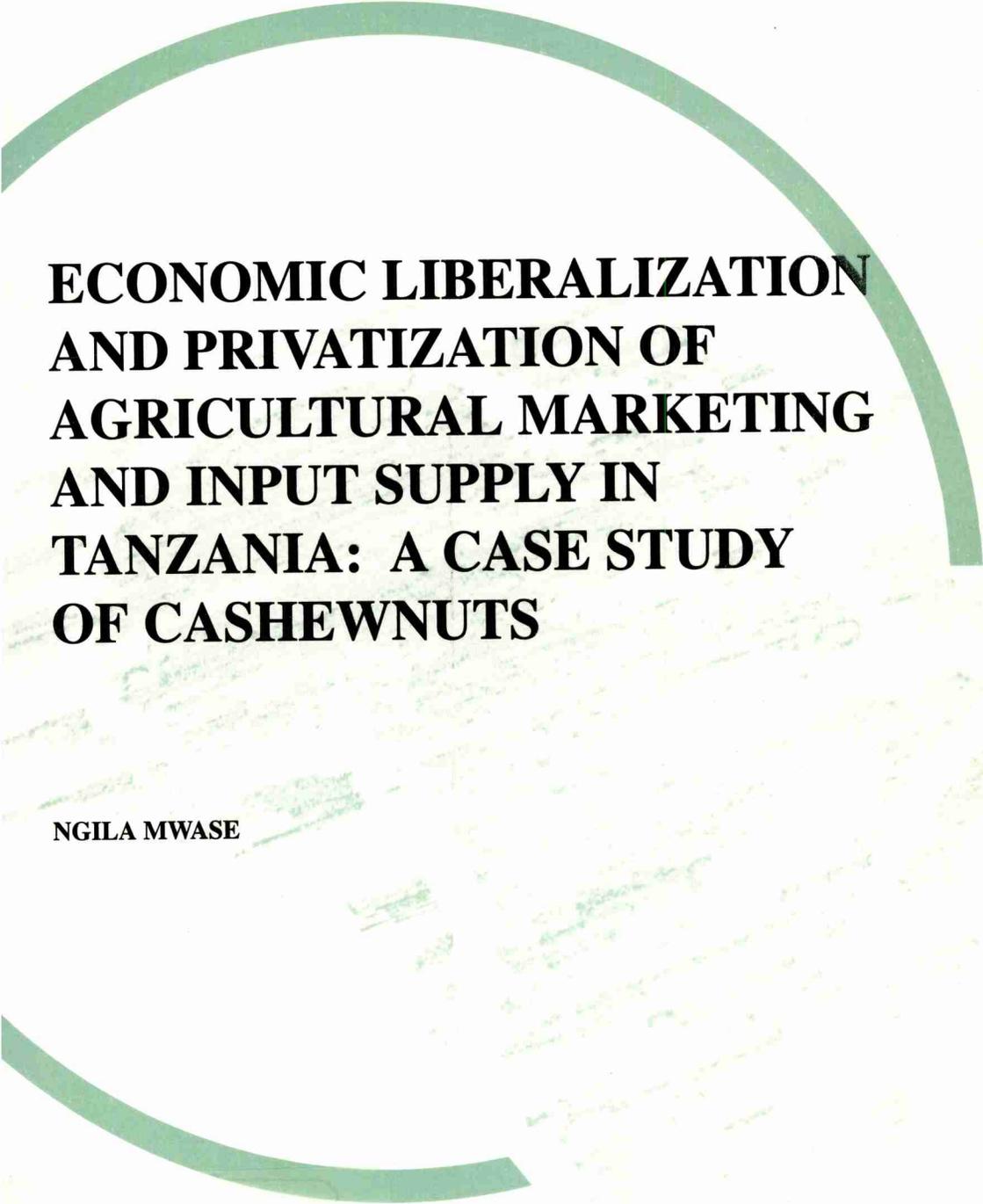


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**ECONOMIC LIBERALIZATION  
AND PRIVATIZATION OF  
AGRICULTURAL MARKETING  
AND INPUT SUPPLY IN  
TANZANIA: A CASE STUDY  
OF CASHEWNUTS**

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**ARCHIV  
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**ECONOMIC RESEARCH CONSORTIUM**

**POUR LA RECHERCHE ECONOMIQUE EN AFRIQUE**

**Economic liberalization and  
privatization of agricultural  
marketing and input supply in  
Tanzania: A case study of  
cashewnuts**

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**Economic liberalization and  
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marketing and input supply in  
Tanzania: A case study of  
cashewnuts**

By

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## **Abstract**

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Since 1991 massive restructuring and liberalization of agricultural marketing have been undertaken in Tanzania. The study examines this process in the context of SAP and the need to ensure a more economically viable private sector driven agricultural marketing system. Private firms and traders are increasingly marketing agricultural inputs and outputs, hitherto a preserve of marketing boards and cooperatives. The study uses interviews and a questionnaire to examine the impact of these changes on smallholder cashew producers, with special emphasis on the producers' views and expectations. We conclude that despite some financial and logistical problems, and vested interest, some positive results are discernible. Given favourable pricing, marketing and processing policies, the persistent decline in cashew production has been reversed, and producer prices have increased. The challenge is to develop a privatised and sustainable cashew marketing system that is responsive to producers' needs and expectations.

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# I. Introduction

---

Public sector dominated agricultural economies in sub-Saharan Africa (SSA), especially those like Tanzania, have taken a U-turn. Structural adjustment programmes (SAPs) with their market-determined prices and resource allocation, economic liberalization, and privatization have all addressed prevalent economic distortions and inefficiency. Exchange rate adjustments and reduced intermediary profits, for example, have increased agricultural producer prices to 60%–80% of world market prices. Additional agricultural reforms should improve efficiency in resource use, smallholder incomes and food security.

The study examines the impact of macroeconomic changes and privatization on micro-level cashewnut activities in Southeast Tanzania. We examine the privatization of cashew production, especially input supply and marketing through private sector channels, and smallholder welfare gains/losses.

Various economic, investment, banking and financial liberalization changes and strategies have been introduced in the 1990s to create an enabling environment for public sector reform and privatization (Sarris and van der Brink, 1993; Ndulu et al., 1995). The Parastatal Sector Reform Commission's (PSRC) *Parastatal Privatization and Reform Master Plan* (1993) for parastatal divestiture is being implemented. The privatization of public sector cashew concerns affects the welfare of smallholder producers.

The transformation of marketing boards into crop authorities in 1972/73, along with the dissolution of cooperative unions in 1976 and their reinstatement in 1984, ending both the compulsory single channel marketing system and uniform commodity pricing shook the crop production and marketing system. A number of cooperatives and agricultural parastatals collapsed. The procurement, processing and export of cashews by the crop authorities faced mammoth operating costs, excessive overheads and outright corruption. This put pressure on financial institutions, but also depressed producer prices.

