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The diverging South : comparing the cashew sectors of Tanzania and Vietnam

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Cashew: Old-timer versus newcomer

Introduction

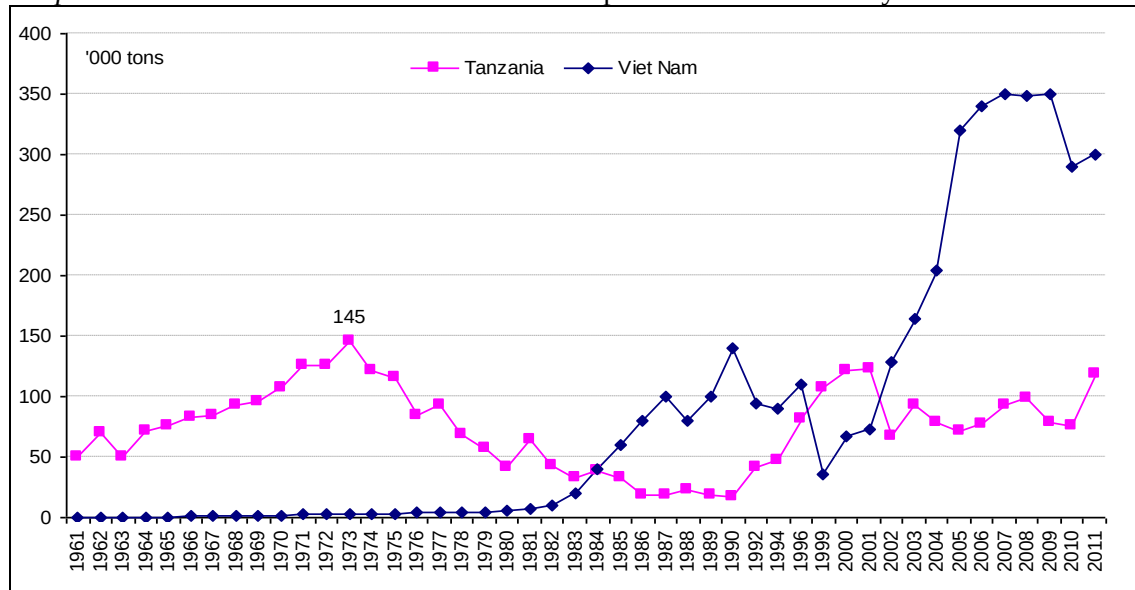
The previous chapter presented the macro context for understanding the Tanzanian and Vietnamese economies. This chapter describes the sectoral history of the cashew crop and explains the trends observed by looking at the roles played by the different actors. Before 2000, the production of raw cashew in Tanzania and Vietnam was comparable but the gap has been expanding ever since (see Graph 3.1). Despite Tanzania's early entry into cashew production, its seasonal output has fluctuated between 70,000 and 90,000 tonnes while Vietnam has stabilized production at 340,000 tonnes since 2005.¹ When looking at cashew production in this way, Tanzania is an old timer while Vietnam is a newcomer in the cashew-producing world.

Description of cashew value chains

Cashew is a commonly produced cash crop in Tanzania and Vietnam and offers an opportunity to understand the contrasting economic strategies adopted in development in the two countries. Agriculture needs to be coordinated for the crop to grow successfully and producers require inputs for production and markets to sell their output. The global value chain (GVC) framework is useful in understanding the comparative dynamics of inter-linkages with the productive sector, governance and processes embraced by these two countries, with a view to explaining the different outcomes in terms of productivity. The GVC framework allows identification of the 'key actors who play a critical role in coordinating

¹ GSO and VINACAS figures are different from those produced by the FAO. Cashew production figures from Tanzania cover two years. For example, the 2010/2011 season includes the cashew harvest from October 2010 to January 2011. Throughout this thesis, this is referred to as production in 2011. For comparative purposes, the values of volumes are quoted in US\$.

Graph 3.1 Tanzania and Vietnam: raw cashew production for selected years



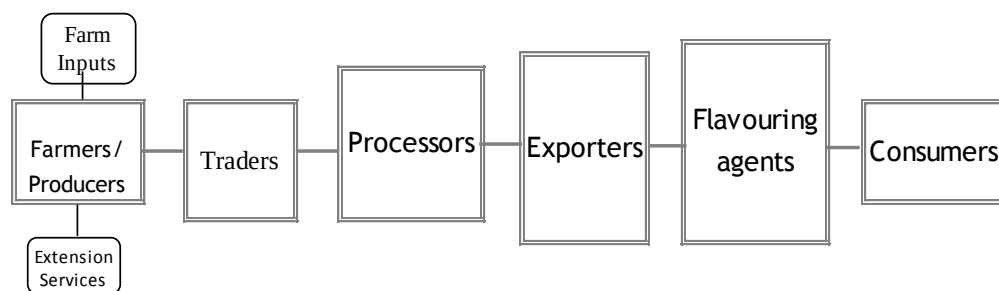
Source: FAOSTAT|© FAO Statistics Division 2010 production output up to 1990 for Vietnam and up to 2007 for Tanzania, Vietnam Cashew Association (1990 to 2006) Cashewnut Board of Tanzania (2007 to 2011), General Statistics Office of Vietnam GSO (2007 to 2011)

production in the chain defining who is to perform what role, what standards are to be met in participating in the chain, coordinating a process of chain-upgrading, and influencing the distribution of returns amongst the various parties who participate in these chains' (Kaplinsky 2004: 3). In other words, a value chain describes 'the full range of activities which are required to bring a product or service from conception, through the different phases of production delivery to final consumers, and final disposal after use' Kaplinsky *et al.* (2001: 4). Initial work to introduce value chains was done by Gereffi (1994) who distinguished two main types of governance that exist in the creation of value chains: these are producer-driven and buyer-driven. Primary commodities like cashew belong to the latter, where there is a low barrier to entry in production and buyers determine the nature of producers' access to end consumers. The introduction of standards to which all the actors participating in the chains need to adhere has been important. Those who manage to stick to high standards continue with production and receive higher returns, and others are left to conduct less-valued activities. As Gibbon (2001) put it, chains that once started with smallholder producers are now supplied by large-scale farms in the case of fruit and vegetables, with on-site packing facilities that are essentially controlled by export companies. This has implications for smaller firms that mainly operate on the margins. Production is primarily driven by supermarkets that have increasing information about their consumers. With standards set high and changing fast, big producers with sophisticated technology and enough investment for research and development have a

significant advantage. And those who cannot adhere to the standards need to utilize markets with lower premiums.

There are five main ways of governing the chain, namely, market, modular, relational, captive and hierarchy.² GVCs governed by *markets* contain firms and individuals that buy and sell products to one another with little interaction beyond just exchanging goods and services for money. The central mechanism of governance is price. This is typical spot contracting. Suppliers in *modular* value chains make products or provide services to a customer's specifications. Suppliers in modular value chains tend to take full responsibility for process technology and often use generic machinery that spreads investment across a wide customer base. GVCs governed by *relations* have mutual dependence regulated through reputation, social and spatial proximity, and family and ethnic ties. Since trust and mutual dependence in a relational GVC take a long time to build up and the effects of spatial and social proximity are, by definition, limited to a relatively small set of co-located firms, the costs of switching to new partners tend to be high. GVCs that are *captive* have small suppliers who are usually dependent on larger, dominant buyers. GVCs governed by *hierarchy* are characterized by vertical integration and the dominant form of governance is managerial control. Buyer-driven chains tend to be coordinated via market, modular or relational governance. The cashew value chain is presented in Figure 3.1.

