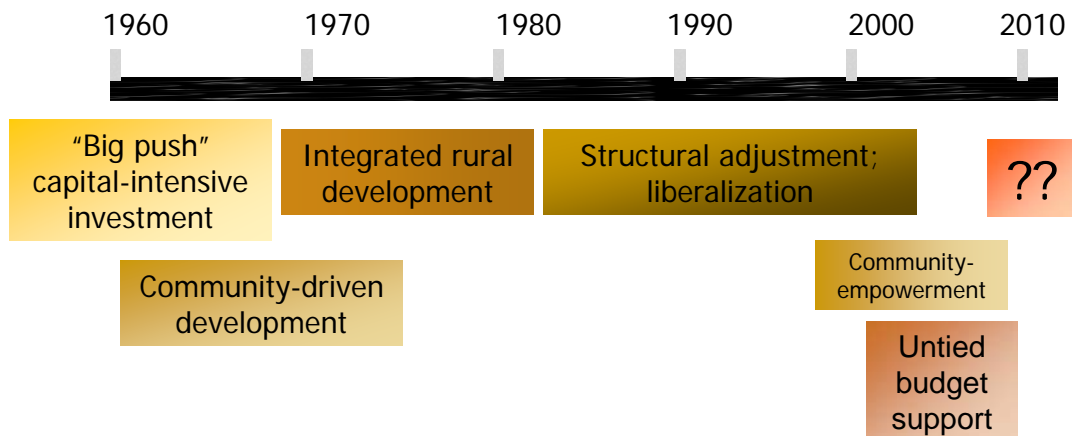
## Implications for Poverty Reduction and Agricultural Growth Strategies



T.S Jayne, with colleagues from Michigan State University

IFAD, Rome  
December 5, 2006

## Major development strategies in retrospect, 1960-2000



# Current thinking on “strategy”

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- Emerging coalition for “big push” agricultural strategy
  - e.g., Sachs, Sanchez,...maybe Gates?
- Strong consensus about need for greater investment in public goods (infrastructure, crop science) and certain policy reforms
- Major debate with regard to what constitutes the right “enabling environment”
  - Food price support/stabilization
  - Input subsidies

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- Many of these debates can be informed by a solid empirical understanding of how rural economies work

## Organization of presentation:

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1. Underappreciated “empirical regularities” of small farm agriculture in Africa
2. Discuss the implications of these findings for current policy debates

## Six underappreciated aspects about African agriculture:

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1. Farm sizes are declining → Huge land disparities → rural population is hardly growing → new demands on food marketing systems
2. Given plausible assumptions about productivity growth possibilities, grain productivity growth will be inadequate to kick-start growth in most of the region → diversification into higher-return activities will be crucial
3. Most farmers in the region are buyers of staple food → directly hurt by higher grain prices
4. Retail food prices are trending downward in most of the region

## Six underappreciated aspects about African agriculture:

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5. Supermarkets account for less than 4% of urban food expenditures in almost all African countries. Even with major growth in supermarket volume, investments in traditional marketing channels will remain much more important for small farmer and consumer welfare
6. “Market liberalization” -- inaccurate description of situation in E&S Africa

## Fact #1

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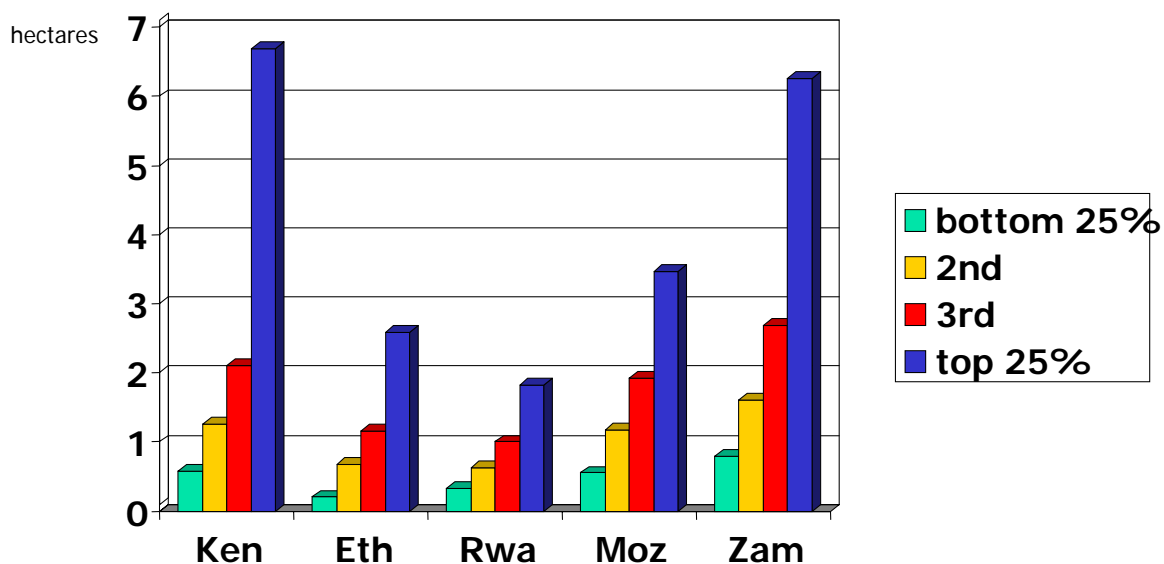
- Emerging land pressures are generating fundamental challenges for poverty reduction and investment strategies