The study analyzes privatization effects on the cashew factor and product markets and the ensuing incomes and welfare of smallholder producers. The objectives of the study are to:

- a) Discuss privatization of the supply, stocking and distribution of cashew industry inputs and outputs and price effects.
- b) Examine income generation/poverty alleviation effects of (a) on smallholder producers.
- c) Examine wider policy implications and possible changes in light of (b).

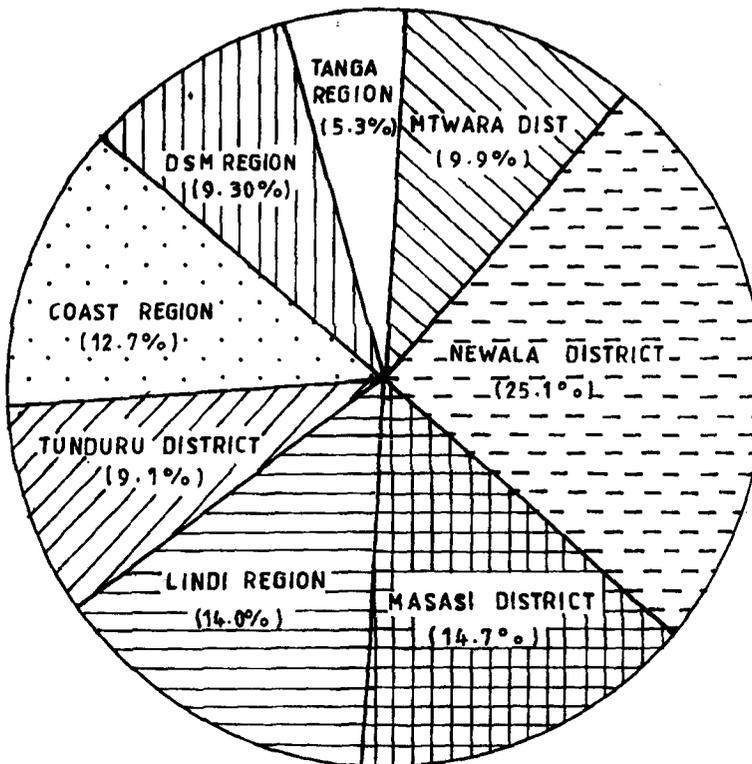
The study seeks to test the perceived superiority of the private over public sector cashew marketing approaches in terms of:

- Efficiency and cost effectiveness
- Increased cashew production at an individual farmer level
- Higher producer prices and increased welfare of cashew producers

The study also examines whether these changes have rendered redundant the costly and duplicative public sector institutions and their activities.

Primary data were gathered through interviews and a questionnaire in six major cashew growing districts: Newala, Lindi, Masasi, Tunduru, Nachingwea and Mtwara (Figure 1). Four villages were randomly sampled in each district. In each village, ten cashewnut farmers were randomly selected from a list availed by the Village Agricultural Extension Officer ("Bwana Shamba") and interviewed. Given the resource constraints, study coverage, theme and requisite precision, the sample of 240 cashew farmers was considered adequate. Data were also sourced from official and unofficial documents. The emphasis was on producer price differentials between public, and local and foreign private cashew marketing firms and traders. Secondary data allowed a time series decomposition of producer prices. The views of cashew producers, processors, marketers and other stakeholders are considered.

**Figure 1: Percentage annual cashew production by region/district**



## II. Theoretical framework

---

In Tanzania, as elsewhere in Africa, marketing boards sought price and income stabilization and agricultural development funds. But poor and inadequate marketing, transport and storage channels and facilities, and exploitation by “middlemen”, characterized marketing board controls (Helleiner, 1966; Kriesel et al., 1970; Ellis, 1982; Temu, 1984). Private marketing channels, on the other hand, are more inclined to greater efficiency, supply responses and multiplier effects. Given doubtful economic benefits and lack of correlation between price stability and increased production, the United Republic of Tanzania (URT) (1966) considered abolishing price stabilization funds. The reorganization of the cooperatives in 1968 and marketing boards in 1972/73 tightened state control on agricultural marketing (Mwase et al. 1976).

The creation of a market economy frees markets and energizes the forces of supply and demand. As Timmer (1986) noted, where the state, rather than the market, makes the allocative decision, prices reflect perceived social values and needs. Where prices deviate significantly from their scarcity values, there is discrepancy between short-term distribution and welfare concerns and long-term growth prospects calling for efficient use of scarce resources. Market liberalization therefore is targeted at narrowing the gap between set prices that reflect policy intervention objectives, and market-determined prices that reflect scarcity values.

Economic liberalization may entail efficient state intervention. Agriculture is “public” in terms of policy and programme needs, but “private” in production, marketing and consumption decisions. Efficient management and intersectoral complementarity call for recognition of this dichotomy. Macro level interventions to address economic distortions should not put undue pressure on micro level decisions but rather canvass them for broader policy goals. Government can regulate and facilitate agricultural marketing to ensure fair trade and protection of public interest, for example by providing market information and improving market infrastructure and standardization, rather than monopolizing or competing in input supply, production, marketing, transportation, storage, processing or trading.

Public enterprises pursue social objectives, which the free market would ignore. They suffer from political pressures, bureaucratic failure and lack of financial discipline, all of which result in poor performance in terms of output and financial outlay. On the other hand, privatization tends to be more conducive to competition and financial discipline, both leading to economic efficiency. The competition is often defective due to private monopoly, public and merit goods, externalities, and information problems (Layard and Walters, 1978:). However, the private sector option is viewed as superior in terms of tackling economic distortions and promoting economic growth.

The socioeconomic and political setting for smallholder agricultural production and marketing has changed significantly, largely because of the SAP policies: reduction of the budget deficit; removal of subsidies; and liberalization of agricultural input/output prices, public utility tariffs, and interest and exchange rates. Several significant devaluations over 1986–1995 depreciated the Tanzanian shilling from an average of Tsh.32 to US\$1 in 1986 to Tsh.480 (1993) and Tsh.550 (1993). The shilling was floated in 1993, and has now stabilized at Tsh625=US\$1. The corresponding parallel market rates were Tsh.165 and Tsh.515 in 1986 and 1992, denoting premium differences of 404% and 7%, respectively.

The nature, locus and effects of privatization of state-owned enterprises has been addressed by several writers (Roth, 1987; Von Braun and Kennedy, 1986; Ferron and Kenbur, 1990). Lofchie (1989) attributed Tanzania's poor agricultural performance to over-valued exchange rates, inappropriate parastatal management and industrial strategies, and commodity pricing. "The pricing system", Lofchie (1989) argues, "represented such a strong economic disincentive to producers that this factor alone could well account for the drastic fall in the levels of marketed production of food grains and export crops". For cashew output, producer price remains the single most important variable. The price elasticities range from 0.12 for robusta coffee to 0.63 for cashewnuts (Mshomba, 1989).