Figure 3.1 Cashew value chain



Farmers are important and come at the beginning of the chain. Credit providers like banks and extension service providers are also crucial, as are transporters. There are authorities leading the process of production, processing and exporting in terms of quality assurance and customs. Moving into processing, there is value creation so standards are enforced that create barriers to entry and increase profits (Kaplinsky *et al.* 2001: 41). And as one goes higher up the value chain into flavouring, more quality and standard checks are enforced with stricter and tougher

² This paragraph is about the Global Value Chain Initiative. See <http://www.globalvaluechains.org>

entry barriers. Moving up the value chain not only requires investment in terms of money and capital but adherence to global standards and food-safety requirements becomes crucial too. Entry requirements in the chain increase with value addition due to logistic reliability, coordination and financial requirements.

At the initial node, returns are lowest for producers but increase with value addition. For instance, among producers of raw cashews, those who opt to dry their nuts receive a higher price than those who do not. At this point, modes of transportation and storage are basic. Producers transport their produce from their farms either on foot or by push-cart, bicycle or motorbike. Cashew is stored in buckets or sisal/plastic sacks and then delivered to the trader (the village buying point). Traders who are financially able to handle bigger consignments improve on the storage and transportation of the crop by delivering to processors or exporters using lorries to transport their produce from the village to warehouses.

Raw cashew received by processors from traders undergoes different processes. Before a kernel is obtained, there are several stages of cashew processing that have to take place: steaming, shelling, drying, peeling, grading and packaging. Coordination plays a central role at all stages and it is important to monitor quality. To obtain a kernel, care must be taken to remove the different outer layers (see Figure 3.2).

Figure 3.2 Cashew processing steps



Steaming helps to ease the shell off and shelling entails the removal of the outer shell that, when squeezed, produces CNSL (cashew nut shell liquid). It is important to ensure that the shell does not touch the kernels.³ Once the outer shell has been removed, drying helps to ease the testa (inner thinner shell) and peeling ensures its removal.⁴ Grading involves grouping the kernels by size and colour according to a standard and then the cashew nuts are packaged in airtight bags. A kilo of cashew when processed gives about a quarter of a kilo of kernels.⁵ The margins received differ according to the quality of the kernels produced, with

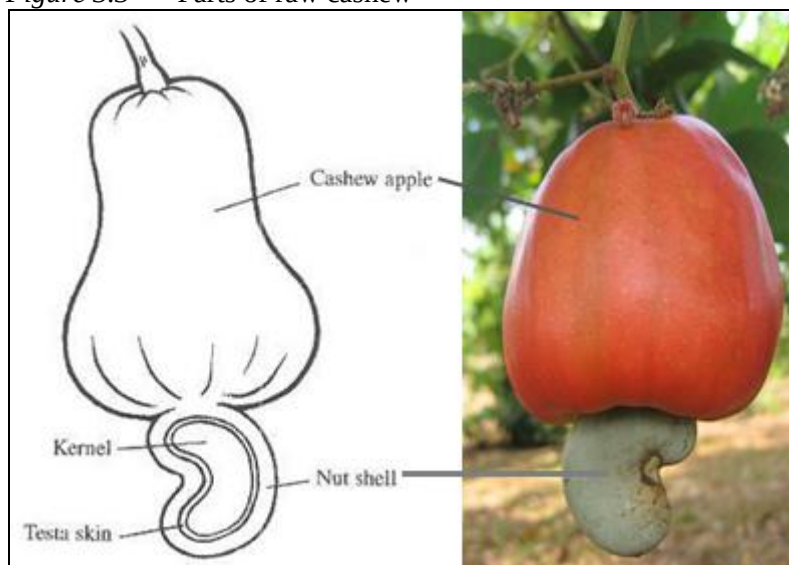
³ CNSL is very corrosive and heat resistant so it is used as a lubricant. This is the main health and safety issue regarding cashew processing.

⁴ Used as animal feed, especially for poultry.

⁵ Kernels are graded as whole or broken. The wholes are further divided into Whites Wholes (W-xxx), Scorched Wholes (SW-xxx) and Dessert Wholes. The split cashews are divided into Fancy Splits and Butts Splits. The broken pieces are classified as Large White pieces (LWP), scorched pieces (SP) and Dessert Pieces and can be grouped as spits/butts. The Whole Whites fetch the highest prices.

high grades fetching a higher price. Producing higher grades requires maximum attention to detail. Kernels are graded according to their size and the number of kernels per pound (454 g). Thus W320 means there are between 300 and 320 kernels per pound. The most common count for Indian and African kernels is 300-320 per pound (W320) followed by 400-450 (W450), 220-240 (W240) and 200-210 (W210) per pound (Azam-Ali *et al.* 2001). Thus the lower the number, the bigger the nut count per pound. Whole whites fetch the highest price.⁶

Figure 3.3 Parts of raw cashew



Source: Google sketches (2010) left panel; photo by author right panel

Given the technological requirements, small processors are involved in shelling, while medium-sized processors undertake all the activities that require close quality control. Processors that are able to package in vacuumed tins/plastic bags have higher returns and those with large consignments use containers and reputable logistics companies. Small processors use local networks for transportation and local consumers.

Roasters receive consignments from processors, and high-end roasters are linked to consumers through large supermarkets and department stores. Roasters supply cashews for specific contracts and to ensure contracts are renewed, quality and adherence to delivery times are crucial. If possible, producers want to supply their goods to the final consumer in order to obtain a maximum price but the entry requirements at the higher levels of processing are exclusive and expensive.

⁶ The variety, the care of the tree and the post-harvest handling all affect the quality of the kernel.

Nature of the tree crop

Cashew is a tree crop⁷ with a long gestation period. It grows in warm climates where the average daily temperature is 25°C, although this can range from 10°C to 40°C. Cashew is drought resistant but needs reasonable rainfall and flourishes best in well-drained (sandy) soils. Its deep root system requires sufficient rain if the tree is to produce abundant fruit. Proper spacing is also crucial if trees are going to grow to their full potential as they need adequate light, water and nutrients. Research on cashew and other permanent crops is different from that of seasonal crops as more time is required to observe performance levels. Cashew trees require great care from the time of planting as they can last for more than 30 years. The first harvest is only in the fourth year, implying low initial investment. Harvesting occurs annually within two months. In Vietnam, according to Que *et al.* (2006: 5), 'Initial investment and annual cost for a unit area of cashew is lower than that of other perennial industrial crops – equal only 1/3 those of rubber, coffee or tea.' The spacing of cashew trees differs depending on the availability of technology and soil type. High-density planting produces more cashews per hectare for up to seven years while low-density planting will produce fewer cashew per hectare but more per tree. There are three ways of spacing the trees: in triangular, quincunx or square patterns. Triangular spacing is done at intervals of 12 m x 12 m = 79 trees/ha, Quincunx spacing is at 15 m x 15 m = 76 trees/ha; and square spacing is at 9 m x 9 m or 10 m x 10 m. In Tanzania, NARI recommends triangular spacing but quincunx spacing is recommended on the Makonde Plateau as trees there tend to be bigger.⁸ These choices are for smallholder cultivation as intensive farming requires thinning.⁹ Young cashew trees (less than five years old) allow intercropping. More mature cashew trees cannot be intercropped and old trees have an interlocking canopy. These three stages of cashew growth