## Cultivated land per agricultural person (hectares)

	1960-69	1970-79	1980-89	1990-99
<b>Ethiopia</b>	0.508	0.450	0.363	0.252
<b>Kenya</b>	0.459	0.350	0.280	0.229
<b>Mozambique</b>	0.389	0.367	0.298	0.249
<b>Rwanda</b>	0.215	0.211	0.197	0.161
<b>Zambia</b>	1.367	1.073	0.896	0.779
<b>Zimbabwe</b>	0.726	0.664	0.583	0.525

Source: FAOStat website: Source: FAO Stat database: [www.faostat.fao.org/](http://www.faostat.fao.org/)

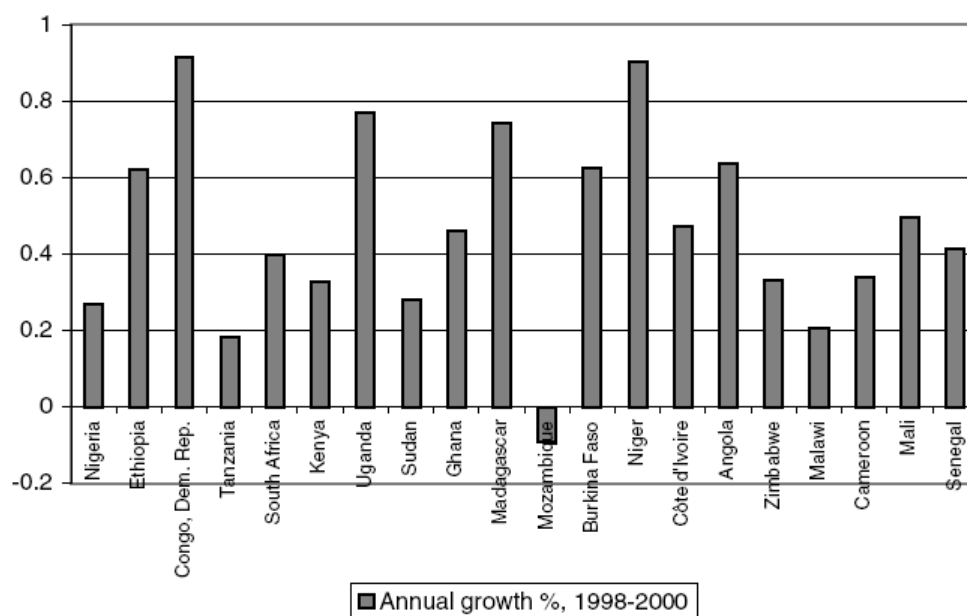
## Farm size distribution: Small farm sector



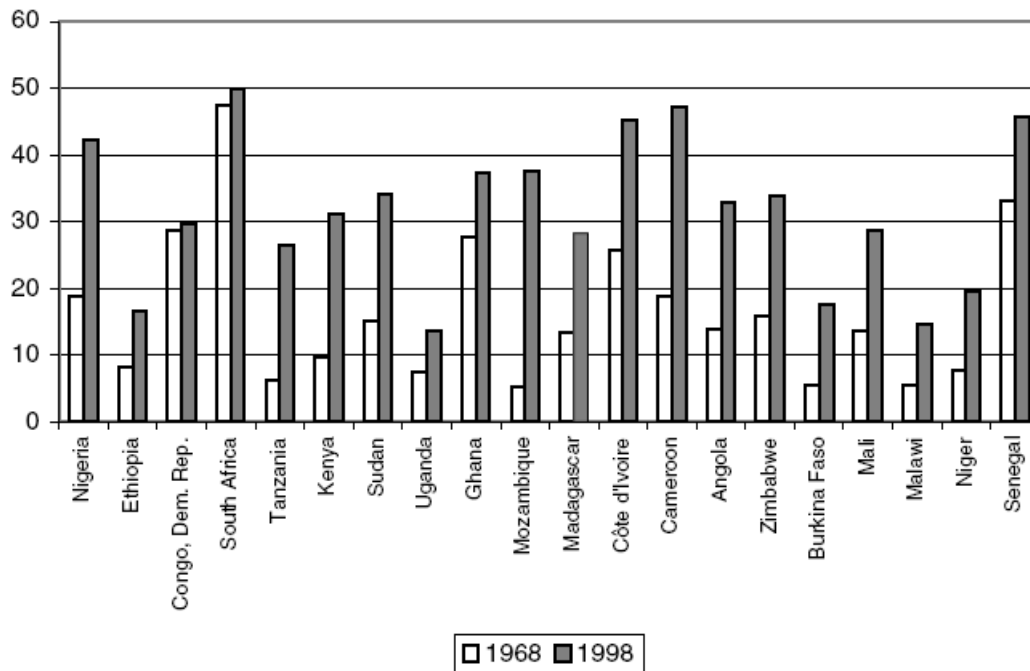
# Characteristics of smallholder farmers, Zambia 1999/00

