

Comparative Analysis of Cotton Sector Reforms in SSA

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Outline

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2. Market Context
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5. Comparative Analysis: Core Activities and Service Delivery
6. Comparative Analysis: Performance Outcomes
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Scope and Approach

- Comparative analysis of cotton sector reforms and performance in SSA countries:
 - Sample of 9 countries cases: Tanzania, Uganda, Mozambique, Zimbabwe, Zambia, Mali, Burkina, Benin, Cameroon
 - Comparison across sub-regions: WCA and SEA (new)
- Understand:
 - How a sector's history and current structure influence the set of feasible reform paths
 - How the path chosen influences the types of challenges a sector might have most difficulty meeting (e.g. quality, input supply and productivity, competitive prices to farmers)
- Identify the range of institutional responses that have emerged to meet these challenges under different settings
- Through this, to provide a stronger analytical basis for public and private stakeholders to design their reform path
 - Gather evidence and look at facts with out ideological bias, step back from political/ideological controversies
 - "Better understand to better advise" (cf. IEG report)

Market Context

- Price Trends
 - Decline of 55 percent between 1960-64 and 1999-2003
 - Driven by annual average yield gains of 1.8% .
- Subsidies to OECD producers
 - Full removal could raise world price by 10-15%
- Exchange rate for WCA countries
 - Considerable appreciation of the CFA Franc
- Demand Side: Increasing Importance of Lint Quality
 - Inherent fiber characteristics and hand picking should generate premium
 - Africa not capitalizing on its comparative advantage: contamination!
- Valorization of by-products

Historical Background: WCA Summary

- Single-channel, vertically integrated system in most countries
 - To be credited for strong growth in output during the 1960-2000 period
 - WCA/SSA world market share up from 3 to 15%
 - Also growth in yields until mid-1980s
 - Critical functions secured for small farmers (input credit, extension services, even rural development)
 - Cotton crop development not possible with a low input system
 - Major argument justifying the limited structural reforms so far
 - Recently, new price setting mechanisms to provide flexibility w.r.t world prices, although these still need refinement
- But:
 - Stagnation of yields, innovation, investment : threat to LT competitiveness
 - Currently financially unsustainable (heavy deficits borne by public budget and periodic bailing out of cotton companies)
 - Low world price, CFA/dollar appreciation, high costs, farmer price expectations

Historical Background : SEA Summary

- Different background :structural reforms of the 1990s, disengagement of the state, great institutional diversity
- Trade-off between competition & coordination
 - Highly competitive sectors (TZ, UG) struggle with input provision, quality, and productivity
 - Concentrated sectors (ZM, ZB) perform better on all these, but at expense of seed cotton pricing?
- Persistent institutional innovation (private and public) in search of effective coordination
- But:
 - Instability of concentrated systems: new entrants (ZM 2001, ZB 2006)
 - Low productivity and ecological unsustainability (competitive systems)

Conceptual Framework and Typology

4 steps:

- Typology of Cotton Systems (see Chart on next slide)
 - National Monopoly
 - Local Monopoly (Concession)
 - Concentrated
 - Competitive
 - Hybrid
- Mapping SSA Cotton Sectors (see Chart on following slide)
- Indicators of Performance
 - Process: core activities and service delivery (prices paid to farmers, input credit delivery, quality, valorization of by-products, research)
 - Outcomes: yields and returns to farmers, value addition, efficiency and competitiveness, macro-impact
- Linking performance to sector types by analyzing sector performance w.r.t. the selected indicators

Location of Cotton Sectors within African Cotton Sector Typology

National Monopoly	Local Monopoly ("Concession")	Concentrated, market-based	Competitive	Hybrid
Cameroon		Zambia Zimbabwe	Tanzania	Benin Uganda
Mali Chad* Senegal* (private)	Mozambique Burkina Faso			
	Côte d'Ivoire* Ghana*			

* Not included in this study

-----> Change in process

Results:



