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PRICES PAID TO COTTON FARMERS: HOW DOES ZAMBIA COMPARE TO ITS AFRICAN NEIGHBORS?

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MAIN POINTS

1. Zambia has paid among the best nominal seed cotton prices to farmers in SSA since 1995.
2. By a more refined measure (share of FOT), during 1995-1999, Zambia paid prices comparable to those in Tanzania (a very competitive sector), and substantially higher than in Mozambique and WCA. However, from 2000-2005, Zambia's pricing performance fell, and exceeded only Zimbabwe and Mozambique in our sample
3. The recently announced reference price for 2008 of ZKW 1,200/kg of seed cotton was negotiated and jointly announced by ginners and farmers. It amounts to about 53% of FOT at current exchange rates and Index A prices; about equal to recent shares received by farmers in Zambia, but well below levels in WCA and Tanzania.
4. What “rules of the game” are needed for farmers and ginners to continue working together so that the costs and benefits in Zambia’s cotton sector are shared equitably?

INTRODUCTION: Prices are one key determinant, along with productivity and cost of production, of the returns farmers earn from the crops that they grow and sell. They are thus an important element in the ability of a crop like cotton, produced almost entirely by poor smallholder farmers, to reduce poverty.

OBJECTIVE and METHODS: Cotton sectors are organized in a wide variety of fashions in sub-saharan Africa. A recent study of nine SSA countries identified publicly-owned national monopolies (Mali and Cameroon), local monopolies in which private firms hold monopoly rights in defined geographical zones (Mozambique and, most recently, Burkina Faso), concentrated market-based sectors in which 2-3 private firms dominate the cotton market (Zimbabwe and Zambia), competitive sectors in which many private firms compete vigorously for seed cotton (Tanzania), and hybrid sectors which combine elements of different types (Benin and Uganda). Theory predicts that competitive sectors such as Tanzania’s will pay better prices to farmers than unregulated national or local monopolies, and that prices in concentrated systems (such as Zambia's) depend very much on the dominant companies' behavior. This Policy Synthesis draws on recent comparative work across the nine countries listed above to describe approaches to price setting across SSA, and to assess pricing performance in Zambia compared to the other eight. In the final section, we discuss key policy implications for Zambia.

PRICING MECHANISMS IN WEST-CENTRAL AFRICA (WCA): Pricing mechanisms in francophone WCA countries are remarkably similar, based on a commonly accepted principle that single channel systems require guaranteed fixed prices throughout the cotton-growing area (panterritorial), throughout the cropping season (panseasonal), and announced before planting (Table 1).

In the 1970s and most of the 1980s, Ministries of Agriculture announced the producer price before planting, and the cotton company was mandated to collect all cotton and pay farmers. In recent years, to bring flexibility and reduce financial risks, most WCA countries have reformed their pricing systems with a two-tier payment linked to world prices: a base price negotiated at the beginning at planting and a price complement to be paid at the end of the season, if the cotton company makes a profit (Cameroon) or if the actual sales price is above the base price (Burkina and Mali). Initial producer prices, administratively set until the end of the last decade, are now typically agreed prior to the planting season through direct negotiation between cotton companies and farmers, or, in some countries (Burkina and Mali) through a commonly agreed pricing formula within an "Inter-Professional Committee". These formulas now formally link producer prices to world market prices.

In all countries of WCA until 2004, pricing was linked to a stabilization fund designed to limit fluctuations in producer prices and avoid having them fall under some minimum. Only one of these funds (in Cameroon) survived the 2004 crisis, when world prices fell 30% during the marketing season; even Cameroon's fund was exhausted in subsequent years. The collapse of the stabilization funds in WCA created major financial crises, requiring large budgetary transfers to the cotton sectors in Mali, Benin and Burkina.

PRICING MECHANISMS IN EAST AND SOUTHERN AFRICA (ESA): Prior to reforms in the early 1990s, cotton pricing mechanisms in ESA closely resembled those of WCA in the sense that a cotton parastatal (or cooperative union in Tanzania and Uganda) was the sole buyer of cotton at a preannounced, panseasonal and panterritorial price. Following reforms, pricing mechanisms in the region became more market-linked and flexible and diversified in line with the diverse sectoral types that have emerged (Table 2). As a result, no country in the region operates a stabilization fund, and none have generated sector-wide deficits that government had to cover.