	N=	Farm size (ha)	Asset values (US\$)	Gr. Rev., maize sales (US\$)	Gr. Rev., crop sales (US\$)	Total hh income (US\$)
Top 50% of maize sales	23,680	6.0	1,558	690	823	2,282
Rest of maize sellers	234,988	3.9	541	74	135	514
Households not selling maize	762,566	2.8	373	0	36	291

## Rural population growth rates

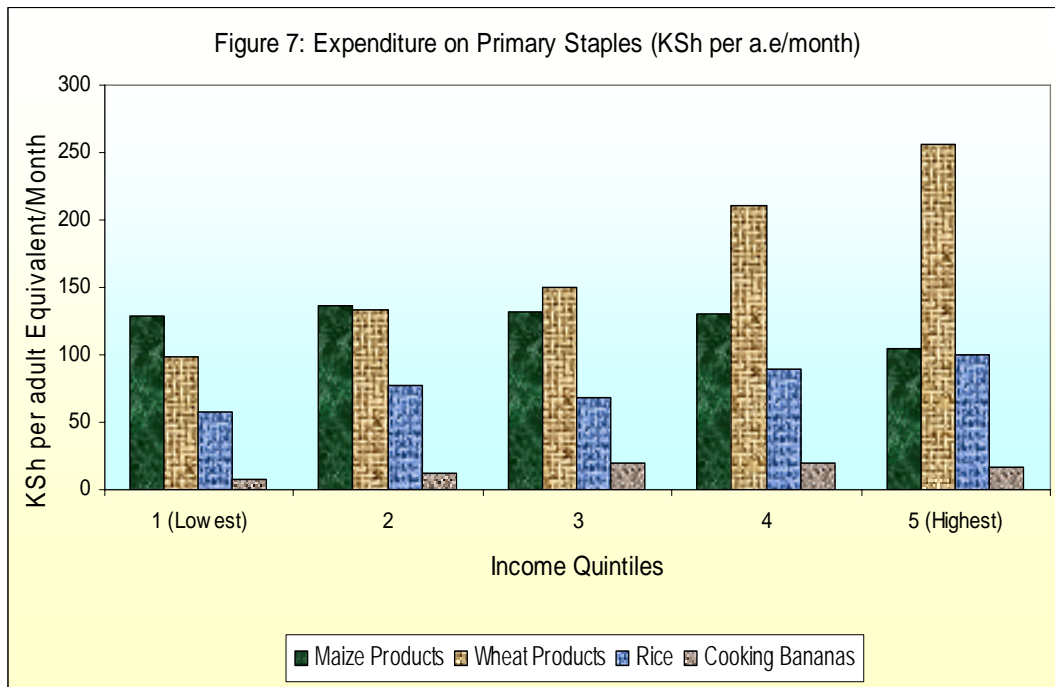


## Share of Urban population in total population, 1968 and 1998



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- ▣ More than 50% of Africa's population will be urban by 2015.
    - 2000: 10 farm households feed 7 non-farm households
    - 2020: 10 farm households feed 16 non-farm households
  - ▣ Upshot: demand for food will be rising rapidly
    - Policies on imported rice, wheat, & food aid will influence this translates into increased demand for locally produced

# Importance of Imported Staples in Nairobi Expenditure Patterns



## Fact #2

- Given plausible assumptions about new technology development, farm sizes are too small for grain-based productivity growth to lift most rural households out of poverty
- Hence, diversification into higher-return activities will be crucial
- This transition is already occurring



Role of maize in small farm incomes is declining (share of gross sales revenue)

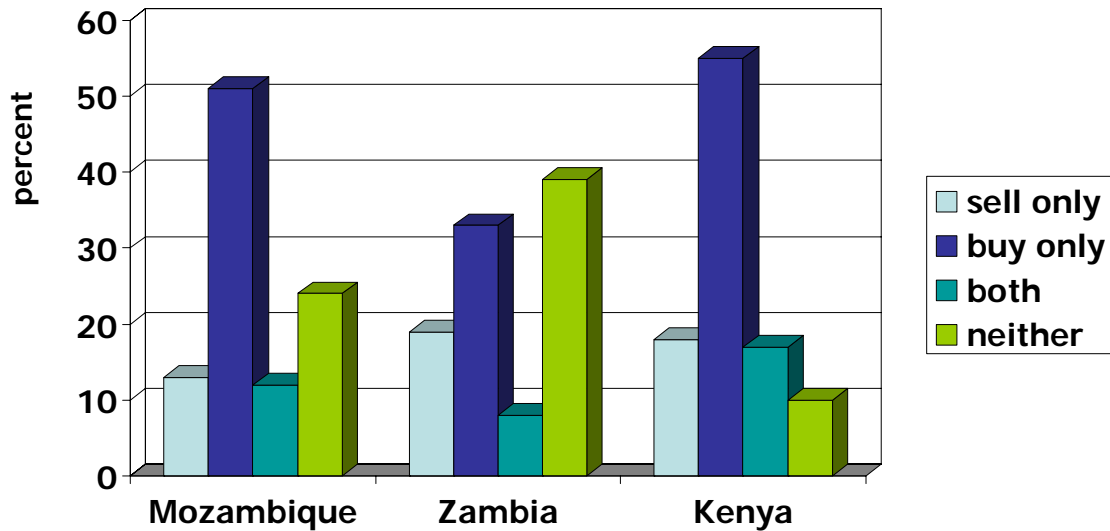
	Maize	Other grains/ beans/ oilseeds	Non-food cash crops	Fruits - veges	Animal products
Kenya	13.3	7.9	34.0	14.7	26.7
Malawi	32.3	11.8	44.9	na	na
Mozam	13.8	9.3	16.9	30.4	23.4
Zambia	28.2	7.7	16.7	27.5	14.7

