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THE MANY PATHS OF COTTON SECTOR REFORM IN EASTERN AND SOUTHERN AFRICA: LESSONS FROM A DECADE OF EXPERIENCE

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Key Policy Messages

- While African cotton sectors face common technical challenges, the structure of the market for seed cotton strongly influences which of these challenges are most difficult to meet and which types of institutions need to emerge if the system is to be sustainable.
- Institutional innovation is the key to improving performance in cash crop sectors; large injections of public capital are not needed.
- Direct state management of funds from industry levies is problematical. Vesting regulatory and coordination functions within multi-stakeholder bodies – where government is one actor among many -- may be the most promising approach for many sectors.
- Regular "deliberative fora" are invaluable for building trust between stakeholders and seeking innovative solutions to tackling sector-wide problems.

BACKGROUND: Cotton is a rare economic success story in Sub-Saharan Africa (SSA), generating cash incomes for millions of smallholder households and allowing the continent to capture a rising share of world trade in the crop. Characteristics of the crop, especially its need for purchased inputs and the typical inability of smallholders to access these on a cash basis, have fueled concern that the economic reforms sweeping the continent since the early 1990s, by under-cutting the basis for effective "interlocking" of transactions and also complicating collective decisions on long-term investment, may derail this remarkable success story. At the same time, technology has driven sharp declines in real prices since the late 1990s, putting pressure on inefficient systems; the massive subsidies provided to cotton farmers in developed economies have added to the difficulties for African producers.

OBJECTIVES: With cotton sector reform in much of SSA at least a decade old, it is now possible to begin learning from experience. This brief summarizes a larger assessment of the record of five countries in southern and eastern Africa: Tanzania, Uganda, Zimbabwe, Zambia, and Mozambique[1]. The focus is on the course of reform in each and on lessons for policy makers, donors, and researchers.

APPROACH: Our conceptual approach suggests a trade-off between competition and coordination in cotton systems. More precisely, it suggests that the structure of the market for seed cotton may strongly influence which challenges are most difficult to meet and which types of institutions need to emerge if the system is to be sustainable.

FINDINGS: The review of reform experience highlights three points. First, initial conditions (prior institutional set-up and performance), and thus the motivation for reform, varied widely across the countries. Second, each

[1] The full report is downloadable at http://www.aec.msu.edu/agecon/fs2/papers/idwp88.pdf

country shows strong path dependency: historical and pre-reform institutional set-ups re-emerge or strongly condition the choice of post reform institutions. Finally, there has been a great deal of institutional "churning" in most countries, centered primarily on the need to ensure input provision and credit recovery.

The cooperative-based cotton systems in ***Tanzania and Uganda*** lead after reform to highly competitive markets for seed cotton. Price competition was intense and farm prices improved, but input systems collapsed and lint quality declined. As a result, the two countries that most closely approached the competitive ideal in market structure saw the most persistent state involvement in input provision to farmers. ***Zimbabwe and Zambia***, each with single channel systems prior to reform, maintained concentrated sectors. Through the early 2000s, each performed much better than Tanzania and Uganda on input provision and lint quality. Perhaps surprisingly, each also paid attractive prices to farmers. Recent developments in Zimbabwe, however, may be undermining this success. In reforming its cotton sector, ***Mozambique*** returned to the concession model of the colonial era. Key post reform themes have been the absence of systematic evaluation and re-awarding of concessions, widely divergent performance between early investors and new entrants, and the government's openness to new investment. The country continues to lag its neighbors in productivity and quality, but new entrants since 2000 have begun to change this.