### III. Cashew production trends

---

Cashewnut is Tanzania's third most important crop (after coffee and cotton), contributing 10%–14% of foreign exchange earnings, which amounted to US\$52 million in 1994/95. Grown largely in Mtwara and Lindi regions, cashewnut supports over 250,000 smallholder producers and factory workers. The average farmer has 1–2 hectares of cashewnuts sometimes intercropped with cassava and legumes especially in Mtwara and Nachingwea districts. Cashew production rose from 7,000 tons in 1945 to its highest peak of 145,080 tons in 1973/74 (about 30% of world production), declining by 89% to 16,552 tons in 1986/87 (about 7%–8% of global output).

Following concerted efforts this decline was reversed in 1990/91 when production rose to 29,016 tons, recording further improvements to 41,657 tons (1991/92), but declining slightly to 39,323 tons in 1992/93. Production resumed its upward trend, registering 46,601 tons in 1993/94 and 70,000 tons in 1994/95 – 52% and 28% higher than 1993/94 actual and forecast production levels. Cashew production reached 81,000 tons in 1995/96 (Table 1). Raw cashew exports at 46,598 tons in 1993/94 reached 70,000 tons and 80,500 tons in 1994/95 and 1995/96, respectively. Cashew production is projected to increase by 10%–15% p.a. to about 100,000 tons by the year 2000. Cashew production by district is presented in Appendix A and its distribution by region/district is shown in Figure 1.

Figure 2 depicts production trends based on four-year averages. If cashew production had doubled to 250,000–300,000 tons (a plausible proposition given the resource base) the cashew industry could have absorbed the surplus labour, slowed rural-urban migration, and reduced Dar es Salaam's *Wamachinga* (street vendors who originate essentially from Mtwara and Lindi regions) unemployment problem.

Reasons for the production decline at a time of massive investment in processing plants include:

- Forced relocation of cashew farmers into *ujamaa* villages (Operation Sogeza) and disincentives inherent in the “collectives”.
- Increased transport and storage costs leading to widespread abandonment of cashew trees in the bush.
- Cumbersome parastatal cashew marketing systems.
- Declining cashew prices, from US\$100 per ton in 1988/89, to US\$725 (1992/93) and US\$613 (1993/94) for standard grade.
- Decreased real producer prices because of parastatal inefficiencies and payment delays.

- Inaccessibility of credit facilities due to the 8–10 year loan payment lag.
- Widespread fungus disease and pests exacerbated by the bushy state of the farms, which reduced individual tree yields to 2–10%.
- Ill-funded research and poor dissemination of research findings. R&D expenditure as a percentage of the Ministry of Agriculture and Livestock Development and national budget declined from 29% and 1.2% in 1987/88 to 25% and 0.6% in 1992/93.
- The problem of “man-eating” lions in Tunduru.
- Poor crop husbandry.

Cashew revival efforts led to the establishment in 1989 of the Cashewnut Improvement Programme (CIP) with donor financial and technical counterpart funds. The project ensured expanded infrastructure, extension services and intensified research in crop protection and disease resistant planting materials. CIP has encouraged rehabilitation, planting and sulphur dusting of high yield and disease-resistant cashew trees and enhanced accessibility to both remote district/villages and appropriate technology. (See Table 2 for details of CIP.)

**Table 1: Production of cashewnuts in Tanzania (1945–1996)**

Year	Production ('000 mt)	Index (Peak of 73/74 is 100%)
1945	7,000	5
1950	11,000	6
1955	23,000	16
1960	42,000	29
1965/66	73,327	51
1970/71	112,302	77
1973/74	145,080	100
1976/96	83,734	58
1980/81	56,658	39
1985/86	20,443	14
1986/87	16,552	11
1987/88	24,328	17
1988/89	19,375	14
1989/90	17,059	12
1990/91	29,186	20
1991/92	41,657	28
1992/93	39,323	27
1993/94	46,598	32
1994/95	70,000	48
1995/96	80,500	55

Source: Market Development Bureau, Dar es Salaam.

Figure 2: Tanzania cashewnut production 1973/74–1993/94

**Table 2: Cashew improvement programme: Major performance indicators, June 1995**

Objectives	Indicator	Comments
1. Increase cashew production	Production increase of 25% p.a	•At 70,000 tones, production was 50% higher than forecasted
2. Quality seeding supply and Survival	•Supply 65% demand •Survival over 70%	•Unmet excess demand diverted to polyclonal seed
3. Quality seed supply	•Supply 60% of demand •Germination over 85%	•Met •Germination in Lindi poor (40%)
4. Farm gate price as % export price	•65+%	•1993 & 1994 farm gate prices were 75 - 80% of export price
5. Secure imported inputs to meet demand	•Annual figure of imports. At least 50% of demand to be met	•Region collected over Sh637m cashew exports levy of the input funds. •About 2,400 tones of inputs will be imported to meet about 60% demand
6. Provide credit to farmers, traders and stockists	•Significant number provided credit	•CRDB unable to implement scheme in 1994/95 due to BOT restrictions
7. Improve policies and procedures of small credit	•Process and procedures of CRDB; impact on lending & recovery	•A restructured CRDB improved its lending procedures

Source: Research by author.

Despite the elastic demand and price deterioration, prospects for cashews on the unsaturated world market remain good. However, India, the world's leading cashewnut producer/processor—and Tanzania's main export market—has switched to Southeast Asia and instituted in its eighth five-year plan (1995–2000) a comprehensive programme to increase its own cashewnut production to 600,000 tons to reduce imports. Given Tanzania's production shortfalls, Indian imports fell from peak levels of 175,000 tons in the early 1970s to 20–30,000 tons in the 1980s. If output and premium quality are restored, Tanzania can secure premium prices and ascertain external demand.

## **IV. Cashew marketing and pricing**

---

Until 1991/92 cashews were marketed through a compulsory single channel system based on a two-tier monopolistic structure with a purchasing, processing and exporting parastatal at the helm and cooperatives at the base. Cashews were marketed through the National Agricultural Products Board (1963/64–1973/74) and by the Cashewnut Authority of Tanzania (CATA) (1973/74–1991/92). In the absence of cooperative unions over 1976/77–1980/81, CATA dealt directly with primary cooperative societies and did production-related work such as input supplies. In the early 1990s crop authorities, including CATA, reverted to marketing boards.