### Fact #3

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- Most rural farm households are buyers of maize (or net buyers)

## Smallholder Households' Position in the Maize Market



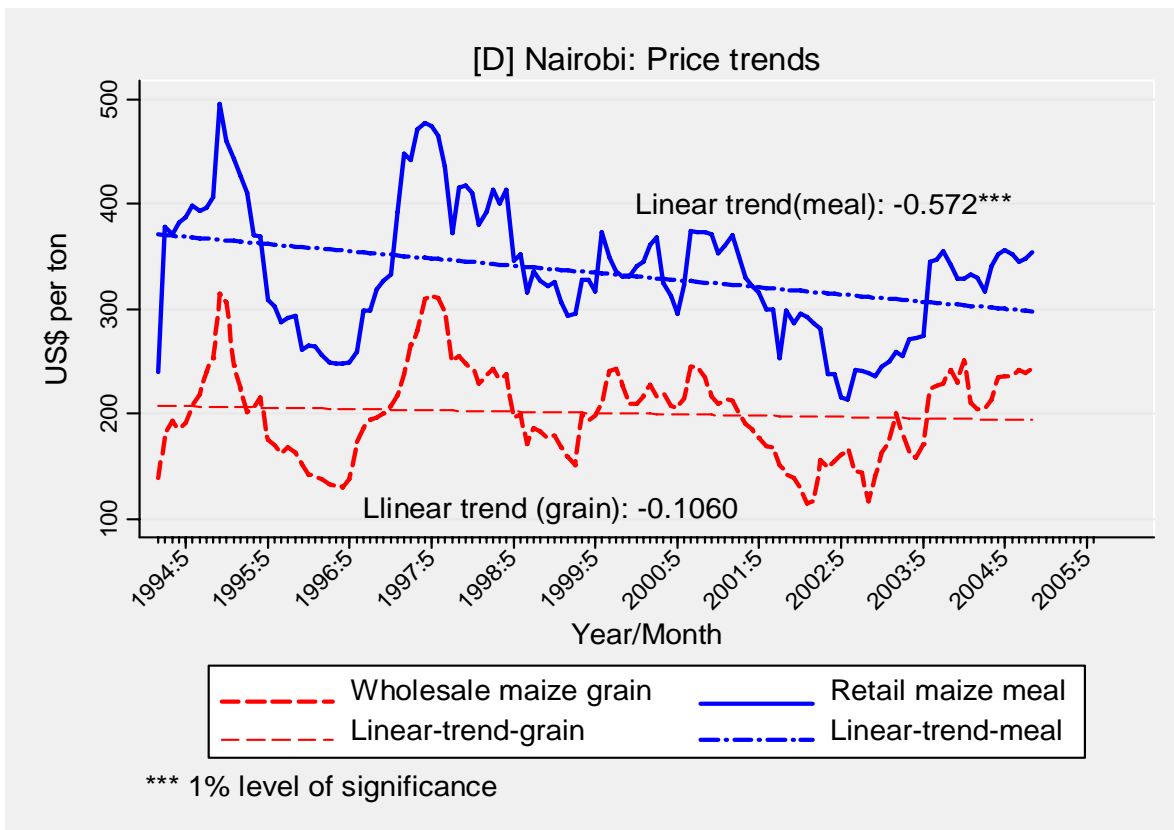
### Fact #3

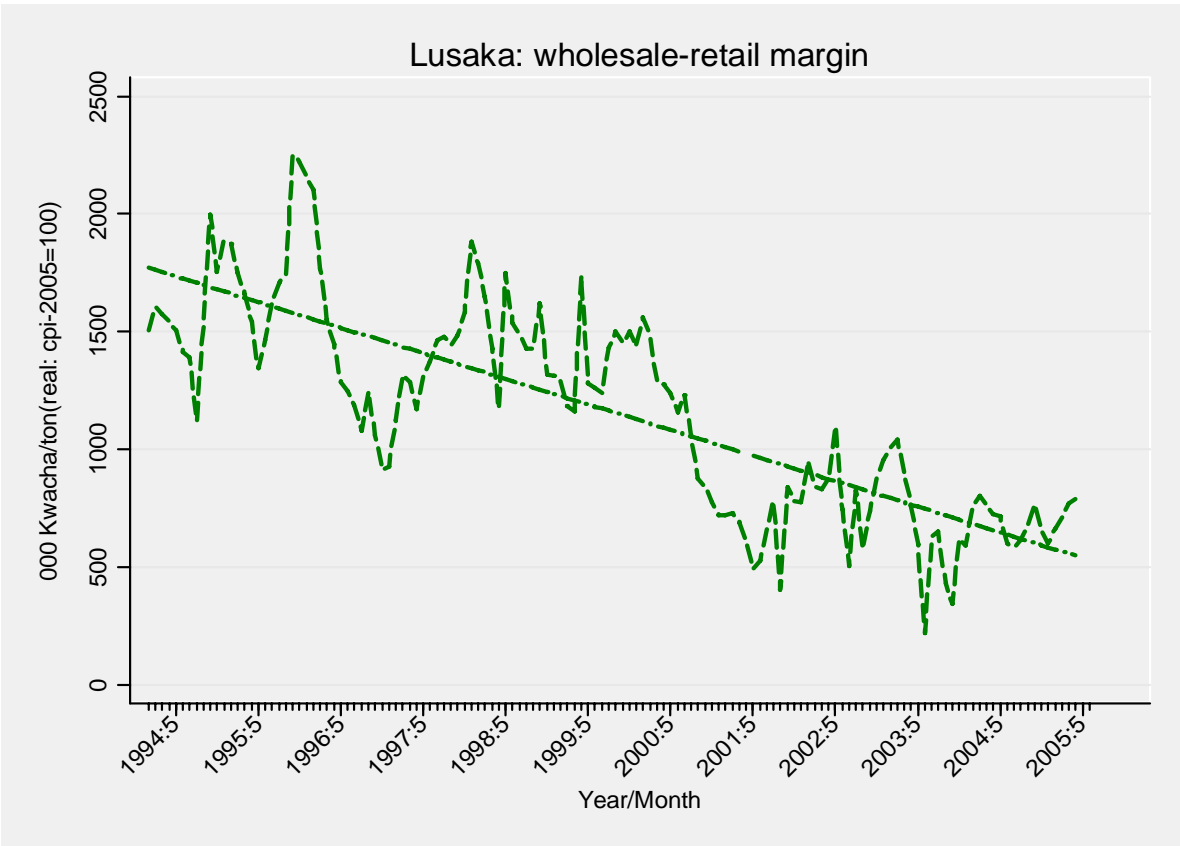
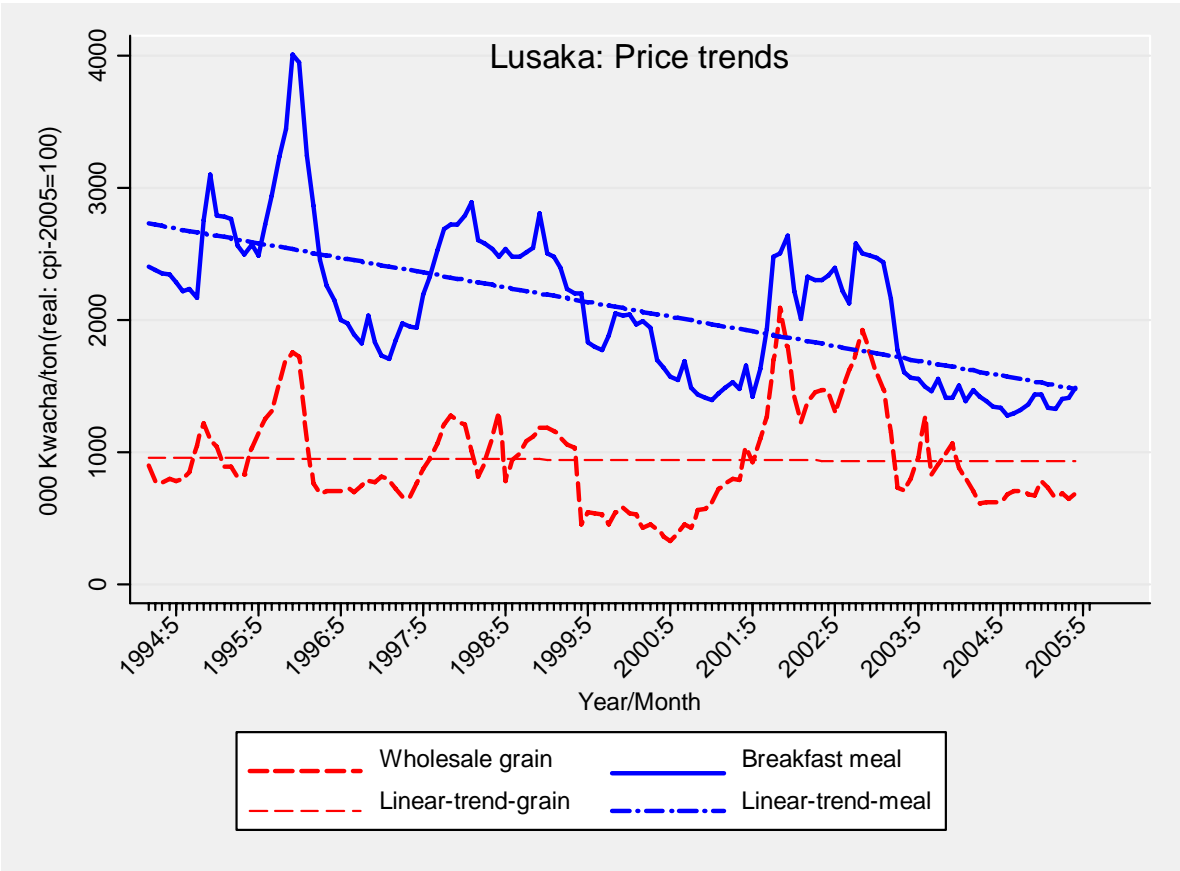
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- Most rural farm households are buyers of maize (or net buyers)
- 2% of households account for 50% of marketed grain surplus
- Crop price supports:
  - highly concentrated benefits
  - anti-poor
  - Most likely impede small farm diversification into higher-valued activities