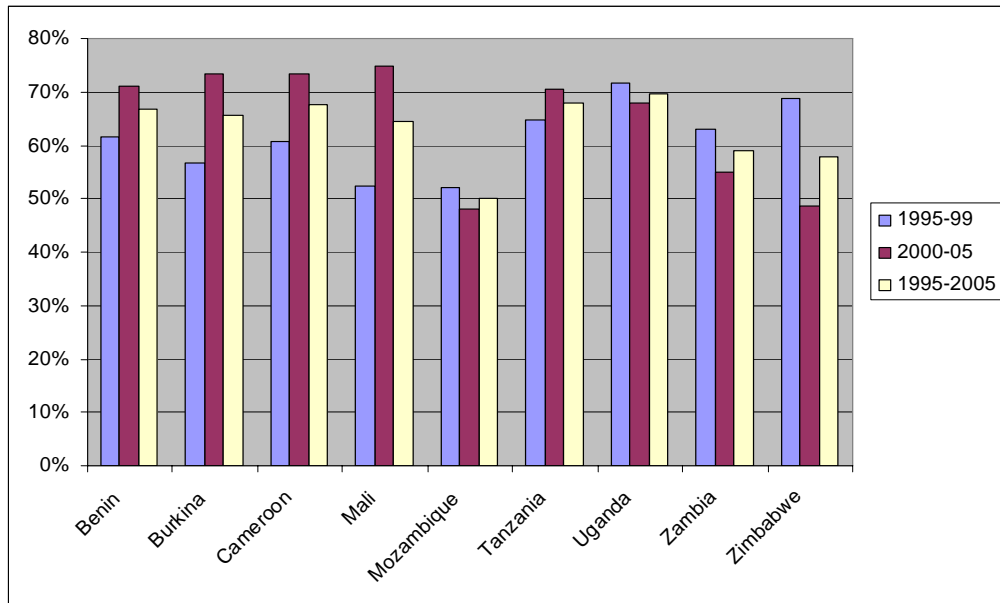
Process Indicators



Prices to Farmers

- WCA price setting: administered, panseasonal, panterritorial, announced before planting, purchase guaranteed at official price
 - Move in recent years to pricing systems providing more linkage to world price and more flexibility
 - Greater farmer voice in pricing decisions
- SEA (excl MZ, UG post-2003): price leadership or competition
- Indicator: share of FOT price paid to farmers 1995-2005

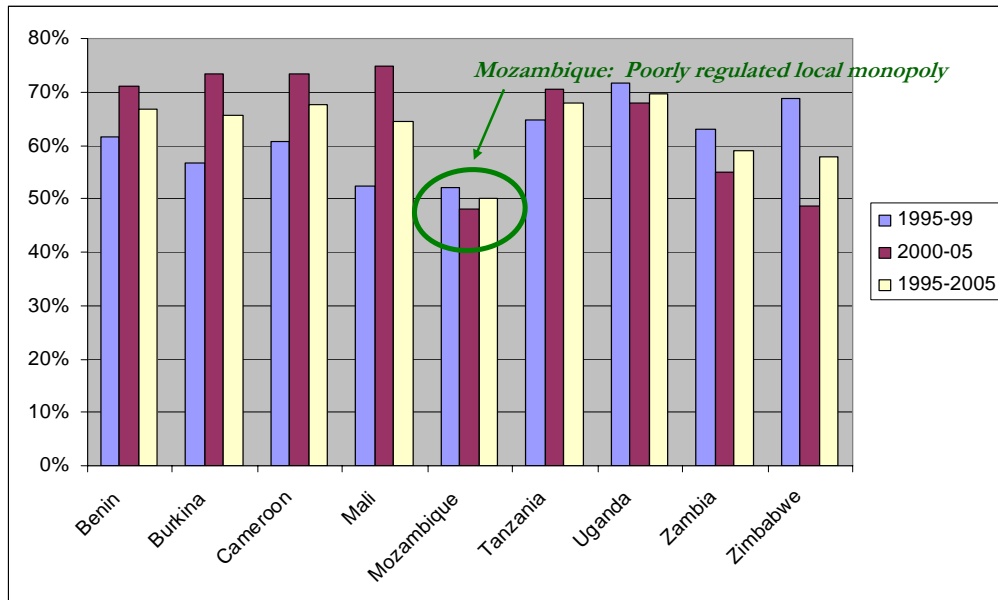
Farmer Share of FOT Lint Price, 1995-2005



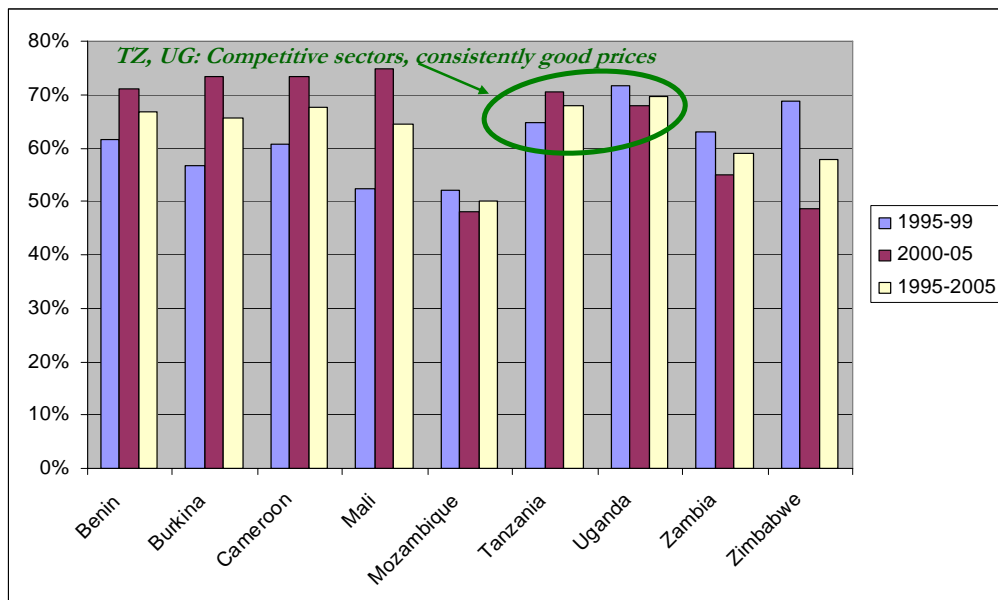
Farmer Share of FOT Lint Price, 1995-2005