The paper shows that each country brought a different history into its reform process, and each has used very different approaches to solve common problems of input distribution, credit recovery, and quality control. Table 1 shows selected institutional mechanisms used for input delivery in our five countries, highlighting the diversity of approaches over countries over time. Overall, the picture is relatively positive. Fears that reform would undercut the basis for effective interlocking of transactions and also complicate collective decisions on long-term investment have often proved well founded. Yet predictable benefits of reform, such as higher prices, more timely payment, and reduced pressure on state budgets, have also been realized. It also seems clear that analysts underestimated the persistence and ability of sector participants – public and private – to innovate in pursuit of workable solutions to the problems unleashed by reform in their countries. Table 2 assesses the status of each sector as of mid-2005, and highlights how the key challenges each sector faces depends to a great degree on the structure of its market for seed cotton.

LESSONS: We draw several lessons from this experience. First, though cotton sectors face common technical challenges, workable solutions must be responsive to local conditions. The recent experience of Tanzania should encourage policy makers to work with sectors as they are, rather than to try to radically influence sector structure or to impose a "textbook" solution to a particular problem. Second, institutional innovation is the key to improving performance in cash crop sectors; large injections of public funds are not needed.

Third, direct state management of funds from industry levies is problematical. Vesting regulatory and coordination functions in multi-stakeholder bodies may be the best approach for many sectors. Fourth, the principal objective for institutional innovation, and the appropriate public role in promoting it, varies with the structure of the market for seed cotton. Where many firms compete, the main objective should be to ensure effective coordination for the provision of collective goods and to provide assurance for asset specific investment. In sectors with less competition, the emphasis should be on incentives for strong performance in pricing and service provision. Finally, regular "deliberative fora" are crucial to build trust between stakeholders and seek innovative solutions to sector-wide problems.

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Table 1. Selected Institutional Mechanisms for Input Delivery to Smallholder Cotton Farmers in Five Countries of SEA

	Mechanism	Year Initiated	Synopsis
MOZAMB.	Concession System	1989	Legal geographical monopsonies for seed cotton purchase. Ginning companies responsible for distributing inputs. Wide coverage but low quality seed and insecticides, no fertilizer. Yields 350 kg/ha. Periodic loan default crises spurred by new entrants. To date, crises resolved by providing new concessions to largest entrants.
	"Open" Concession system	2001 (abandoned 2002)	Allowed new entrants to compete for groups of farmers within existing concession areas. Strong opposition from established concession holders. Lack of transparency in mediating claims of new operators.
ZAMBIA	Distributor System	1999	Private (Dunavant). Operates within a liberalized but concentrated cotton sector. "Distributors" contract with company to receive inputs on credit; package includes treated delinted seed, insecticides, foliar spray (micro-nutrient); Distributors choose which and how many farmers to work with; earnings a function of credit recovery. Credit repayment rates rose from about 60% to 85% by 2001. Yields rose from 450 kg/ha to 600 kg/ha.
	Cotton Outgrower Fund	2002	Public/Private. Government credit at low interest to ginning companies to finance input provision. Allocations across companies favored small players in relative sense. High repayment allowed creation of revolving fund.
	Cotton Board	2005	Public/Private. Statutory body only. Not yet approved. Substantial policing powers to control "poaching" and practices which reduce cotton quality.
TANZANIA	Agricultural Inputs Trust Fund	1995 (abolished 1997)	Public/private. Operated in system with many seed cotton buyers. Subsidized credit to input dealers. Low uptake, poor credit repayment
	Cotton Dev. Fund	1998 (abolished 2002)	Public/private. Operated by public sector in system with many cotton buyers. Privately financed by levy on ginning activities. Fund imported chemicals and distributed them to local governments for cash sale at below market price. Increased insecticide availability 10x over two years. 95% of cotton inputs purchased through system. Imported unfamiliar chemicals 2001/02, low uptake. Some chemicals diverted to market.
	Passbook System	2002	Public/Private. Cotton sellers receive stamp in official passbook entitling them to pesticides sufficient for approximately one spray the following year. Broadens access, may leave more room for private sector and create more accountability in system.
ZIMBABWE	Cottco outgrower scheme	1992 (Abandoned 2002)	Private (Cottco). Began prior to reform with soft loan from World Bank; subsequently operated within a liberalized but concentrated sector. Borrowers organized into groups. Each farmer must produce >= 800 kg seed cotton. Available inputs include treated seed of proper variety
	Cottco "Gold Club"	1992 (Abandoned in 2002)	Private (Cottco). . Upper tier within company's outgrower scheme for loyal (and generally larger) producers. Members can receive larger loans
	Input voucher program	1995	Private (Cargill). Inputs for next year's crop delivered at time of this year's seed cotton purchase
UGANDA	UCGEA/CDO Input Credit Scheme	1997 (abolished 1999)	Public/private. Operates in system with many seed cotton buyers. Uganda Ginners and Exporters Association in conjunction with Cotton Development Organization (CDO). Supported with loan from World Bank. Inputs distributed on credit to 200-300,000 farmers. Companies competed to purchase seed cotton. Fund replenished by levy on lint exports. Dramatically improved input availability, but suffered from "leakage" to market, required large subsidy. Abandoned after two years. Insecticide use collapsed. No fertilizer use.
	CDO Seed Scheme	1999	Public/private. Operates in system with many seed cotton buyers. All seed legally belongs to CDO until it has sufficient to meet anticipated demand. Ginners deliver quota to CDO, which treats and dresses seed, returns to ginners for distribution. Competition from oilseed processors diminishes availability for planting.