Mozambique has the only (local) monopoly system in the region, and is the only country that maintains a fully administered, panseasonal and panterritorial price. Government's role in price setting is strong in Mozambique, due in part to the very weak state of farmer organizations in the country. In Zambia and Zimbabwe's concentrated sectors, pre-planting prices have been maintained but this reflects business decisions by the dominant firms; government has no say in pricing in either country. Prices paid to farmers throughout the region are much more strongly linked to Index A than in WCA, though the way in which this happens varies greatly. For example, prices in Zambia largely adjust only year-to-year, due to price leadership by Dunavant, while in Tanzania and to some extent in Zimbabwe they fluctuate throughout the marketing season. Even in Uganda's hybrid system, which attempts to eliminate competition among firms, prices vary over the course of the marketing season.

COMPARING PRICING PERFORMANCE: One way to assess pricing performance across countries is to compare the simple nominal price paid to farmers for a kg of seed cotton, as a percent of Index A. By this measure, Zambia has performed relatively well, paying the second highest price share among all nine countries from 1995 through 1999 (Zimbabwe was highest). From 2000-2005, Zambia was tied with Tanzania for the highest price paid in ESA, though its prices were well below those in WCA.

This simple price comparison, however, suffers from a number of shortcomings. For example, some countries achieve higher ginning outturn ratios than others, which should allow companies in those countries to pay higher prices for seed cotton. Other countries (such as Zambia) achieve high price premia on the world market, which should also allow them to pay higher seed cotton prices (as long as the costs of achieve this premium do not exceed the premium itself). Finally, countries differ in the costs of assembling seed cotton from farmers, and in the costs of transporting the lint cotton to its FOB port.

To correct for these factors, we calculate the share of the FOT (free on truck; an ex-ginnery price) lint price received by farmers in each of the study countries over the past 10 years (Figure 1). Producer prices for seed cotton are adjusted to lint equivalent using the average ginning outturn ratio, and input costs borne by the companies are added to this result, to show the net value received by farmers. The Cotlook A Index is then adjusted to FOT based on transport and port cost data. Estimates of average quality premia for each country (see PS#23) are then added to estimate the value received by the ginner at the ginnery door. The ratio of these two values—that paid to farmers by the ginners and that received by ginners at the factory door—shows the share of FOT paid to farmers. The FOT lint price is chosen instead of FOB because FOT is the price most within the companies' control. Transport costs from FOT to FOB tend to be higher in landlocked countries (Burkina Faso, Mali, Uganda, Zambia, and Zimbabwe) than in coastal countries (Cameroon, Mozambique, and Tanzania). Thus, for example we estimate costs from FOT to FOB

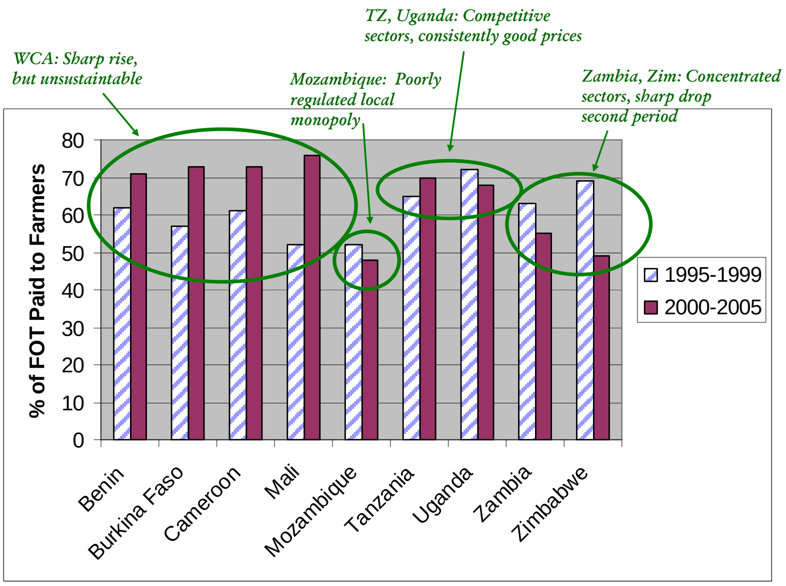
Table 1: Summary of Pricing Mechanisms in WCA Countries as of 2006