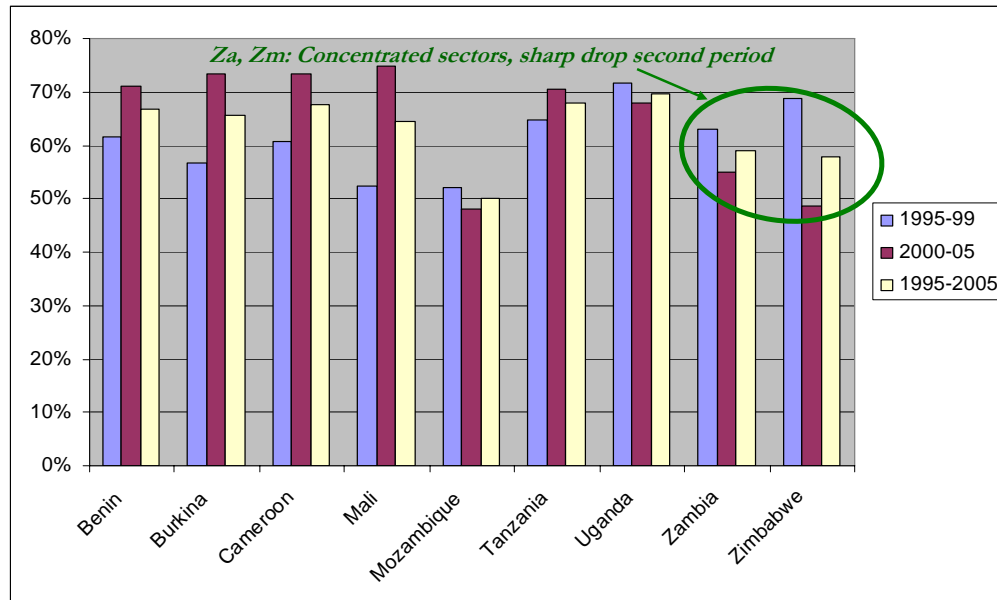
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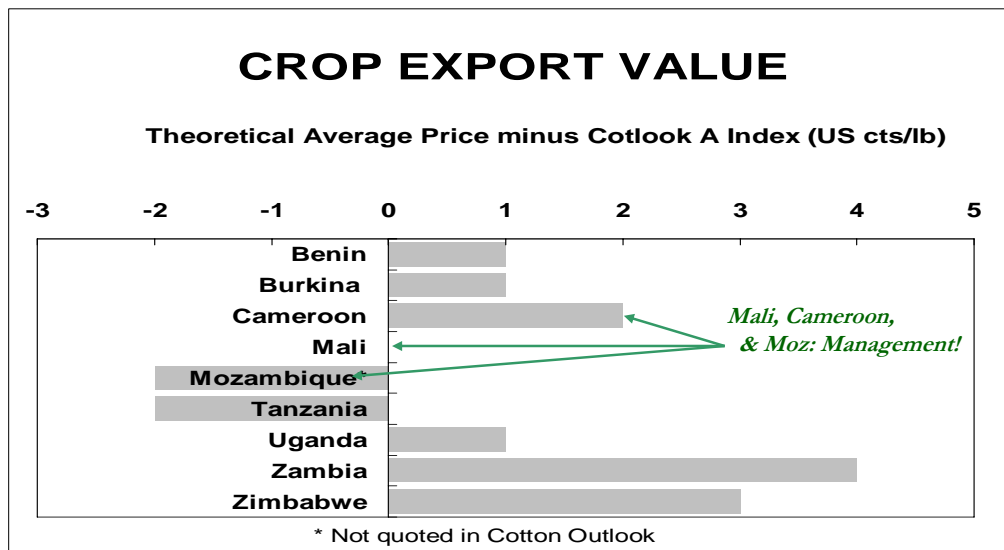
Input Credit and Extension Delivery

- Well developed in WCA single-channel systems and has permitted intensification
 - But yield stagnation within these systems since mid-1980s
- Highly competitive post-reform structures in TZ and UG led to collapse of input and extension systems, and decreased quality
- Concentrated models (ZB, ZM) have performed better, but repayment adversely affected by new entry
- Confirmation of the general hypothesis set forth in the typology:
 - Monopoly and concentrated sectors best able to ensure provision of inputs on credit and also to provide some level of extension advice
 - Provision of these services is undermined by side selling in more competitive sectors