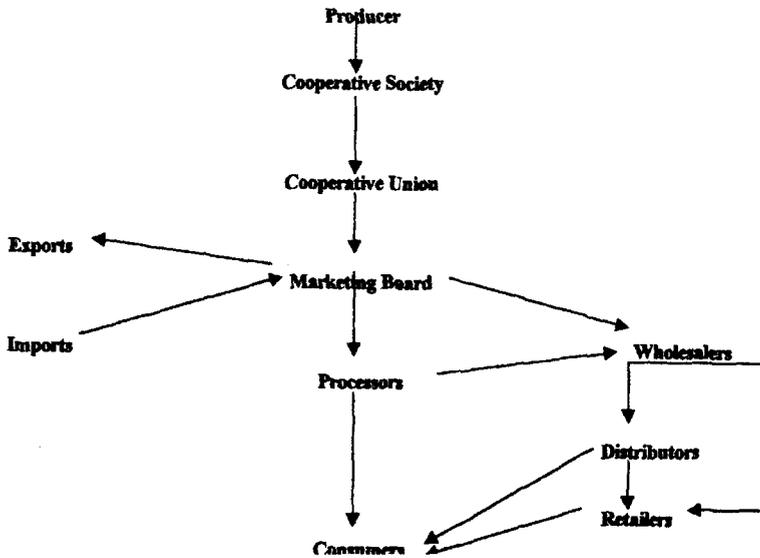
Until lately cashew producers' main outlets were primary cooperative societies, which through the intermediary of second-tier cooperative unions sold to the Cashew Marketing Board, the main processor and exporter (Figure 2). However, unofficial channels existed with market determined prices subject to first channel constraints. This is consistent with observations by Helleiner (1966), Mwase et al. (1976), Ellis (1982), Temu (1984) and Jaffee (1994), who noted that agricultural producer price controls have not only been unworkable, but have generated illegal markets. The construction of 11 processing factories over 1974–1980 increased processing capacity by 465%, from 20,000 to 113,000 tons, and permitted the export of decorticated nuts and cashewnut shell liquid (Appendix B). Only 10%–15% of the produce was locally consumed.

With agricultural marketing privatized, the full-fledged Cashew Board of Tanzania (CBT), which issues export permits and leases factories, appears superfluous. However, primary cooperative societies, as purchase and storage depots for private traders and a link between smallholder producers and private input stocklists, still have a somewhat reduced role to play.

Until 1973 government fixed into-store prices, hoping that cooperative unions/societies would pass on reasonable returns to producers. However, increasing costs and levies reduced residual producer prices. Appendix C shows a total of nine cashew levies imposed by district councils. In the past government fixed producer prices, net of cooperative/parastatal marketing costs and crop levies. In the 1980s, faced with declining export commodity prices and increasing marketing costs, the government introduced export price subsidies to protect farmers. This meant income transfers from non-agricultural to agricultural sectors, and greater dependence on bank financing.

The cashewnut pricing system has therefore passed through various phases: formally fixed into-store prices based on forecast export realization prices (1963/64–1974/75); fixed producer prices based on forecast export realization prices (1974/75–1989/90); and variable prices based on actual export realization prices (1990/91–). Under the pan-

**Figure 3: Official cashew marketing channels prior to introduction of private marketing.**



territorial producer pricing system, crop authorities and marketing boards met all approved cooperative costs, which effectively eliminated uniform into-store prices. However, despite structural, functional and institutional changes, the pricing system remained stable, albeit with significant refinement, until the early 1990s. Producer prices were calculated as a residual, after all cooperative/marketing board budgeted costs had been deducted from an assumed forecasted export price, with no accounting for inflation.

Cashews face four different types of taxes: district cess, input, export and various fund levies especially for education. As Appendix C shows there were up to 10 district council levies/cesses. In 1994/95 in Lindi and Tunduru districts a total of Tsh63.00 and Tsh54.50 or 10% and 16% of average farm gate prices of a kilogramme of cashews were, respectively, payments for various levies and cesses. In 1994/95 CBT levies were as follows: registration license Tsh50,000 per district, export license 0.5% per tonne, exports levy 4% per tonne and stamp duty US\$30 per tonne. The producer price as a percentage of export parity prices declined from 72% in 1970/71 to 24% in 1980/81. With prices determined once and held constant for a year, inflation generated windfall profits for CMB. Net profits for CMB before taxes were 28% to 47% over 1984/86–1988/89.

The fulfillment of the board's objective of doing away with "exploitation by middlemen" did not benefit producers, to whom it is of no consequence whether the marketing intermediaries are public or private, CBT or indigenous/Asian traders, provided they minimize costs or maximize profits. Indeed, as Dumont (1969) noted, whereas it was plausible to protect farmers from the abuses of the Asian traders, "substituting for

them a new class of bureaucratic exploiters hardly seems an acceptable solution". Nor need there be undue worries about possible business concentration and dominance of cashew business by Asian traders given increased involvement by indigenous businesses. However, the absorption by the marketing system of more than 60% of cashew export revenue discouraged producers from harvesting cashews, attending to diseases and pest control, and increasing crop production.

## V. The liberalization and privatization of the cashew industry

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Here we examine private sector response to market reforms: the re-entry of private firms, the competitiveness of the industry and factors influencing it, and the ability of indigenous firms to compete. Hasty public sector withdrawal from agricultural marketing may, as in Zambia's case, lead to adverse effects. Tanzania's gradual replacement of agricultural parastatals by private traders appears more plausible.

The Tanzanian experience indicates the following:

- Without high compensation, private traders and truckers are unlikely to buy and haul limited produce from remote villages (Mwase, 1983).
- Some private input stockists neither stock inputs (creating starved demand) nor repay concessional input loans.

Economic liberalization and privatization have removed various subsidies: production (input supplies, e.g., sulphur, blowers); processing (industrial consumables), and procurement and marketing (export subsidies). Concessional interest rates and treasury guaranteed credit to the cashew industry have ceased. However, the cashew industry now has:

- foreign exchange subject to local currency cover
- input supplies in the hitherto starved local market;
- expanded markets as buyers procure cashewnuts at village level.

With cashew marketing privatized we may witness a return of the days when the Asian "trader-cum-transporter-cum-money lender" moved from village to village buying produce for resale in and outside the country. In 1992/93 private traders bought 75% of cashewnuts in Mtwara region, leaving only 25% for Mtwara Regional Cooperative Union (MARCU). Increasingly cashewnuts are sold through private channels. In 1994/95, for example, the only cashew buyers in Tunduru and Newala Districts were 40 private traders. Of the six cashew producing districts, cooperatives purchased cashew only in Mtwara. Local private firms, e.g., Mohamed Enterprises and J.V. Group, and foreign Indian traders pay higher producer prices than marketing boards, which have exorbitantly high procurement and overhead costs, and excessive bureaucracy and red tape. In 1993/94 MARCU paid Tsh140 per kg as against Tsh160–220 per kg (Mtwara) and Tsh250–300 per kg (Tunduru) paid by private traders.

As Table 3 shows, in 1994/95 the average farm gate price per kg was Tsh320.00. In the 1991/92 season, average price as a percentage of FOB price was 68%. This dropped to 43% in the 1992/93 season mainly due to low competition. However, with increased competition, it rose to 75% in 1993/94. Instant payments by private traders reduce income uncertainties whereas cooperatives/marketing board payments were delayed for one or two years with their value eroded by inflation. Privatization of agricultural marketing therefore ensures greater smallholder incomes, enhanced welfare and greater supply response.