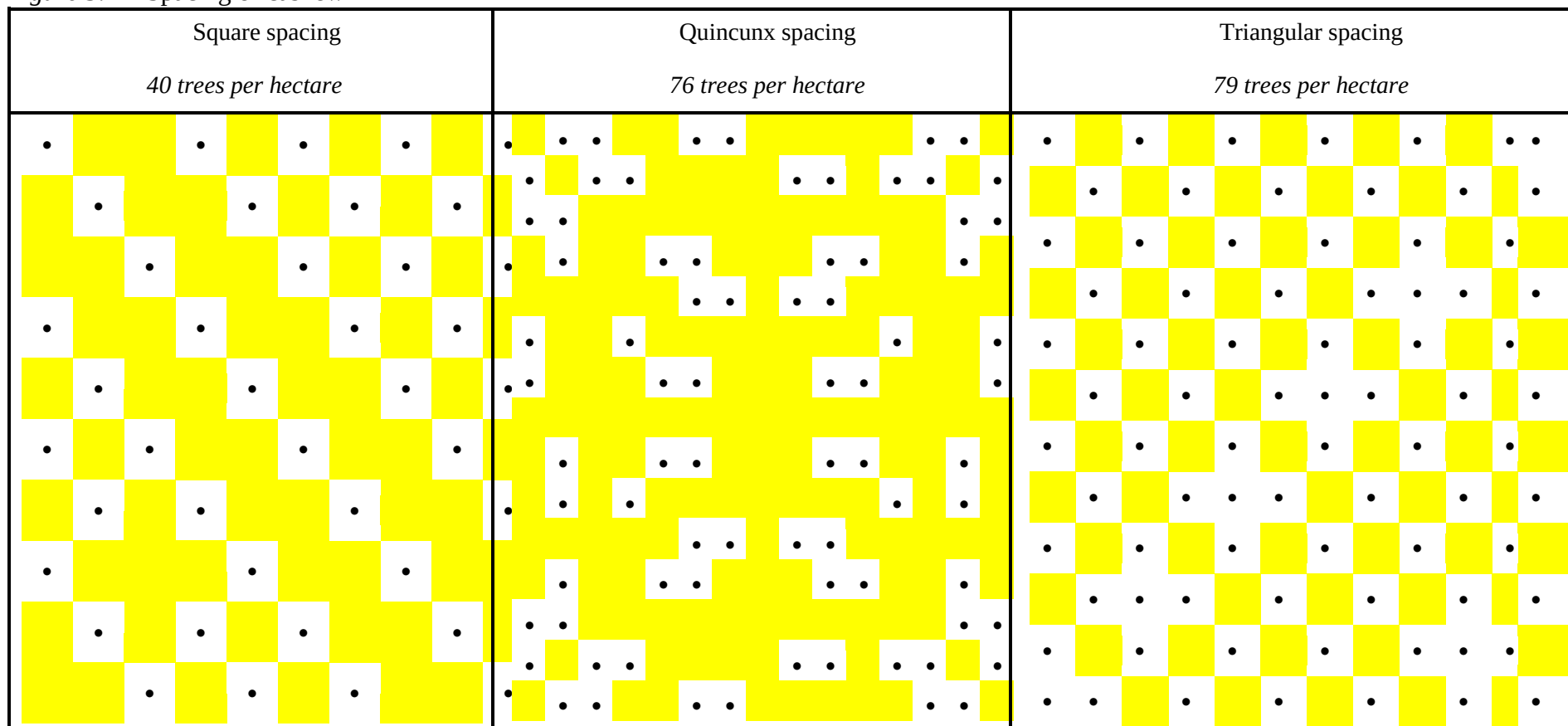
⁷ Information in this section comes from P.J. Martin *et al.* (1997) and <http://www.agripinoy.net/growing-the-cashew-plant.html> Pinoyfarmer (2008).

Permanent crop vs. seasonal crop: Crops grown all over the world have different gestation periods. Some take a couple of weeks, while others take years before the first harvest. Some crops need replanting after every harvest, while others last for many seasons. The crops that last for many seasons are called permanent crops and those needing replanting are referred to as seasonal crops. Tomatoes and rice are examples of seasonal crops, while cocoa, coconut, coffee, tea and cashew are permanent crops. Tree crops are permanent crops. There are two main differences between seasonal crops and permanent crops. Firstly, the gestation period is longer for permanent crops. A seasonal crop can be cultivated two or three times a year but a permanent crop takes years before harvesting is possible. Secondly, the initial costs associated with investing in permanent crops are spread over a longer period. There are costs associated with investing in both seasonal and permanent crops. Some permanent croppers invest and then have to wait before the first harvest while incurring additional maintenance costs. This is the case for cashew, tea and coffee. However, other permanent trees, like cocoa, palm and coconut, require no or very little maintenance and produce one crop every season once they are mature.

⁸ Interview with Dr Shamte Shomari, NARI, Mtwara, 17 November 2008.

⁹ Thinning involves removing the interlocking canopy and congested trees.

Figure 3.4 Spacing of cashew



Source: Sketch by researcher to show the proximity of the trees. Each plot (cell) is similar in size.

require different management.¹ Intercropping cashew with food crops in Tanzania is used as a way of cutting down on weeding and its associated costs.²

The sector story of cashew on the world market

Raw cashew nuts, kernels and Cashew Nut Shell Liquid (CNSL) are the tradable outputs from cashew plants. This section looks at the global production of raw cashew nuts and kernels.

The global raw cashew trade

Cashew consumption and production have been increasing around the world, with producers, processors and traders as the industry's main actors.³ Originally from Brazil, cashews were introduced into India and Africa in the 16th century by Portuguese traders (Azam-Ali *et al.* 2001). According to FAOSTAT, production of raw cashew increased more than tenfold between 1961 and 2008,⁴ with steep changes in production observed from the mid-1990s onwards (Graph 3.2). The world is currently seeing a shift in the share of raw cashew produced by the different regions (Graph 3.3).

African countries dominated raw cashew production in the 1960s and 1970s, with Mozambique and Tanzania being the main producers up until the early 1980s. The two countries produced more than 60% of the world's raw cashew between 1961 and 1975 and any fluctuations observed in this period were mainly attributed to production issues in these countries.

In 1961, the total global production of cashew amounted to about 230,000 tonnes. Since then, production has expanded rapidly, with more countries starting to grow the crop. India and Brazil have consistently been among the biggest producers of raw cashew since the 1960s and, in the last decade, Asian countries have increased their market share significantly (Graph 3.2), with Vietnam and India leading the way (Graph 3.3).

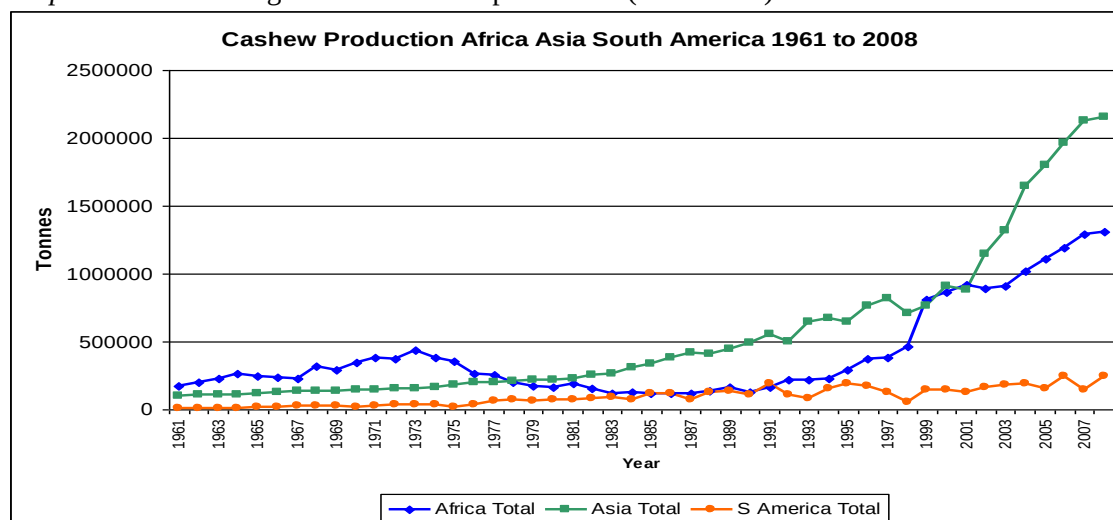
¹ Interview with Dr Shamte Shomari, NARI, Mtwara, 17 November 2008.