Quality

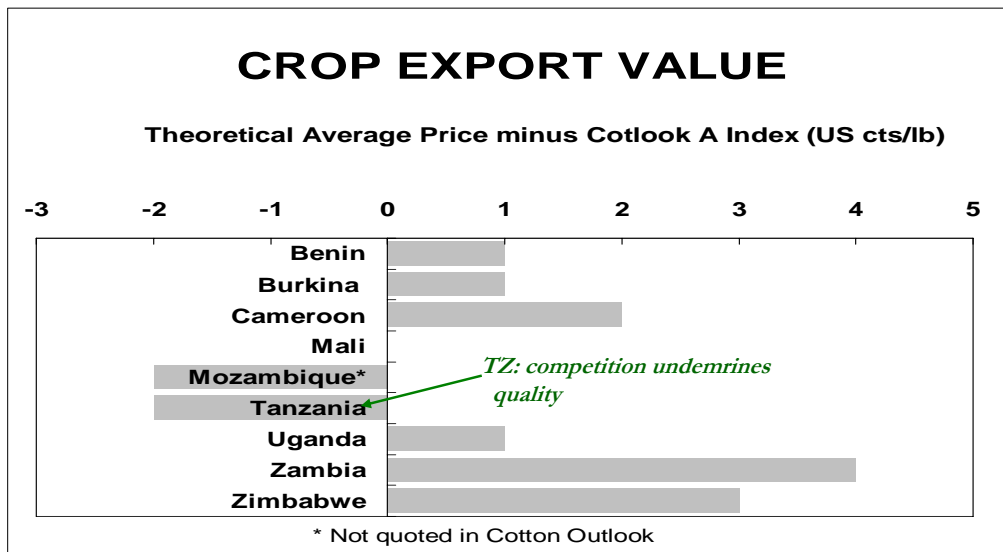
- Increased premia for quality in world markets
 - Driven by new spinning technology
 - African cotton has natural advantages, but contamination a major problem
- Indicator: Estimated average export price differentials across the nine countries relative to the A Index :
 - Improved in Zambia and Cameroon (reduced contamination) and, to a lesser extent, in Burkina Faso and Mozambique
 - Declined in the five other countries
- Predictions from the typology largely confirmed:
 - Best in concentrated, market-based sectors; poor in competitive sectors
 - Variable in national and local monopolies due to factors such as management culture and regulatory effectiveness

Estimated Average Premium over A Index (US cents/lb), 2005/06



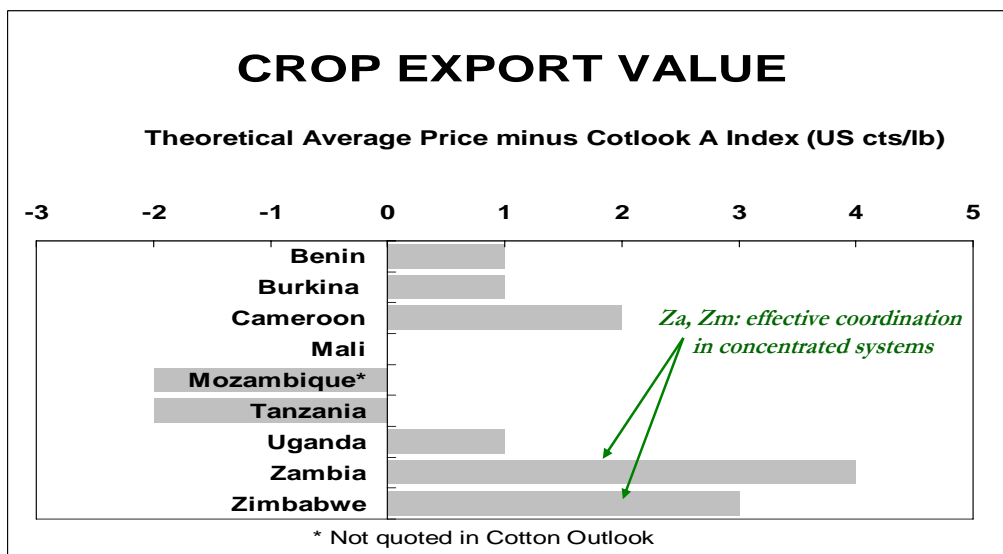
Source: Gerald Estur, Quality Survey, World Bank, 2007