Privatization of cashew production activities including seedling nurseries and scion gardens has changed the cashew industry's "modus operandi". Five of the seven CIP-run Cashew Development Centres (CDCs) (source of polyclonal seed) have been privatized to improve seed supply. Various measures have been instituted to reduce benefit accruals to intermediaries (including CBT and cooperative unions) and to boost producer prices. Although CIP continues to promote trial seed farms, it is leaving seedling nursery development to the private sector.

**Table 3: Farm gate price of raw nuts 1990/71–1994-95**

Year	Farm gate price Tsh/kg	FGT price Tsh/MT	FOB price Tsh/MT	Farm gate price as a % FOB price
1970/71	0.95	950	1,340	71
1971/72	0.95	950	1,343	71
1972/73	0.95	950	1,285	74
1974/75	0.95	950	1,723	SS
1975/76	1.05	1,050	1,817	58
1977/78	1.05	1,050	1,976	53
1978/89	1.10	1,000	2,511	44
1979/80	1.15	1,150	3,640	32
1980/81	1.70	1,700	6,057	46
1981/82	1.80	1,800	11,469	30
1982/83	3.00	3,000	7,431	26
1983/84	5.00	5,000	7,331	67
1984/85	5.00	5,000	7,331	68
1985/86	7.00	7,000	13,796	51
1986/87	9.80	9,800	13,796	71
1987/88	30.00	30,000	96,599	31
1988/89	40.00	40,000	111,913	36
1989/90	84.00	84,000	145,388	58
1990/91	100.00	110,000	184,691	60
1991/92	137.00	137,000	202,153	68
1992/93	145.00	145,000	240,000	43
1993/94	280.00	280,000	372,000	75
1994/95	320.00	320,000	492,000	65
1995/96	300.00	300,000	540,000	56

Source: Cashewnut Board of Tanzania.

\* up to December 1995.

Are we carrying out privatization too speedily and/or too far? Is private sector development of seedling nurseries appropriate? Are we being more “purist” than the USA, for example, where promotional seedling development is a public sector activity? Perhaps we are. The aim is to lessen dependence on public CDCs and research farms, but success depends on collaboration between private seed developers and fertilizer firms, and public agencies in research and extension services operated for three subsequent seasons, with capacity utilization less than 25%. In 1992/93 and 1993/94, with all factories closed due to capacity underutilization, raw cashewnuts were exported with loss of value added and other processing economies.

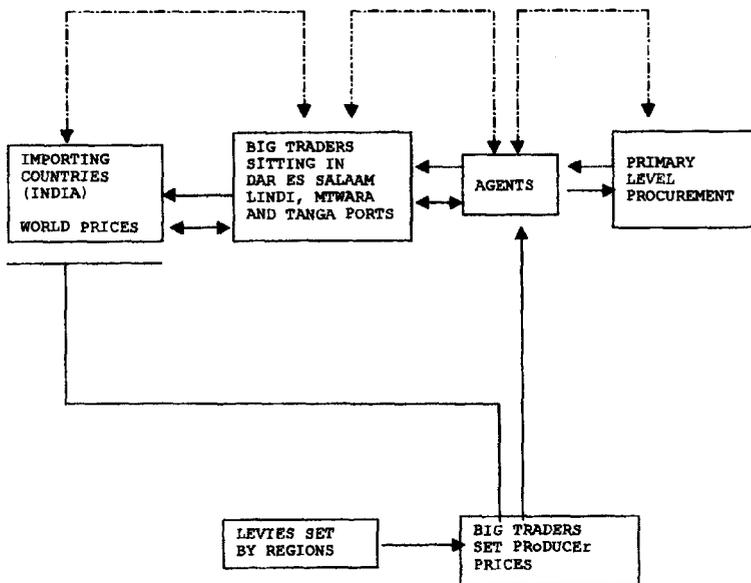
Private exporters now pay government tax previously collected by CBT, before cashew is shipped out of Mtwara. Direct crop procurement and export by local and foreign traders has fiscal policy implications, particularly given difficulties of monitoring, inspecting and checking tax evasion in remote stations.

Domestic processing should realize value added and other processing economies. Construction of the 12 factories was completed by 1982/83 but only 4 were put into operation. CBT owns the 12 processing factories, of which 9 are rural-based. Capacity underutilization is rampant, with 9 factories virtually unused since their inception. During the 1983/84 and 1984/85 seasons only two factories were used. In the following two seasons all factories were closed and the entire crop exported in raw form. In 1987/88 three factories were re-opened to process cashews previously exported raw. In 1994/95 CBT leased three “grounded” factories to private firms. The CDCs are also being leased to NGO/church groups.

Cashew producer prices increased substantially in the late 1980s following post 1986 economic liberalization (see Table 4). Weighted average producer prices increased from Tsh11.58 per kg in 1985/86 to Tsh134.60 per kg in 1991/92. Prices declined by 28% in 1992/93 partly due to Bank of Tanzania (BOT) pressure on cooperative unions to set low producer prices as a pre-condition for crop financing loans. However, prices resumed their upward trend, reaching Tsh300–350 per kg in 1994/95. Increased competition pushed 1995/96 farm gate prices up by about 40% over 1994/95 prices. Coconut prices also rose by approximately 40%–50% and 20%–30% in Tanzania mainland and isles, respectively.

Table 4 shows that producer prices, as a proportion of export prices, were a mere 25%–37% in the 1985/86–1988/89 period. This proportion rose and remained at 74% over the next two years; it declined to 68% in 1991/92 and 60% in 1992/93 mainly due to low competition but rose again to 73% in 1993/94, and to 70%–80% in 1994/95. In real terms farm gate prices have been on the increase since the market was liberalized. Table 5 compares cashew producer prices as a percentage of FOB prices with coffee, cotton and flue cured tobacco. Whereas producer prices for these crops (excepting coffee) were better than those for cashews in the mid 1980s, cotton and tobacco have not improved their relative positions vis-a-vis cashews.

**Figure 4: Schematic presentation of cashew marketing system under privatization**



**Key**

- Producer Price Determinants : \_\_\_\_\_
- Flow of Raw Cashewnuts : \_\_\_\_\_
- Flow of Crop Financing : \_\_\_\_\_

**Table 4: Comparison of producer and export prices for cashewnuts in nominal and real terms, 1985/86–1993-94**

Year	SG		UG		Weighted average	Export price (FOB) Sh/kg	Producer price as % of exp price	NCPI 977=100	Deflator 1988/89	Producer price	Sh/kg export
	Sh/kg	UG	Sh/kg	UG							
1985/86	11.75	8.30	11.58	8.30	31.47	37%	716	0.26	44.14	119.99	
1986/87	18.20	12.85	17.93	12.85	72.89	25%	948	0.35	51.64	209.90	
1987/88	30.00	20.00	29.50	20.00	96.60	31%	1,239	0.45	65.00	212.05	
1988/89	40.00	27.00	39.35	27.00	109.86	36%	1,587	0.58	67.60	188.98	
1989/90	84.00	56.00	82.60	56.00	111.91	74%	1,984	0.73	113.77	153.99	
1990/91	110.00	73.00	108.15	73.00	145.39	74%	2,143	0.78	137.77	185.21	
1991/92	137.00	89.00	134.60	89.00	196.95	68%	2,730	1.00	134.60	156.95	
1992/93	125.00	100.00	123.75	100.00	202.15	61%	3,424	1.25	98.69	161.18	
1993/94	270.00	110.00	262.00	110.00	360.00	72%	4,441	1.63	161.06	221.30	

Source: Calculated from Market Development Bureau, Ministry of Agricultural, Dar-es-Salaam.