# Fact #4

- Retail maize meal prices are trending downward

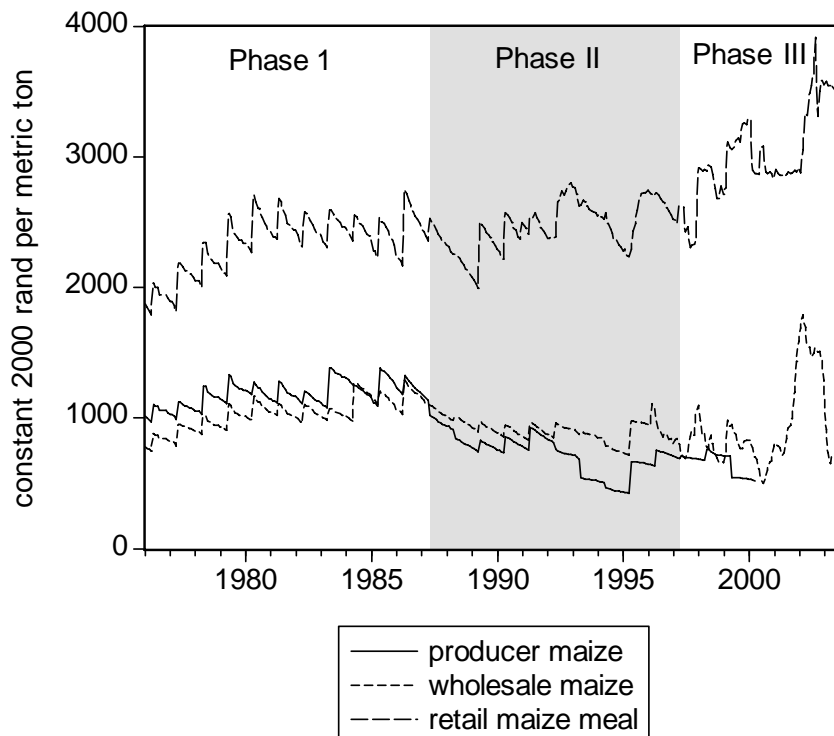




# Fact #4

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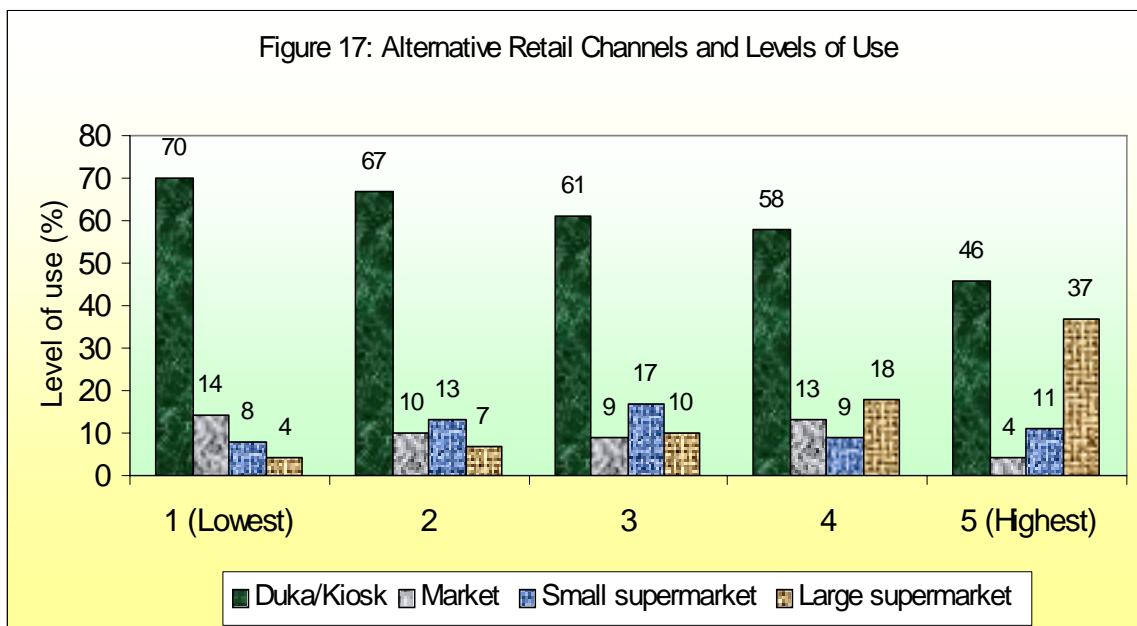
- Retail maize meal prices are trending downward
- Why?
  - Food market reform has encouraged rapid investment in informal, small-scale milling and trading networks
  - The informal channel exerts competitive pressure on commercial millers/retailers
  - Exception: South Africa



# Fact #5

- The performance of “traditional” food systems will remain a much more important determinant of farmer welfare and consumer food security than “supermarkets”
- Hence, focus investment priorities on improving the performance of traditional food marketing systems
  - linking traditional with new agribusiness systems

## Retail sources of consumer staple food expenditures, Nairobi



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- Even with 20% annual growth of supermarkets, in relatively progressive Kenya, in 10 years, the supermarket share will be:

12.4% market share in 2016.