Estimated Average Premium over A Index (US cents/lb), 2005/06



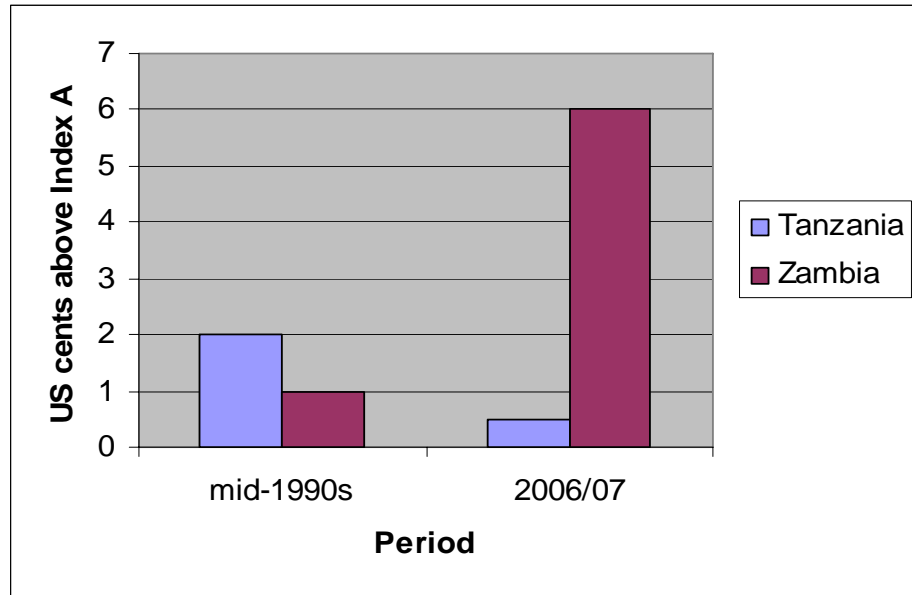
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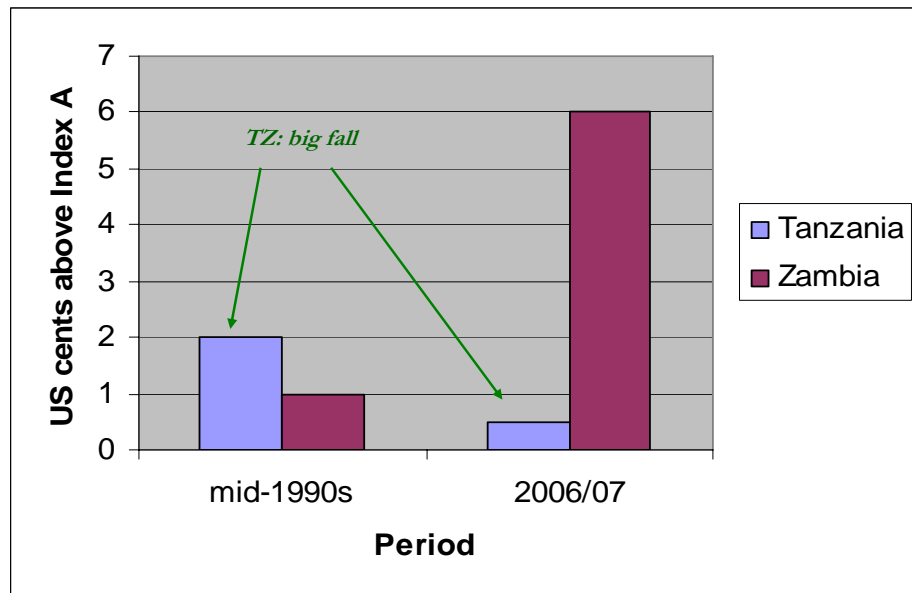
Source: Gerald Estur, Quality Survey, World Bank, 2007

Change in price premia for top Tanzanian and Zambian lint types, mid-1990s to 2006/07