² Interview with Dr L.J. Kasuga, NARI, Mtwara, 17 November 2008.

³ The movement of cashew from one actor to the next requires reliable transport.

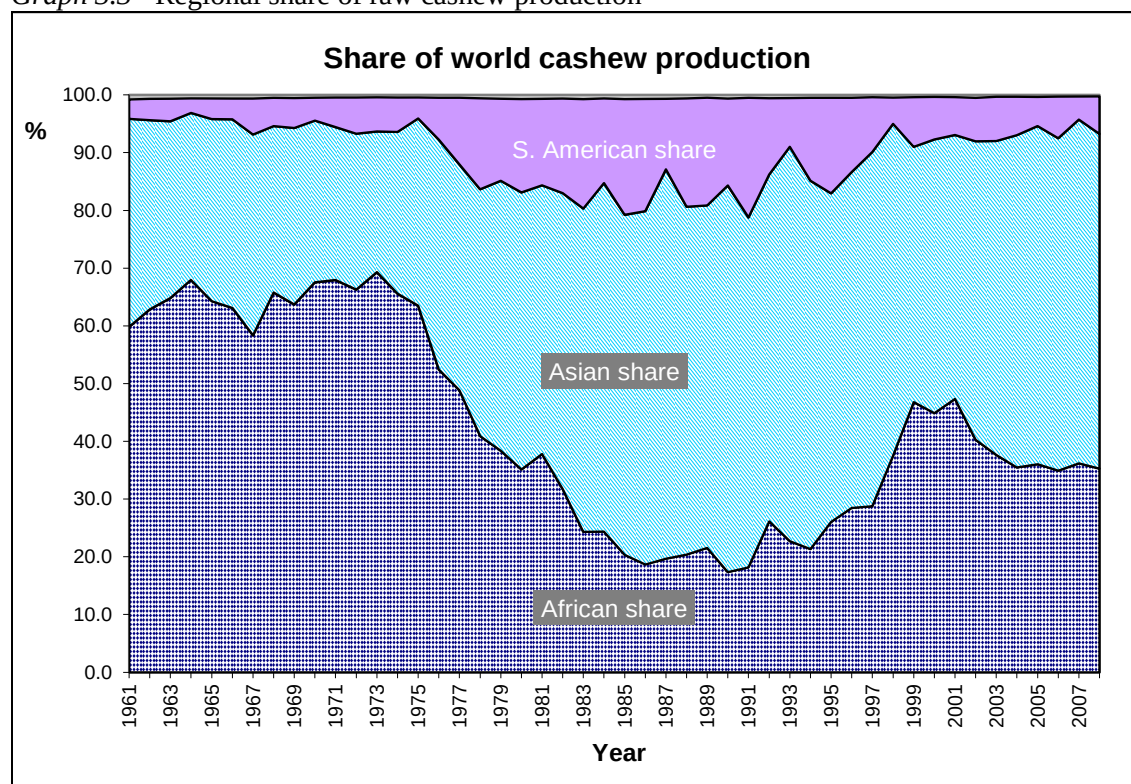
⁴ Total world raw cashew production with shells was 287,535 tonnes in 1961 and by 2008 this had grown to 3,720,306 tonnes. The global area under cashew cultivation has risen tremendously from about half a million hectares to four million hectares between 1961 and 2008. According to FAOSTAT (2011), the largest area under cultivation today is in West Africa (with Ivory Coast having about 660,000 hectares and Nigeria 330,000 hectares), followed by India, Brazil and Vietnam. Tanzania had 80,000 hectares and Mozambique 60,000 hectares of cashew in 2009. Massawe (interview, NARI 28 January 2011) estimates the area under cashew in Tanzania to be 500,000 hectares.

Graph 3.2 World regional raw cashew production (1961-2008)



Source: FAOSTAT | © FAO Statistics Division 2010

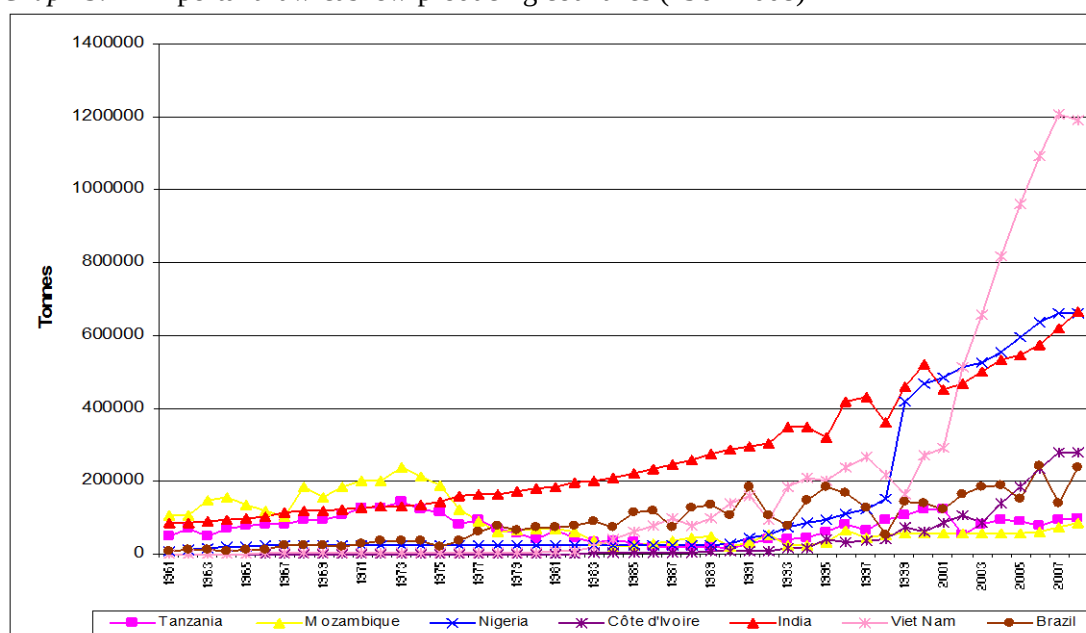
Graph 3.3 Regional share of raw cashew production



Source: FAOSTAT | © FAO Statistics Division 2010

According to the FAO,⁵ Vietnam is currently the leading producer of raw cashew (Graph 3.4), producing more than one million tonnes of cashew annually since 2007, which is about four times the world's total production in 1961. Nigeria and India are second and third in the league of raw cashew producers today and claim to produce more than twice what was produced globally in the early 1960s. Tanzania is presently ranked eighth in the world for raw cashew production, while Mozambique is number ten.