Table 2. Status of Cotton Sectors in Southern and Eastern Africa as of mid-2005

Country	Market Structure and Firm Behavior	Input Provision and Credit Recovery	Lint Quality	Production & Productivity Trends	Future Challenges
Tanzania	- Many firms compete heavily in output market - High seed cotton prices despite high burden of taxes and levies.	- Little progress on seed qual. - Partial provision of chemicals through Passbook system. - Leaves room for development of independent private input system	- Declining prior to reform; decline has continued since - Auction system offers hope for improvement, but still awaiting pilot phase	- Record production in 2004 after slump of several years - Limited input provision on credit makes production more price responsive than in neighboring countries	- Maintain (and expand?) passbook system - Develop auction system for quality control - Increase farm productivity
Uganda	- Many very small firms compete heavily in output market - Cottco left sector in 2005	- Little or no provision by cotton buyers as of 2003. Some progress since that time.	- Declined since reform	- Rose to 45,000 mt in 2005 from 20,000 mt - Individual farmers produce very small quantities (100-200 kg)	- Public/private cooperation to improve input provision - Increase scale of production at farm level
Zimbabwe	- Concentration declining, with heavy competition from new firms - Cottco's market share < 60% - Prices rival Tanzania after brief decline	- Share of farmers receiving input credit steady at 35-38% - Quality of assistance has declined and sustainability open to question	- Indications that it is declining, as farm level quality control has diminished	- Yields probably falling, based on Cottco ending its input schemes - Production remains > 200,000 mt, near record levels	- Develop sector coordination strategies in a more competitive environment to reinvigorate input and extension assistance and stem decline in quality
Zambia	- Highly concentrated, CR2>85% - High prices, rivaling Tanzania	- Effective among top two players, though indications in 2005 of more credit default - More provision by smaller players due to Cotton Outgrower Fund	- Polypropylene contamination controlled since 2003; lint now receives small premium on world markets	- Production booming - Yields appear to be rising steadily	- Strengthen effective competition while avoiding credit default crises - Rework Cotton Act to stress coordination over policing - Introduce new germplasm
Mozambique	- At least 10 companies, each with geographic concession - Prices to farmers remain the lowest in region - Proposals on table for evaluation and re-awarding of concessions	- Both effective outside Nampula - New seed available in most of country, including Nampula - Credit default a recurring problem in Nampula	- Remains generally poor, with 3% discount on world markets; exceptions for some companies	- Prod'n rising since 2000, but well below 1999 peak - Nampula losing share - Yields outside Nampula rival best in region; among lowest in region w/in Nampula	- Extend performance seen outside Nampula into the province - Operationalize plan to regularly evaluate and re-award concessions