Weighted average price assuming 95% SG and 5% UG.

NCPI = National consumer price index

SG = Standard grade

UG = Undergrade

**Table 5: Producer prices as a percentage of FOB prices of cashews and other commodities (1985/86-1993/94)**

	Cashews	Coffee	Cotton	Tobacco (flue cured)
1985/86	37	74	166	119
1986/87	25	48	111	57
1987/88	31	58	52	60
1988/89	36	38	39	46
1989/90	74	82	29	34
1990/91	74	64	36	45
1991/92	73	97	58	60
1992/93	61	46	42	32
1993/94	75	48	40	61

Source: Calculated from data from Market Development Bureau, Ministry of Agriculture, Dar es Salaam

Cashew prices were based on nut quality (based on district/village of purchase). Sometimes nuts were transported to other locations with better prices. Poorer villagers in Newala and Tunduru sample villages sometimes sold their meagre crop before the buying season for very low prices (e.g., Tsh60 per kg) for cash to cover emergencies or for food.

Cashew trading is dominated by seven principal Asian traders, who finance cashew purchase and export. A second group of traders are financially dependent on, and are agents of, the principal traders. Their purchases range from a truckload to 4,000 tons and are procured at designated buying centres at prices fixed by the principals. A third group of unregistered small traders financed by and working for the core traders offer premium prices, as they do not pay registration and various other fees. Figure 4 depicts the current private sector-dominated cashew marketing system and the inter-group linkages.

In sum, cashew marketing is undertaken through three main channels:

- big private exporters with hired private traders or cooperatives serving as purchase agents;
- cooperative unions procuring nuts from cooperative societies and then trading on their own account; and
- private traders and cooperatives selling to the CMB which in turn exports the raw nuts.

The dominance of cashew marketing by a few big traders curtails competition and may foster cartels. In 1991/92, for example, 4 out of 17 Lindi traders (including two public sector entities) bought 66% of the crop. Traders' collusion to fix producer prices is now a possibility given CBT's inactivity, the marginalization of cooperatives and parastatals, and the inaccessibility of credit to indigenous traders following discontinuation of the IDA-funded, Cooperative and Rural Development Bank (CRDB)-operated, credit scheme. Indeed, IDA's 1993/94 small traders' credit of US\$100,000 would have bought only 140 tons of cashew in 1994/95, too few to influence competition or producer prices.

**Table 6: Conditions for registration of cashew traders in different regions, 1991/92**

Condition	Region	Coast	Dar	Tanga	Lindi	Mtwara	Ruvuma	Mbeya	Iringa
1) Valid trading license (issued for one season only)		x	x			x	x	x	
2) Procurement at cooperative society		x	x	x	x	x	x	x	x
3) Pay obligatory levies				x	x	x	x		
4) Pay for use of society premises		x	x						
5) Submit weekly procurement returns to authorities					x	x			
6) Purchase in all districts					x				
7) Prove ability to pay govt. set prices			x	x	x	x	x		
8) Purchases from areas specified by district authorities									
9) Establish contacts with District authorities		x	x				x		
10) Recover from farmers union education		x	x						
11) Export processed products only				x					
12) Deliver crops to CBT at negotiated into store price					x				

Source: Survey data.

Lack of significant producer price variations among buying centres and over time is a pointer to the lack of competition.

Big (foreign) traders are less dependent on domestic bank borrowing. For example, in 1994/95 India's M/S Saba and Associates committed US\$10 million for cashew purchases – an amount greater than the aggregate borrowing of four cooperative unions and two parastatals in 1993/94. However, to encourage savings for input purchases, MALD and CRDB are to establish about 20 rural savings and credit cooperatives in Mtwara, Lindi and Ruvuma regions.

National and local (regional/district) conditions for traders' registration (Table 6) include traders' ability to have secure and recognized buying posts, to pay farmers upon delivery, and to meet various local cess/fees. CBT and Bank of Tanzania conditions include export of only processed nuts and observance of minimum FOB price. Registration of private traders is bureaucratic and cumbersome because they are perceived as supplementors to, rather than competitors of, public sector marketing channels.

To ensure sustainability of cashew development research activities, Government has decided to integrate CCTP donor-funded research facilities into MALD's research structure; to levy a cess on cashew exports to raise cashew research funds; and to encourage establishment of regional and district funds to raise additional resources for import of inputs.

## VI. Privatization of cashew input supply system

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The survey conducted for this study showed that cashew farm age ranged from 7.4 years in Masasi to 21.7 years in Lindi; farms have on average 1,565 trees per hectare. The relative youth of the farms underlined their establishment during the *ujamaa* villagization policy entailing movement to new areas, with about 49% of interviewees in the six districts saying they shifted during the *ujamaa* collectivization campaigns. The incidence was highest for Masasi and Lindi districts, with 60% and 47.5%, respectively. Massive replanting/reclaiming of “bush” trees has especially occurred in Lindi.

There is substantial intercropping of other crops with cashew. In addition to cassava, with 85.2% intercropping, and sesame, with 75% intercropping, the incidence of other crops is: coconut 30%, millet/sorghum 44%, maize 78.5%, cassava 16.5% and others 50.6%. Other non-agricultural activities and the extent to which they are undertaken include: livestock 45.6%, trade 24.5%, fishing 0.4%, others 17.3% and none 34.6%.

With cashew harvesting done largely by women (20% of cashew households are female-headed) and children, increased cashew production has a gender dimension and affects labour utilization and welfare within the household. Assistance to the predominantly male-headed households is provided by wives (80.6%), sons (29.1%), daughters (21.19%) and employed labour (57.4%). Employed labour, targeting large and medium-scale farming, is likely to grow given the privatization crusade.

Increased production is perceived by most farmers especially in Newala and Tunduru as dependent upon sulphur application. In both districts the price of sulphur from private traders increased from Tsh12,000 in 1992 to Tsh23,000 in 1994 for a 50 kg bag. The corresponding farm gate prices of cashews rose from Tsh140 to Tsh170 and Tsh300. Whereas sulphur prices are uniform across villages, the price of cashew is not. The concept of “contract dusting” under which a sulphur “stockist” using own blower and operator dusts a farmer’s trees in exchange for an agreed portion of the crop (about 3.5–5.5 kg per tree) has declined due to poor repayment experiences. Repayment rates were poor for credit or input advances from cooperative union loans in 1991/92 (Mtwara) and 1992/93 and 1993/94 (Tunduru).

The confinement of cashew input supply to the crop authority/marketing boards made it difficult for farmers to get inputs in time.