Graph 3.4 Important raw-cashew-producing countries (1961-2008)



Source: FAOSTAT | © FAO Statistics Division 2010

The world kernel trade

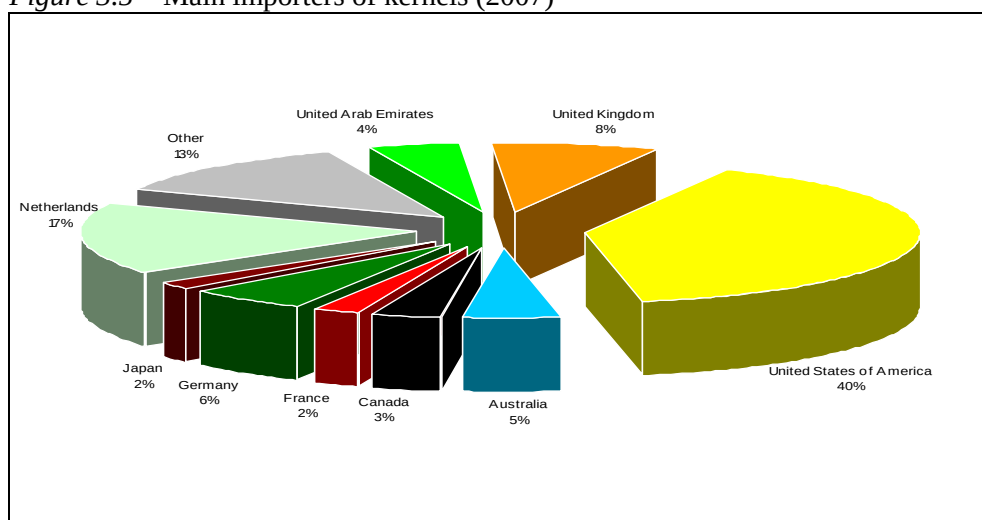
Vietnam, India and Brazil have become the main processors. In 1961 a tonne of kernels fetched less than US\$ 1000 but by categorizing consumers and introducing standards, cashew has become a premium quality product and a tonne of kernels has been fetching an average price of more than US\$ 4500 for the past two decades (FAOSTAT 2011). The highest quality, namely the processed Whole Whites, fetch the highest prices. For raw cashew-producing countries to increase their earnings, not only do they need to increase production but also to figure out ways of adding value to the product. Initially, India was the leading exporter of cashew kernels but Vietnam took over the top spot in 2007. Vietnam and India

⁵ Many researchers, including myself, prefer to use the FAO dataset since it has rich information for many countries for many years. Unfortunately, FAO cashew production data for Vietnam seem to be higher than the official data. This could be due to the inclusion of imported raw cashew as part of Vietnam's production. Though the data are useful, caution is advised when using them.

have bigger processing capacities than their domestic production of raw cashew can supply so they depend on imports of raw cashew to keep their plants running at full capacity.⁶ Imports of raw cashew are growing season by season, which suggests that the global demand for cashews is still rising. In April 2010, raw cashew fetched a FOB price of between US\$ 750 and US\$ 900 per tonne, while kernels fetched a FOB price of US\$ 6724 for W240 grades; US\$ 6283 for W320 grades and US\$ 5842 for W450 grades.⁷ See Table 3A1 in the Appendix for the prices of different cashew grades.

Processed cashews, i.e. kernels, are mainly exported to the US (Figure 3.5), as has been the case for more than six decades. Other notable importers are the Netherlands, the UK, Germany, Canada, Australia and Japan. Both the volume and value of these consignments have been on the rise. The US and Western Europe, in particular the Netherlands, mainly specialize in roasting and flavouring cashew kernels⁸ and auctioning them for distribution to other (global) wholesalers and retailers. World consumption has also observed changes, with premium consumption still dominant in North America and Europe, and new markets in Asia that are no longer limited to India. China and Russia are also playing a greater role. Consumption in raw cashew-producing countries themselves, notably India, has increased and the Indians take pride in the fact that at least half of the cashew produced in India are consumed locally, while the remainder are exported. Local consumption of processed cashew in India has increased noticeably

Figure 3.5 Main importers of kernels (2007)



Source: FAOSTAT | © FAO Statistics Division 2010

⁶ Vietnam and India imposed a ban on exports of raw cashew in the mid-1990s.

⁷ Cashewinfo.com (2010), *Cashew Week* 19 -24 April, vol. 11, no. 17.

⁸ Given the advanced infrastructure and logistical qualifications, this costly and complicated task is done by Western roasters. Cashew kernels have a short shelf life after roasting and to maintain their freshness, they have to be roasted and sold within a short period of time.

from 13,000 tonnes in 1960-1961 (from 57,000 tonnes of kernels) to 92,000 tonnes in 1995-1996 (from 160,000 tonnes of kernels) (Bhaskara Rao 1998). These significant increases in consumption show that the cashew crop is probably in a healthy state in terms of future global demand.

Technological advances explain the current demarcation of cashew production, with raw nut producers primarily in Africa and Asia, processors predominantly in Asia (Vietnam and India) and flavouring being done in Western countries (the US and Europe).

The following section analyzes the diverging cashew stories of Vietnam and Tanzania before considering contrasting resettlement stories. It is argued that the price received by farmers is the most important factor influencing production, whether provided by multi-tier state marketing or private traders marketing on behalf of the two countries.

A tale of two cashew countries: Tanzania versus Vietnam

Tanzania and Vietnam were both socialist countries that liberalized their economies in the mid-1980s. Tanzania did so by adopting economic recovery programmes and Vietnam liberalized through its *Doi Moi* (renovation) policies.⁹ This section considers the development of cashew in Tanzania and Vietnam.

Photo 3.1 Symbolic signs of the two major cashew producing areas: Mtwara in Tanzania and Binh Phuoc in Vietnam

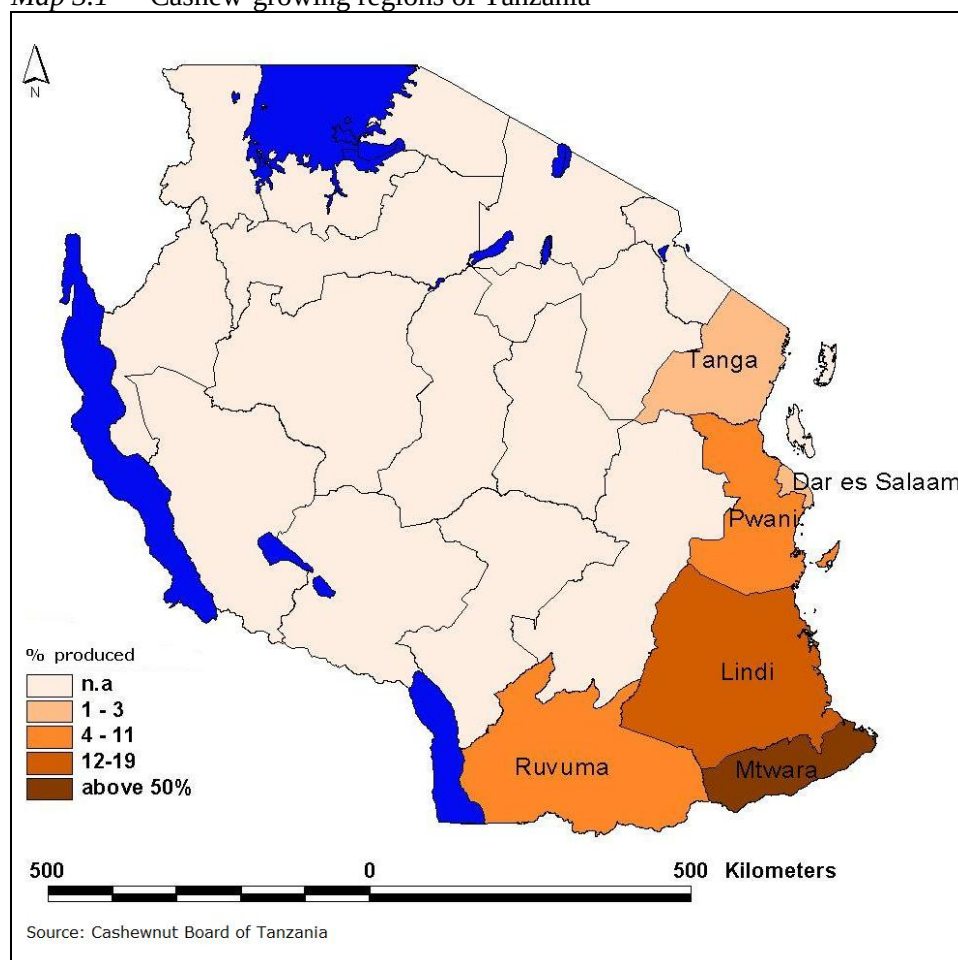


⁹ Both countries experienced resettlement programmes. In Tanzania this involved having people/farmers in villages and providing social services, while the main concern in Vietnam was the provision of land to the landless poor who used to reside in the North.