## Fact #6

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- Major misunderstanding of the staple food and input market policy environment
  - “liberalization” – a misnomer
  - marketing boards continue to play major role in food and input markets
    - Handle 25-60% of marketed maize in Zambia, Kenya, Malawi, Zimbabwe
  - policy uncertainty

# Sources of Policy Unpredictability

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- Export bans, import quotas (year to year & within year)
- Uncertainty over changes in import tariff rates
- When and where will marketing boards enter the market
  - current example: Zambia 2006
- Prices at which the MBs buy and sell unpredictable
- Farmer & trader inventory carrying risks are high
- All of these sources of unpredictability impede private traders' servicing small farmers' needs



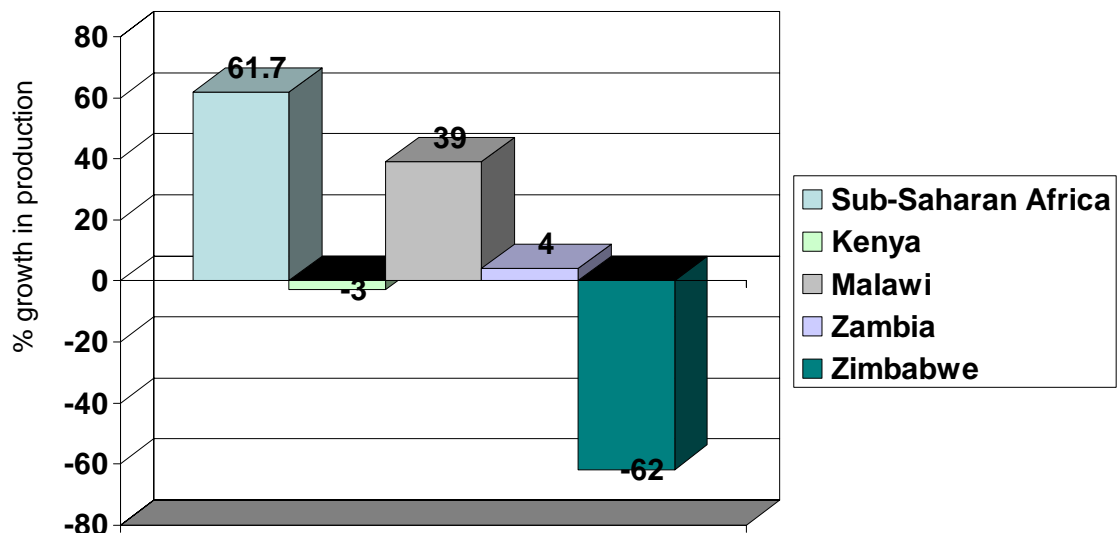


# Sources of Policy Unpredictability

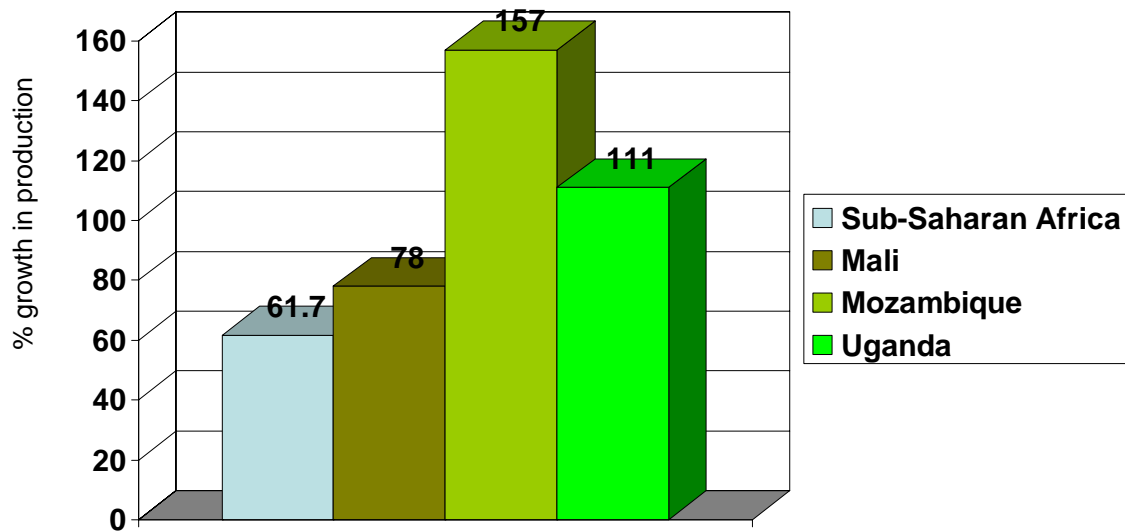
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- Why does it matter how we characterize the market environment over past 15 years?
- It matters a great deal

## African Countries - % Growth in Cereal Production between 1985 and 2005



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## Where from here?