	Benin	Mali	Burkina	Cameroon
Administered price?	Mixed	Yes	Yes	Yes
Panterritorial, panseasonal?	Yes	Yes	Yes	Yes
How set?	Government has arbitrary role	Negotiated within interprofessional committee	Negotiated within interprofessional committee	Negotiated within interprofessional committee
Announced prior to planting?	Yes	Yes	Yes	Yes
Adjusted prior to harvest?	Yes	No	No	Yes
Secondary payment after marketing?	Yes	Yes	Yes	Yes
Linked to A Index?	Yes in principle, not so clearly in practice	Yes	Yes	Yes in principle, not so clearly in practice
Stabilization fund?	Yes, but exhausted	Yes, but exhausted	Yes, but exhausted	Yes, but exhausted
Sector wide deficits?	Yes	Yes (estimated US$91 million for 2005 alone)	Yes (estimated €110 million, 2004/05-2005/06)	None through 2007

Table 2: Summary of Pricing Mechanisms in ESA Countries as of 2006

Pricing Element	Mozambique	Zambia	Zimbabwe	Tanzania	Uganda
	Local Monop	Concentrated	Concentrated	Competitive	Hybrid
Administered price?	Yes	No	No	No	Only pre-planting price
Pan-territorial?	Yes	Yes for individual companies, but prices vary across company	Yes for individual companies, but prices vary across company	No	Only pre-planting price
Pan-seasonal?	Yes	Yes	No	No	No
How set?	Negotiated btwn government and ginners; very little direct role of farmers	Dunavant acts as price leader	Price leadership by Cottco and Cargill	Competitive market price, no price leadership	Government (CDO) sets pre-planting price in collaboration with ginners' association
Announced pre-planting?	No	Yes, only by Dunavant	Yes (Cottco and Cargill only)	No	Yes
Adjusted prior to harvest?	N/A	Yes	Continually adjusted over season due to hyper-inflation	N/A	Not formally, but actual prices paid do fluctuate over marketing season
Secondary payment after marketing?	No	No	Yes (Cottco and Cargill only)	No	No
Linked to A Index?	Yes in principle, not so clearly in practice	Yes	Yes	Yes	Yes
Stabilization fund?	No	No	No	No	No
Sector wide deficits?	No	No	No	No	No

Figure 1. Share of FOT Received by Cotton Farmers in Nine SSA countries, 1995-2005



to be 50% higher in Zimbabwe (US$0.157 per kg of lint) than in Tanzania (US$0.105) entirely due to geography. Note that, due to differential transport costs, seed cotton prices in US$ terms may be lower in Uganda than in Tanzania, but the share of FOT paid to farmers may be larger.

Four patterns stand out. First, prices paid in WCA increased sharply during the second period (2000-2005), but the prices during this period are not sustainable, as indicated by the large sectoral deficits that these countries have experienced in recent years. Second, Mozambique, a poorly regulated local monopoly system with very weak farmer representation, has consistently paid the lowest prices of any country. Third, Tanzania and Uganda, with highly competitive structures, have consistently paid attractive prices to farmers. Finally, the two concentrated sectors – Zambia and Zimbabwe – paid attractive prices to farmers during the first period (1995-1999), even matching those in Tanzania and Uganda. Yet those prices fell (quite sharply in Zimbabwe, less so in Zambia) during the second period. During this period, average FOT price shares in Zambia were lower than any country other than Mozambique and Zimbabwe.

POLICY IMPLICATIONS: Zambian Cotton Pre-Financiers' Association recently negotiated an indicative pre-planting price of ZKW 1,200/kg with the Cotton Association of Zambia. This price was then jointly announced and supported by government, though the announcement made it clear the final price could differ from the announced price. Equivalent to USD0.315/kg at current exchange rates, the announced price amounts to about 53% of Zambia's FOT at current Index A prices (USD0.717/lb). This share is about equal to the average FOT share that farmers have received in Zambia since 2000, and is well below the current levels of 66% in WCA and 75% in Tanzania.

The collaborative fashion in which ginners and farmer representatives have negotiated prices this year bodes well for future collaboration. As such negotiations continue to take place, it is crucial that both sides be fully informed about world market conditions, about price premia that Zambian cotton receives in international markets, and about reasonable cost structures that can be used to assess what prices can be sustainably paid in Zambia, so that the benefits of cotton cultivation and processing are equitably shared across all sector participants.

This Policy Synthesis draws directly from Tschirley et al (2007). "Comparative Analysis of Organization and Performance of African Cotton Sectors: Learning from Experience of Cotton Sector Reform in Africa", forthcoming from World Bank

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