Tanzania: Mtwara

In Tanzania, cashew is mainly cultivated in the coastal regions of Mtwara and Lindi in southeastern Tanzania (Map 3.1). Mtwara accounts for 70% and Lindi for about 20% of the country's total cashew production.¹⁰

Map 3.1 Cashew-growing regions of Tanzania



Mtwara and Lindi regions are among the poorest in Tanzania. In addition to being the poorest regions, they also lag behind in human development indicators. They rank among the bottom in adult literacy rates, under-five mortality rates and in improved water supplies PHDR (2005); Census (2002).

Mtwara is one of the 26 regions¹¹ in southern Tanzania and covers 16,707 km². It came into existence after separating from Lindi in 1971. Makonde are the

¹⁰ Pwani region contributes about 10% and Tanga, Dar es Salaam and Ruvuma contribute the rest. Data from Cashewnut Board of Tanzania (2010).

¹¹ As of March 2012, Tanzania has 30 regions (with four new regions having been added: Geita, Katavi, Njombe and Simiyu).

main ethnic group found in Mtwara, and Makua, Yao, Mwera and Mawia make up the remaining matrilineal groups (Koda 1998).

The main crops cultivated in Mtwara include both food and cash crops. On the cash-crop side, cashew is the main occupation of most people and sesame, groundnuts and coconut (along the coast) are also produced, while on the food-crop side, cassava, maize, pigeon peas, sorghum, millet, paddy, cow peas and Bambara nuts are produced. For production purposes, labour is the most needed input. As will be seen in Chapter 4, labour is either paid in kind or in cash. In the past, *mkumi* was also used but the practice is rarely seen now in the money economy.

Photo 3.2 Small traders: *Uhuru Day* in Nanhyanga, Tandahimba, Mtwara



In the 1970s, *Ujamaa* was more intensively implemented in the south than anywhere else in Tanzania (Voipio 1998). Donors who supported Mtwara included Finland, the World Bank, UNICEF, the German Catholic missionaries and the British Overseas Development Agency (*Ibid.*).

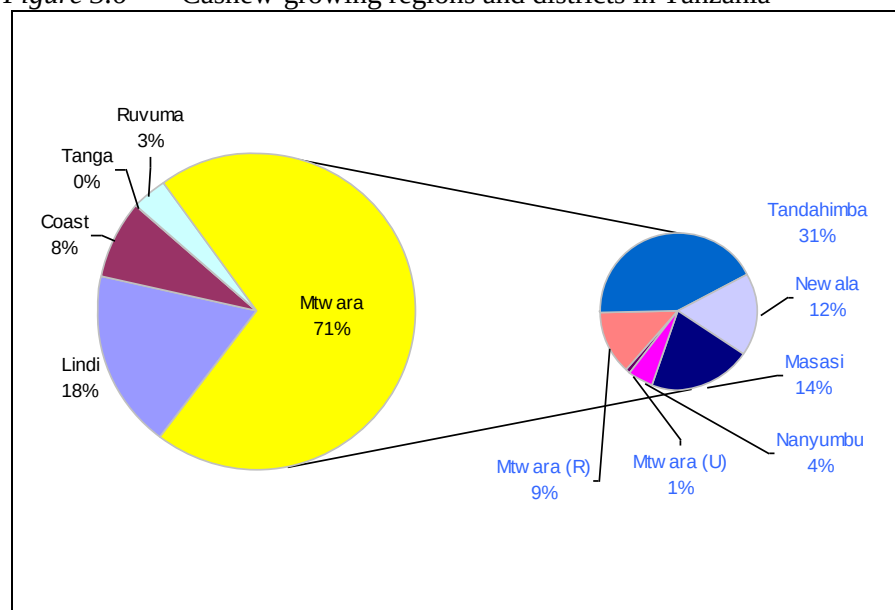
According to the 2002 census, Mtwara has over 1 million people. The percentage of the Tanzanian population living in urban areas increased from 6% to 23% between 1967 and 2002. The same also applies to the Mtwara region. People here mainly live in the rural areas with about 20% of the population residing in urban

areas. The population density in Mtwara has increased from 37 people per km² in 1967 to 67 people per km² in 2002. In Mtwara region only 3.7% of the population who are 10 years of age or older are literate in both English and Kiswahili.

Chronic food shortages in the region led to frequent imports of food. There were several food-related deficiencies that hit Mtwara and led to the implementation of programmes of *onjama* in Masasi, *tutumane* in Newala, *kuchakumi* in Mtwara Rural and *kiwami* in Mtwara Urban (formerly known as Mikindani). For years, the food situation saw poor nutrition indicators for children under the age of five, with the highest stunting, wasting and underweight rates in the country. The low population of livestock in the region and only seasonal food sufficiency may partly explain this situation.

There are six districts involved in cashew production in Mtwara (see Figure 3.6 and Table 3A4 in the Appendix). Tandahimba District in Mtwara accounts for 30% of the entire cashew produced in Tanzania.

Figure 3.6 Cashew-growing regions and districts in Tanzania



Source: Cashewnut Board of Tanzania (2010/2011)

In the early years before a dense canopy has formed, intercropping can be done among trees that are less than five years old (United Republic of Tanzania 1997). Cassava, pigeon peas and groundnuts are some of the crops intercropped with cashew trees as they protect the trees before the first harvest. Young trees require frequent weeding so intercropping reduces the amount of attention the trees need. Once the trees have matured, the space between them can no longer

Table 3.1 Cashew season: Tanzania (Mambamba)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Rain												
Weeding												
Pruning												
Spraying												
Harvest												

be used for intercropping as the dense canopy does not allow adequate light penetration and hinders growth below it. On average, 40 trees are planted per hectare.

Farmers start by pruning their trees to provide aeration and ventilation. Pruning is often accompanied by sanitation and thinning. These procedures remove the sources of young tissue in the canopy, thus reducing the interlocking canopy and congested trees.¹² Pruning removes all the branches that are close to the ground and allows for easy picking of the cashew in the coming season. It also ensures that rain water reaches the cashew roots.

Masika, the heavy rainy season in March and April, provides nutrients for the newly pruned trees and encourages new growth. Sufficient rainfall means adequate flowering and greater output, while insufficient rain results in less flowering and lower output. For instance, Tanzania saw little rain during the 2008/2009 growing season and output was lower than normal. Farmers referred to the period as *likaba*. Towards the end of *masika*, weeding (*kutibulia* and *kulimia*) takes place and the soil is tilled to allow for easy water absorption. The trees are then sprayed with pesticides and nutrients.

Harvesting involves picking cashew nuts from the ground once they have fallen off the trees.¹³ Farmers with older local varieties (*miti ya kienyeji*) harvest twice a season. The first harvest in the period of light rains is more plentiful and cleaner than the cashew harvested in the second round in the hot and humid rainy season (*korosho za kifuku*). Harvesting takes place from October to January.