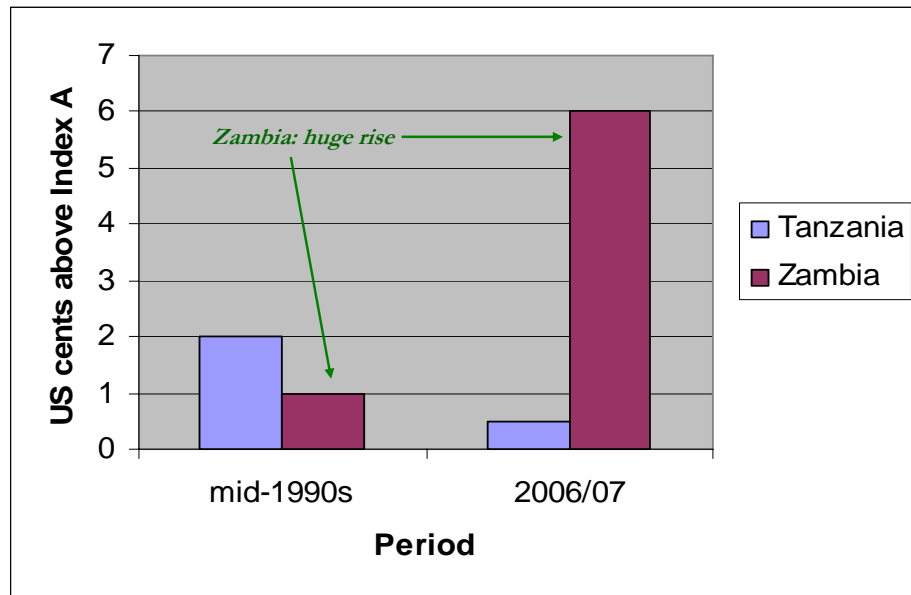
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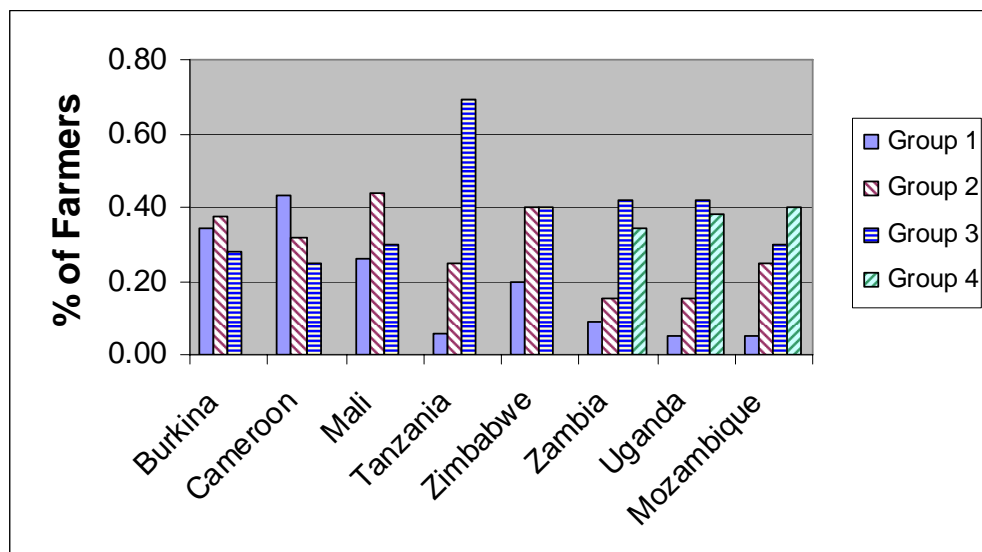
Results:

Outcome Indicators

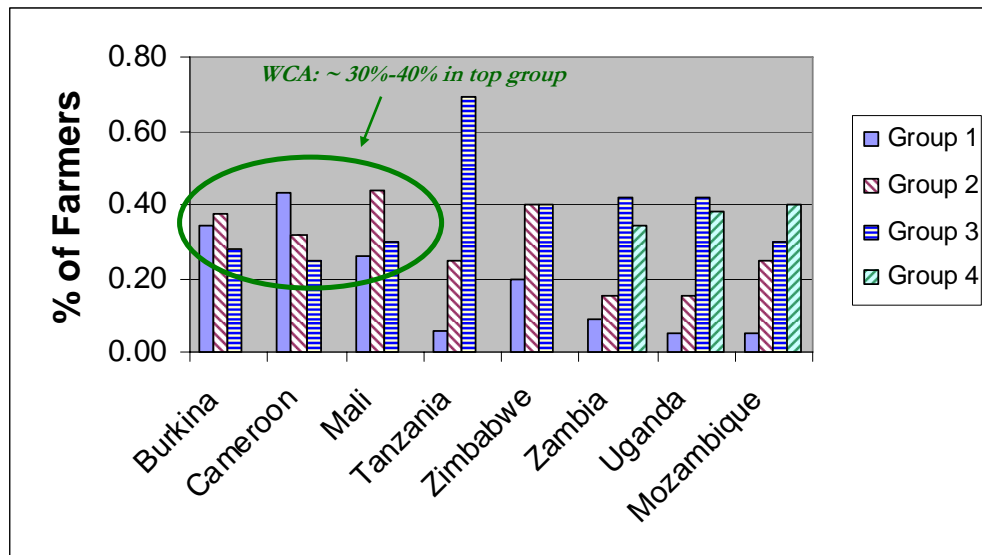
Yields, Crop Budgets and Returns to Farmers

- Results confirm that performance on yield levels is
 - Strongly related to expectations and performance for input provision and extension
 - Heavily influenced by past investments (WCA)
- Yield performance in ESA is correlated with sector organization:
 - More concentrated systems (Zambia and Zimbabwe) achieve higher yields than more competitive models (Tanzania and Uganda)
- Crop budgets:
 - Much higher proportion of cotton producing households found in the higher producing groups in WCA than in ESA
 - Weighted average returns to both family labor and to all labor are higher in WCA than in ESA
 - Between 25% and 75% of cotton producing households (depending on the country) would get a higher return on their labor by hiring it out rather than applying it to their own cotton plots