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- Implications of:
  - > 50% of rural farm households have < 1 hectare and are extremely poor
  - > 50% of rural farm households are net buyers of staple food
  - Massive rural-to-urban migration
  - but lacking the human capital to contribute productively to society

# Where from here?

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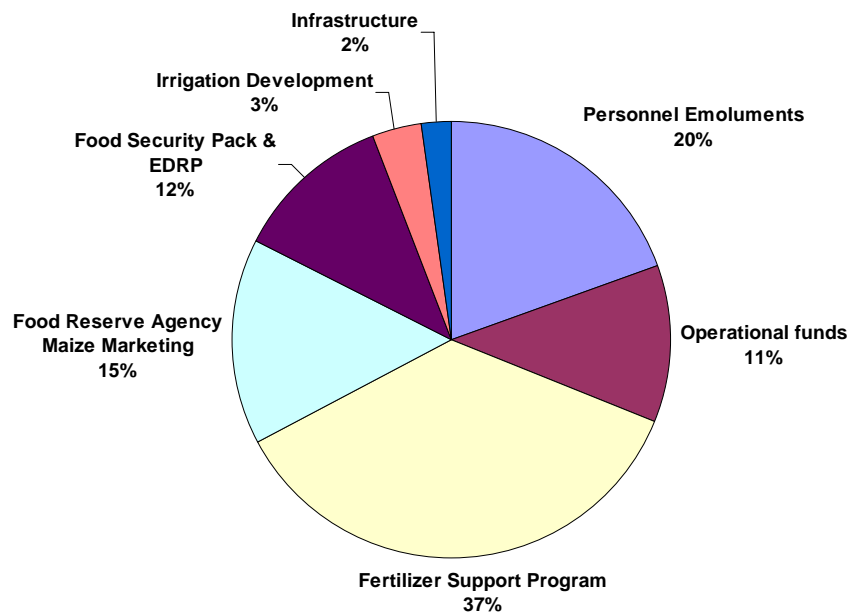
- Investments that raise the long-term productivity and competitiveness of rural farm families:
  - Invest in crop science and technology
  - Rural infrastructure
  - Farmer organization for service provision
  - Basic education: facilitates peoples' ability to thrive and contribute to an increasingly globalized economy
  - Health (w/ particular emphasis on HIV/AIDS)
- Widespread agreement on these investments

Much research evidence documents high returns to investment in

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1. R & D: (Alston, Grilliches, Mellor)
2. Education: turns information into knowledge (Johnston)
3. Extension systems: farm management (Evenson)
4. Infrastructure: road, rail, port, communications (Antle)
5. Investments in health and addressing HIV/AIDS (Binswanger)

## Budget allocation to Agricultural Sector in Zambia: ZMK465 million in 2005



Zambia	Total Income	Assets	Landholding size
	‘000 kwacha per capita		ha per capita
<b>Fertilizer source:</b>			
<i>Households not acquiring fertilizer:</i>	266	173	.15
<i>Cash purchases from private retailers:</i>	774	342	.20
<i>Government Fertilizer Support Program (50% subsidy)</i>	804	425	.23

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- ❑ Spending 70% of agricultural budget on input/output subsidies is most likely a regressive mis-use of budget resources with questionable long-term payoffs
  - ❑ Opportunity costs

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- ❑ As massive as the poverty problems are now, they will be much greater unless budgets are re-allocated sooner or later to investments that will make the economy productive in the long-term:
    - Population growth w/o productivity growth → civil strife
    - Not a viable option to have more and more “failed states” in Africa

# Major Challenge:

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- ❑ how best to encourage governments to reallocate public budgets toward crucial investments with long-term payoffs instead of investments with short-term payoffs with limited impact on L.T. development?
- ❑ Future of 'untied' budget support?

# Farmer groups

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- ❑ Organizing small farmers into viable groups will be crucial for poverty reduction and agricultural growth
- ❑ Millions of remote farms < 1 hectare have major problems with access to
  - credit and inputs
  - extension services, soil testing
  - market outlets
- ❑ Reducing the transaction costs of linking small farms to markets and services will require aggregating farm units into groups

# Getting Markets Right: What does this mean?

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- Not getting government out of markets
- Changing the *role* of government from direct intervention to supportive investments to make markets work
  - Public goods investment
  - Support development of farmer organizations
  - Create “stable” policy environment: Clear, rule-based public operations in markets
  - Commodity risk management tools (e.g. warehouse receipt systems)
  - Greater transparency and consultation needed between private and public sectors

## Policy response (cont.)

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- Lobby forcefully for more level playing field in international trade
  - OECD support for Africa: \$50 bill./yr
  - OECD ag. subsidies: \$350 bill./yr
  - Reassess developed country policy of dumping free food in Africa under guise of “food for development”



thank you