Vietnam: Binh Phuoc

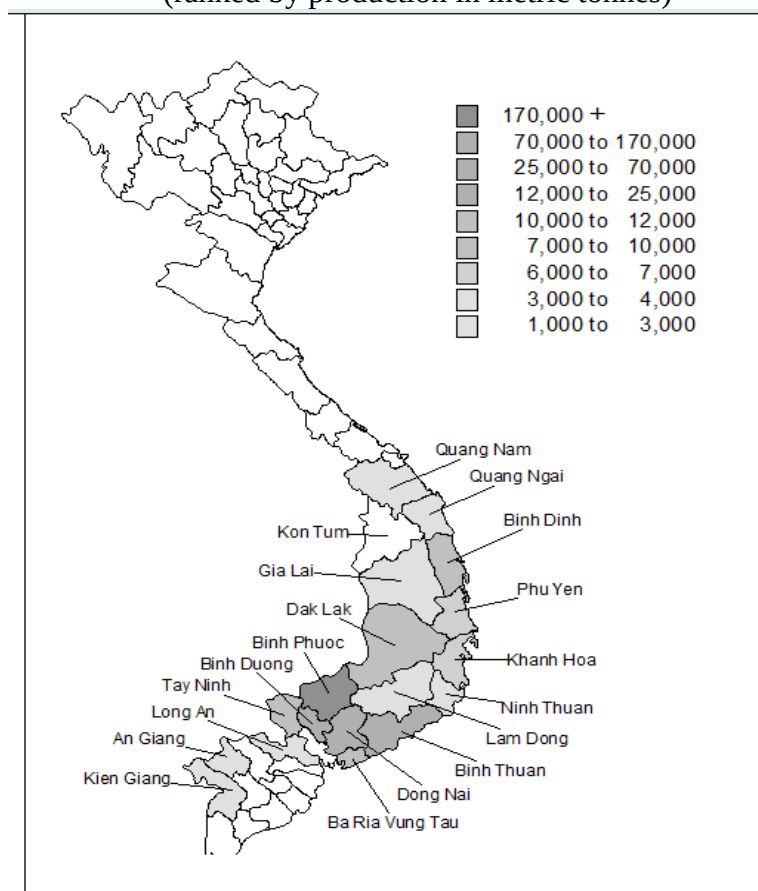
In Vietnam, cashew is mainly cultivated in the Central Highlands, along the south-central coast, and in the southeast and the Mekong Delta¹⁴ (Map 3.2).

¹² Interview with Mark Sijaona, 17 November 2008.

¹³ Cashew need to be collected immediately so that they do not absorb moisture from the ground. The quality of the nuts depends on their moisture content. To keep the moisture content low, early collection, sun drying and proper storage are important (Westergaard 1968b).

¹⁴ The Central Highlands (Kon Tum, Gia Lai, Dak Lak and Lam Dong); the south-central coast (Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan and Binh Thuan); the southeast

Map 3.2 Cashew-growing provinces in Vietnam
(ranked by production in metric tonnes)



Source: VINACAS (2009)

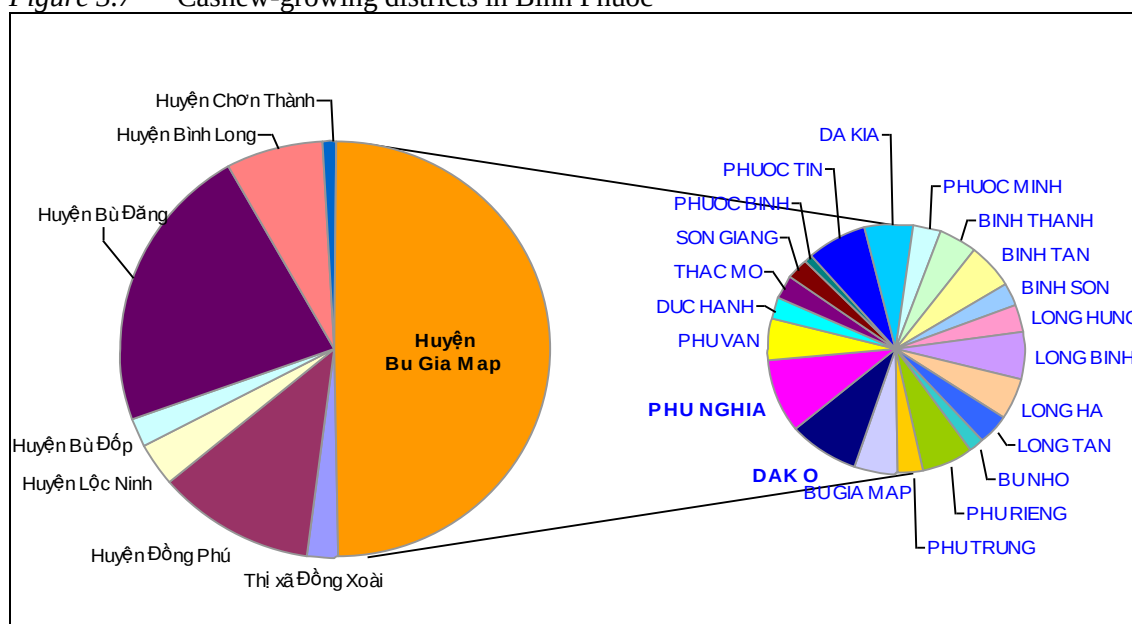
The southeast produces most of the raw cashew, especially Binh Phuoc and Dong Nai Provinces, together with Daklax in the Central Highlands. These three provinces account for more than 60% of the total area under cashew cultivation (VINACAS 2009).¹⁵ Binh Phuoc Province accounts for about 40% of the country's total cashew production. Within Binh Phuoc Province, Bu Gia Map¹⁶ District produces 20% of all Vietnam's cashew, with about 50% of this being produced in Binh Phuoc (Figure 3.7). Dak O and Phu Nghia communes each account for 9% of the output produced in Bu Gia Map District.

(Binh Phuoc, Binh Duong, Tay Ninh, Dong Nai and Ba Ria-Vung Tau); and the Mekong River Delta (Long An, An Giang and Kien Giang).

¹⁵ Binh Phuoc has 40% of the total area under cashew.

¹⁶ It broke away from Phuoc Long District in November 2009.

Figure 3.7 Cashew-growing districts in Binh Phuoc



Source: Binh Phuoc Statistics Office (2009)

Cashew is traded on the market by both small- and large-scale private traders in Vietnam and farmers sell their cashew to these traders.¹⁷ Cashew is a small-holder crop in this country and is mainly planted as a mono crop, which tends to result in it being crowded. Vietnamese cashew farmers have about 150 to 400 trees per hectare (Nguyen Minh Chau 1998).¹⁸

Being in the northern hemisphere, harvesting in Vietnam, as in India, takes place from January to May. Harvesting is then followed by the rainy season, as in Tanzania.

Table 3.2 Cashew season: Vietnam (Phu Nghia)¹⁹

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Rain												
Weeding												
Pruning												
Spraying												
Harvest												

¹⁷ A golden cashew festival was held in Binh Phuoc Province in 2009 to showcase the success of the cashew industry.