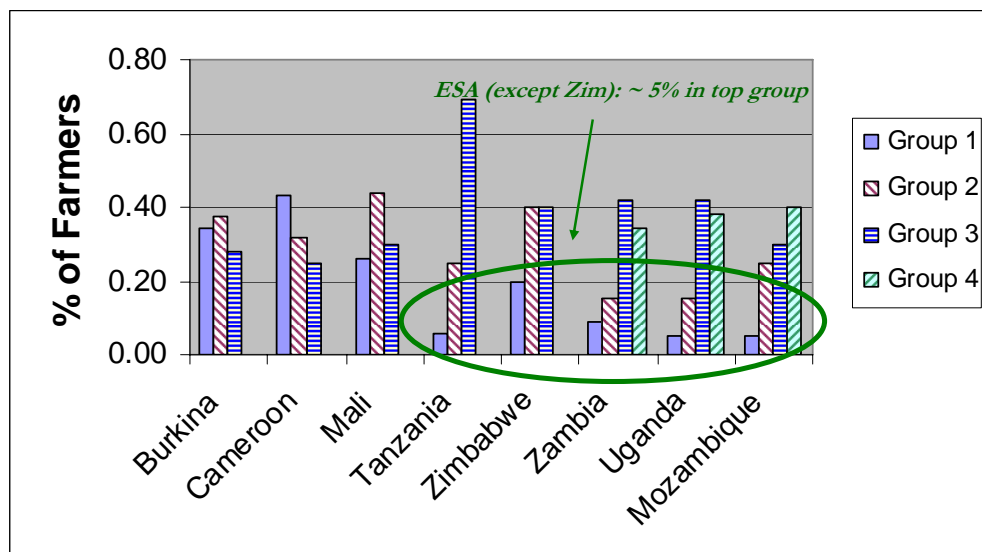
Share of farmers in top group



Share of farmers in top group



Share of farmers in top group



Cost Efficiency and Overall Competitiveness

□ Cost efficiency

■ Ginning costs

□ Sharply lower in market based systems (Zambia, Zimbabwe, Tanzania) than in monopoly or hybrid systems (WCA, Mozambique, Uganda).

■ Total net cost, farmgate to FOT:

□ Lower in market based systems, whether competitive or concentrated

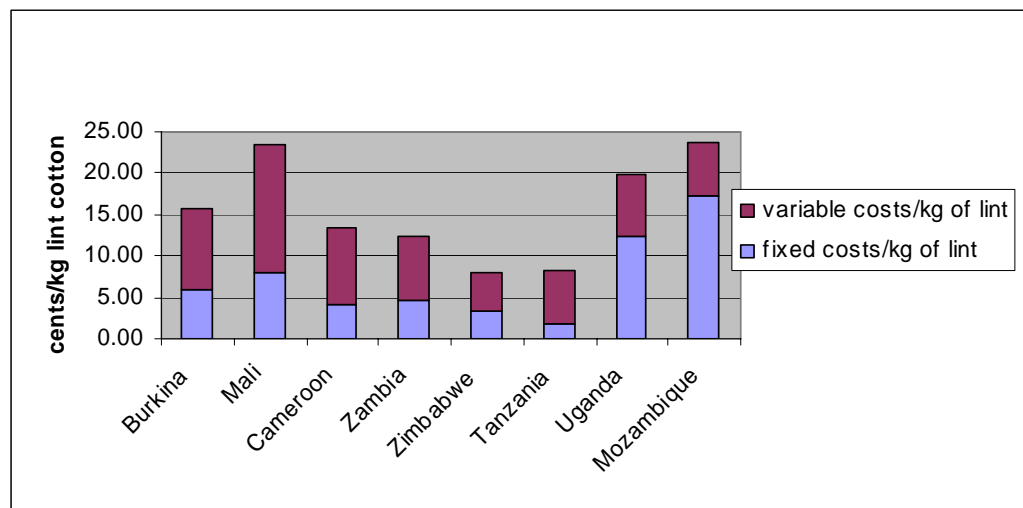
□ WCA monopolies perform especially poorly in terms of company efficiency

□ Overall Competitiveness

■ WCA sectors least competitive, either barely breaking even (Cameroon) or generating large deficits (Mali and Burkina Faso).