The cashew inputs are sulphur for dusting cashew trees against fungus; blowers; for applying the dust; oil and regular petrol for operating the blowers and planting materials (grafted seedlings and polyclonal seeds). The liberalization of cashew inputs supply started in 1990. The selling of seedlings only started in 1992; previously farmers planted their own seedlings. Supply of other inputs was monopolized by private traders due to

the huge profits envisaged and inadequate cooperatives' response. Table 7 shows two significant developments: the decline and virtual elimination of the public sector in the inputs trade, and the substantial price differentials over time and between the private and public sector for one input, sulphur. Over 1992–1994 the CIF price of sulphur decreased substantially. This could be due to increased competition or continued public sector participation, which could have exposed some unfair collusion. It could also be due to cooperatives selling cheaply without concern for profits to win popularity.

**Table 7: Cashew inputs: Sulphur imports and price structure, 1986–1994**

Year	Imports (MT)	Unit price Tsh/kg	CIF price US\$/ton	Importer
1987	50	-	-	MALD
1988	350	431	-	MALD
1989	402	-	-	CRDB
1990	1,500	94	534	TCMB
1991	1,500	131	534	TCMB
	1,200	144	492	Private traders
1992	1,250	252	492	Private traders
1993	1,250	358	369	Private traders
1994	500	250	330	Co-op. union
	558	273	315	Private traders

Of 230 farmers interviewed, 134 (58.2%) said that availability of inputs (sulphur and blowers) had not improved; 73 (31%) said that there had been some improvements and 10% said that the situation had worsened.

Another key input is improved seedlings and seeds attainable through replanting and new planting. In the field survey, 56.1% of the farmers had planted new seedlings. Out of these, 62.59% used seedlings from their own farms. Others relied on CIP (29.4%), private nurseries (2.2%) and other sources (5.9%). This shows that privatization of seedling supply is still at a low ebb. One explanation might be that farmers do not see seedlings as tradeable goods.

## VII. Impact of privatization of the cashew industry

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Some positive impact has been realized in increased cashew production and incomes, but the situation is not uniform across districts, villages and households. In the sampled villages, there is little evidence that resource-poor farmers are selling cashew trees to wealthier farmers. In Tunduru, moreover, many households are increasing cashew tree ownership by new planting and buying. Tree dusting in Newala has not increased, but it has in Tunduru, especially in the 1992–95 period due to credit availability. Although cooperatives' input funds have ensured sulphur availability, they have tended to subsidize wealthier farmers at the expense of poorer ones.

Cashews are the main source of income in the villages studied, with non-cashew income generally contributing a higher proportion for less wealthy than for wealthier households. Less than 30% of the sampled households earned over Tsh50,000 from cashewnut sales in 1993/94. Although few households can purchase items such as bicycles (Tsh55,000), an increase in bicycles and radio ownership was identified. The majority of households use cashew income for basic needs such as food and clothes, and for hospitalization, burials and debt repayments. These basic needs are not easily quantifiable to allow comparisons over time.

In his study on private traders' response to market liberalization, Jaffee (1993) established that poor communication, poor roads and taxes/cesses topped the list of 14 major problems facing cashew traders especially exporters. Although some problems including delayed crop payments have been addressed, only 13.1% of the 237 farmers interviewed in this study said they had no problems in marketing cashews. On average 8.4% of farmers complained of too many taxes. As Table 8 shows, other complaints (and their magnitude) were: unfair grading of cashew (18.2%); price fluctuations (29.9%); excessively low prices (21.2%); and long distances to selling depots (5.7%).

Table 8 shows that the remote Tunduru and Newala districts faced many problems, especially price differentials between different traders. This problem could be addressed through grading – standard grade (SG) and undergrade (UG) – with substantial price differentials. With demand for cashews outstripping supply in the 1994/95 season, some farmers may have sold their cashews without grading. Some traders capitalize on the issue of grading to cheat the farmers.

In general there has been an increase in the producer price at the individual farmer's level. But as Table 9 shows there was a wide diversity in average incomes earned by individual farmers. Cashew farmers tended to earn more than the national per capita income of US\$120 or Tsh65,000 (1994). Higher incomes for Newala are attributed to the district's favourable cashew growing conditions and its high dependency on cashew as the single cash crop.

Have higher producer prices/incomes resulted in a matching improvement in the welfare of farmers? The field survey showed that the social services had not improved. Out of the 237 farmers interviewed, only 9.6% indicated that there had been improvements in the social services; 84.7% saw no improvement and 5.7% said the situation had deteriorated. This was an overall trend that applied to all districts.

**Table 8: Farmers' problems in selling cashewnuts by districts (%)**

District/ Problems	Lindi	Masasi	Mtwara	Nachingwea	Newala	Tunduru	Average
Too many taxes	27.4	2	5.9	1.5	0	2.9	8.4
Unfair Grading	13.1	20	17.6	32.4	16.7	2.9	18.2
Price Fluctuations	28.6	30	23.5	33.8	37	20	29.9
Low prices	8.6	18.3	41.2	19.1	18.5	45.7	21.2
Long Distance	11.9	8.3	0	2.9	1.9	2.9	5.7
Others	1.2	11.7	0	1.5	5.6	2.9	3.6
No problem	9.5	10	11.8	8.8	20.4	0	13.1

Source: Survey data.

**Table 9: Farmers' average incomes, production and price**

District	Average production (kg)		Average income (Tsh)
	1993/94	1994/95	
Lindi	348	404	11,007
Masasi	1,010	1,008	462,673
Mtwara	367	383	12,047
Nachingwea	669	654	205,158
Newala	3,113	2,327	1,161,377 <sup>a</sup>
Tunduru	669	664	180,950
Average	1,029	907	33,852

Source: Survey data.

<sup>a</sup>Two farmers produced unusually large quantities of cashew, worth Tsh18 million and Tsh14 million.

**Table 10: Farmers' hopes for the future by district**

Future hopes	Lindi	Masasi	Mtwara	Nachingwea	Newala	Tunduru	Total
Expansion of cashew farms	30 66.7%	12 25%	22 56.4%	30 50%	27 64.3%	23 43.4%	144 50.2%
Diversify to other crops	0 0%	4 8.3%	1 2.6%	0 0%	1 2.4%	2 3.8%	8 2.8%
Availability of loans for cashew inputs	2 4.4%	18 37.5%	4 10.3%	0 0%	1 2.4%	2 3.8%	26 9.1%
Increase in producer prices	5 15.6%	1 10.4	1 2.6%	11 18.3%	5 11.9%	10 18.9%	33 16%
Not applicable	2 4.4%	1 2.1%	0 0%	8 13.3%	0 0%	13 4.5%	13

Source: Survey data.

Smallholder producers spent their increased incomes on household needs, housing, education and reinvestment in their cashew farms. Large farmers, especially in Newala, used their substantial cashew revenue to open retail shops and to construct water reservoirs for rainwater harvesting. As Table 10 shows, there is renewed enthusiasm for the future of the crop, as most farmers (70.1%) plan to plant new cashew seedlings, to dust and to increase hectareage. Of this, 19.9% plan to plant new improved seedlings. Only 2.8% of the farmers interviewed intend to diversify to other crops.

## VIII. Conclusion

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The liberalization and privatization of agricultural marketing is a major U-turn for Tanzania. Since the 1940s cashew producers bought inputs from, and sold cashew to, cooperatives, marketing boards and regional transport companies. Private traders did not never officially participate in village cashew input or output markets.

The cashew industry in the 1970s and 1980s was in the doldrums, with production down by 89% and 12 processing factories closed. This was attributed to unfavourable pricing, marketing and processing policies; agricultural collectivization in the 1970s; and the incidence of fungal disease. However, the positive aspects of structural adjustment, including easier access to foreign exchange and inputs and privatization of inputs, purchase, processing and export of cashews, have enhanced competition, increased producer prices and prompt payment of farmers. This has led to expanded hectarage and rehabilitation of cashew trees, which has reversed the decline in production. Privatization and rehabilitation of factories and pre-export processing of cashews should increase value added.

Privatization has reduced the role of the CBT and the cooperatives, now operating as agents of and buying depots for private traders. Further refining and streamlining of their roles and functions should reduce costly duplication. Despite privatization of input supply and disbursement of credit on concessional terms to private input stockists, adequate inputs (e.g., sulphur and blowers) are yet to be stocked. Although the new system has some problems, the advantages far outweigh the disadvantages.

Even though the state has withdrawn from active involvement in cashew production and marketing, it can facilitate these activities by removing remaining constraints to private sector entry; encouraging formation of small-scale seed companies by “progressive farmers” or the informal sector; removing remaining restrictions to getting cashew input permits; publicizing and encouraging private trader procurement and sale of cashew inputs and outputs; establishing a comprehensive market information system available to all players; and reviewing the role of CBT and cooperatives to ensure a level playing field for the private sector.

Prices should be market-determined, with cooperatives and marketing boards acting as a “buyer of last resort” to ensure purchase of cashews from remote rural areas shunned by private traders. The challenge is to develop a liberal, privatized and sustainable cashew marketing system that is responsive to producers’ needs and expectations.

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## Appendix A: Cashewnut production by region/district

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94
<u>Mtwara Region</u>							
Mtwara	1,793	1,184	1,169	2,684	4,531	4,950	3,039
Newala	7,457	7,621	4,429	7,885	11,985	7,033	10,901
Masasi	3,173	2,203	2,950	2,783	5,609	5,660	7,894
Total	12,423	11,008	8,548	14,352	22,125	17,943	21,834
<u>Lindi Region</u>							
Lindi	1,191	507	856	1,614	3,399	4,800	2,711
Nachingwea	436	289	135	451	1,344	1,764	2,356
Liwale	227	622	54	374	654	654	675
Kilwa	738	196	250	660	516	206	202
Total	2,592	1,614	1,295	3,099	5,913	7,435	5,944
<u>Tunduru Region</u>							
Tunduru	550	1,354	319	1,336	2,854	5,165	4,981
Total	550	1,354	319	1,336	2,854	5,165	4,981
<u>Coast Region</u>							
Kisarawe	3,676	1,095	1,933	2,486	2,129	n/a	3,408
Kibaha	205	481	936	2,066	1,021	n/a	3,370
Bagamoyo	624	182	201	415	633	n/a	461
Rufiji	555	317	313	697	319	n/a	229
Mafia	69	74	157	59	61	n/a	0
Total	5,129	2,149	3,540	5,163	4,165	n/a	7,468
<u>Tanga Region</u>							
Tanga	302	97	243	n/a	450	2,333	1,928
Muheza	954	203	1142	n/a	1,340	871	70
Pangani	360	276	416	n/a	313	1,016	150
Korogwe	132	40	33	n/a	136	180	0
Handeni	33	6	3	n/a	7	55	0
Total	1,781	622	1,837	1,622	2,246	0	2,148
<u>Dar es Salaam Region</u>							
Ilala	400	107	86	154	134	n/a	310
Temeke	986	2295	1772	2626	3646	n/a	3237
Kinondoni	300	0	12	50	60	n/a	29
Total	1,686	22	1,870	2,830	3,840	4,131	3,576
<u>Mbeya/Iringa Region</u>							
Kyela	165	106	94	209	97	176	296
Ludewa	11	7	2	12	0	0	15
Others	0	8	0	0	0	18	15
Grand Total	22,337	19,270	17,505	29,183	41,238	39,323	46,603

Source: Cashew improvement programme, Dar es Salaam

## Appendix B: Exports of raw nuts, kernels, cashewnut shell liquid and cashew powder, 1985–94

Year	Raw nuts	Kernels	Cashew shell liquid	Cashew powder
1985	13,853	518	1,199	15
1986	13,379	0	315	Nil
1987	13,871	0	-	-
1988	14,004	1,014	Nil	Nil
1989	7,485	1,711	Nil	Nil
1990	7,429	1,412	577	Nil
1991	19,000	956	1,056	Nil
1992	18,456	1,027	564	Nil
1993	39,323	Nil	Nil	Nil
1994	46,598	Nil	Nil	Nil

Source: Market Development Bureau, Ministry of Agriculture, Dar es Salaam

## Appendix C: District council cesses levies on cashewnut sales, 1994/95 (sh/kg)

Types of levy	Council levy	Council devt.	Input levy/ <sup>a</sup>	School fund	Primary society	Desks fund	Weighing scale	Tore fund-Gation levy	Sport levy	Other/ <sup>b</sup>	Total
Newala	7.5	5	30	8	NL	NL	NL	NL	NL	/ <sup>c</sup>	54.50
Masaki	3	5	10	5	4.10	2	1	0.5	0.2	NA	30.60
Mtwara	5	NL	10	5	4.10	2.7	1	0.5	6	NL	33.50
Lindi	3	5	10	5	4.10	2	0.5	0.5	NL	NL	29.60
Bagamoyo	5	NL	20	3	12.00	5	NL	NL	NL	18/ <sup>d</sup>	63.00
Rufiji	10	NL	NL	NL	NL	NL	NL	NL	NL	NL	13.00
Kisarawe	10	10	20	2	15	NL	NL	NL	NL	NL	NA
Tanga	NA	NA	5	5	NA	NA	NA	NA	NL	NA	NA
Muheza	1	NL	NL	NL	NA	NA	NA	NA	NA	NA	NA
Pangani	5	NL	NL	NL	NL	NL	NA	NL	NL	NL	9
	5	NL	NL	NL	NL	NL	NL	NL	NL	NL	6

Source:

Research by author.

<sup>a</sup>For crop development fund

<sup>b</sup>Village, stadium, road maintenance, etc.

<sup>c</sup>Stadium levy

<sup>d</sup>Road maintenance levy

NL = Not levied

NA = Not available

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