■ All ESA sectors appear to be highly competitive in world markets

Estimated Average Ginning Costs at 2006 Capacity Utilization Rates in Study Countries



Source: company accounts (WCA), project interviews (ESA)

	National Monopoly	Local Monopoly	Concentrated	Competitive	Correlation w/ Typology
Prices to farmers	X	X	Variable	✓	✓
Input supply	✓	✓	✓	X	✓
Quality	Variable	Variable	✓	X	✓
By-products valorization	X	X	✓	✓	✓
Research linkages	Variable	Variable	Variable	Variable	X
Yields	✓ but ...	Variable	✓	X	✓
Returns to farmers	✓ but ...	X	✓	✓	X
Cost efficiency	X	Variable	✓	✓	✓
Value addition	Variable	Variable	✓		X
Macro Impact	✓	✓	✓	✓	✓

Conclusions: Opportunities and Challenges for African Cotton

- Big Picture: SSA countries could increase revenues and benefits from cotton in the future, but subject to three major challenges:
 - **Achieving greater value** through improved quality, marketing, and valorization of by-products,
 - **Bridging gaps performance** and competitiveness through farm-level productivity and ginning efficiency, and
 - **Improving sustainability** through institutional development and capacity-building of stakeholders, as well as strengthening of governance structures and management systems.
- As shown by the comparative analysis, institutional change is part of the solution
- These objectives are important, notwithstanding factors that are beyond the direct control of SSA governments and stakeholders, such as:
 - the evolution of the euro/\$ exchange rate, and
 - the slow progress in reducing market distortions due to OECD subsidies

Conclusions: Summary of findings for particular sector types

- WCA national monopoly model
 - has generated strong returns to very large numbers of farmers,
 - but poor cost efficiency has undermined these sectors' competitiveness and rigidities in pricing systems have undermined financial sustainability
- Competitive sectors
 - are cost efficient and pay attractive prices to farmers,
 - but their inability to provide input credit and extension, or to raise quality makes them unlikely to make substantial contributions to poverty reduction
- Concentrated sectors
 - have performed well in quality and service delivery (input and extension), have been more efficient than the monopolies, and have also generated attractive value added per capita while making the highest contributions to state budgets,
 - but their performance on seed cotton pricing has been disappointing and they tend to be unstable

Final reflections on sector types and looking ahead

- Some degree of convergence in the forms of cotton sector organization in Africa likely to happen over the next decade
 - Increase in the number of local monopoly systems in WCA in the short/medium term?
- Transition to concentrated systems desirable, if regulatory challenges can be overcome
- Support (investment) to rural finance, quality management, productivity improvement, institutions and capacity building necessary in all cases
- More competitive systems are probably part of the *long-term* future in most countries
 - But require more effective rural financial markets, inputs markets and farmers' organizations first

Conclusions: Lessons from Reform

- The analysis has revealed strengths and weaknesses in various systems (particularly when one looks over a long time period):
 - no model superior to all others in all respects over time, and
 - none of those under review offers a fully satisfactory and sustainable response to the challenges of future competition in the world cotton market.
- However, strengths and weaknesses not all equal, and challenges differ (much) from type to type:
 - Monopoly and competitive systems confront severe challenges in terms of sustainability
 - Concentrated and local monopoly more promising, if effective regulatory regimes can be developed
- Clearly “reform” does not entail a movement from one stable set of rules of the game to another stable set
- Complex processes : not just about privatization, or liberalization

Thank you!

Take away points

- **Great diversity** among cotton sectors today:
 - Progressive differentiation over last 10/15 years stemming from some fairly common history in WCA and ESA respectively
 - Structural reforms (ESA) and adaptations +/- important (WCA)
 - Implication: each case different hence solutions need to be worked out on a case by case basis
- **Many lessons to be drawn** from reform experience (while no model to replicate):
 - WCA: impressive results, but recurrent financial crisis, lack of adjustment capacity of the model and financial unsustainability
 - ESA: start from lower point but steady growth over last 15 years; however some questions on environmental sustainability and productivity improvements
- **Typology of cotton sectors useful** (5 types)
 - Good capacity to explain links between sector structure and performance,
 - Good characterization of strengths and weaknesses of each system
 - Thus useful to identify the key reform challenges, predict the impact of structural reforms and design/revise sector strategies
 - However typology/sector structure does not explain all

Take away points (2)

- **Strengths and weaknesses** in all sector types, but **not all models equal** and challenges differ significantly:
 - Severe - while different - for monopoly and competitive
 - Concentrated and concession have potential, subject to efficient regulation
- **Lessons from reform experience** show that reforms cannot be limited to discrete measures, such as privatization (transaction) or liberalization (policy): example of Benin.
 - Reform entails transition processes that are long and complex and require adapted **strategies and instruments** (from both governments and partners)
 - **Need to (continue to) invest** in improving productivity, strengthening capacities, regulatory frameworks, rural finance, private input supply networks, research, etc.
 - **Important role of government in post-reform period**
- **There are substantial growth opportunities** for African cotton, but also some major challenges: (i) improving value addition (esp. quality), (ii) closing productivity gaps, and (iii) reinforcing capacities and institutions
- **Short-term crisis (and issues)** threatening the survival of WCA cotton sectors (exchange rate, OECD subsidies, risk management): need to be dealt with but should not hide the need for structural reforms that will affect long term competitiveness.