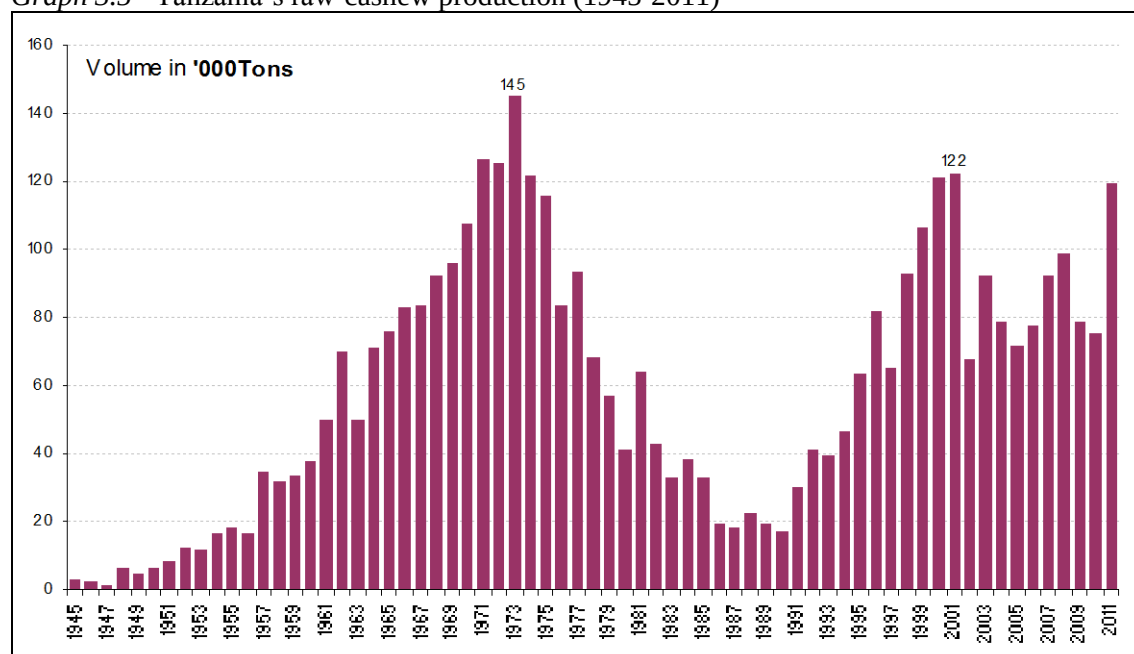
¹⁸ Interviews with farmers confirm this.

¹⁹ Compiled by Hoa Dinh and Duy (2011). Making this seasonal calendar was a challenge as the Vietnamese use a lunar calendar that fluctuates every year and does not necessarily overlap with the international calendar.

Tanzania: Two peaks, then what?

Cashew was one of the main traditional export crops²⁰ traded in Tanzania long before the country gained independence in 1961. Production in Tanzania has been erratic but with two notable peaks: one was during the socialist period in the mid-1970s and the other at the time of economic reforms in the early 2000s, although this second peak never reached the level of the earlier one (Graph 3.5).

Graph 3.5 Tanzania's raw-cashew production (1945-2011)



Source: Output for 1945-1962 from Jaffee & Morton (1995: 165) using data from Northwood (1962) and *Tanganyika Trade Journal* (1963); for 1961-1998 from FAOSTAT | © FAO Statistics Division 2010; and production figures for 1998-2011 from the Bank of Tanzania and Cashewnut Board of Tanzania

Even before Tanzania gained independence, cashew was being produced in small quantities. In 2010, cashew ranked as the fourth largest contributor to GDP among traditional crops (BOT 2011). This section considers the historical explanation behind the trends observed in cashew production in Tanzania where cashew trading has been undertaken by private traders on the free market and by the state's multi-tiered marketing system.²¹ Trading mainly occurred in three dif-

²⁰ Others include coffee, cotton, sisal, tea and tobacco.

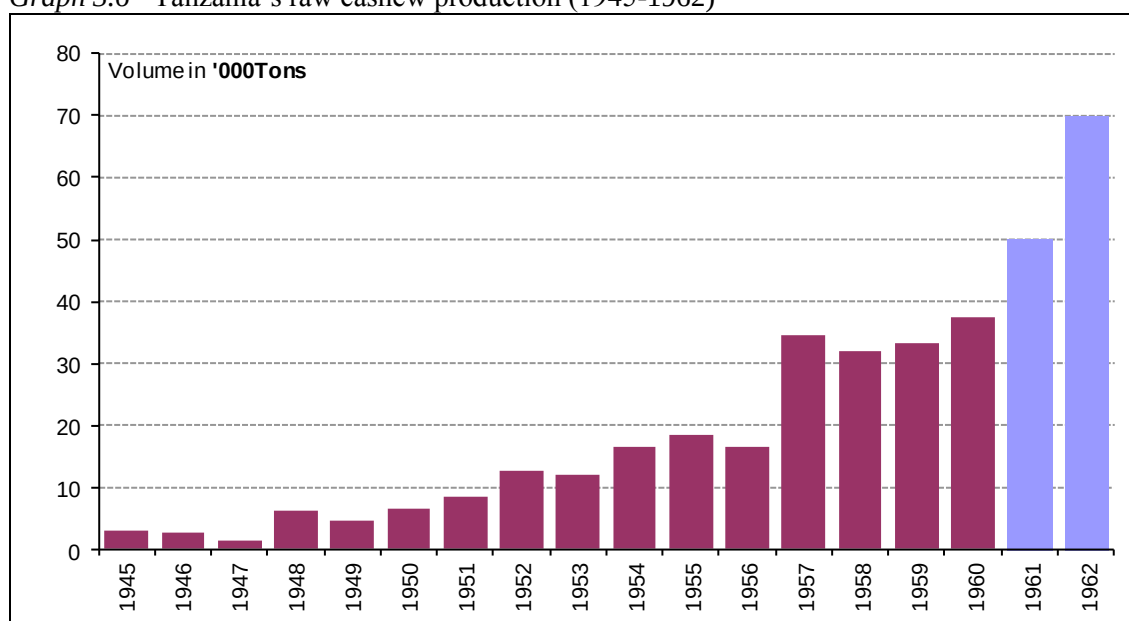
²¹ The value of exported raw cashew has been increasing over the years but production did not necessarily peak at the same time. For instance, in 1973, the volume of raw cashew production given by BoT (see Graph 3A1 in the Appendix) was 110,000 tonnes and was valued at US\$ 20 m, yet the production level of 60,000 tonnes in 1998 was valued at more than US\$ 100 m. Production levels and prices then declined to 65,000 tonnes in 2006 with a value of US\$ 40 m.

ferent periods: on the free market in the pre- and post-independence periods; during the *Ujamaa* time; and in the era of market liberalization with the structural adjustment reforms and the Warehouse Receipt System.

Free market I: Pre-independence and post-independence (1945-1962)

The first exports of raw cashew were recorded from Mafia Island and the sisal estate in Tanga in the late 1930s (Jaffee *et al.* 1995; Seppala 1998: 122). The crop then expanded in Mtwara and Ruvuma in the south of the country and production and exports continued to rise rapidly (Graph 3.6). All the raw cashew were exported to India and Indians and Arabs were the main traders, operating shops or transport companies and they either bought or bartered for cashew. Asians were favoured in trading by both Arabs (during slavery) and Europeans (during colonialism by the Germans and British) (Rweyemamu 1973: 29)). During colonial times, racial occupational categorization ‘gave Indian traders a legitimate position to trade on behalf of Africans’ (Seppala 1998: 122). The Indians at the coast had trade connections with southern India (Seppala 1998) and played a significant role in trade while the indigenous people grew the crops. During colonialism, crops were cultivated in specific areas. For example, coffee was cultivated in northern Tanzania, tea in the plateau areas where there were higher levels of rainfall and cotton was grown in areas with moderate rainfall (Rweyemamu 1973). In some areas, this practice is still enforced. At the time, India already had a flourishing processing industry and needed additional cashew from elsewhere

Graph 3.6 Tanzania’s raw cashew production (1945-1962)



Source: Jaffee *et al.* (1995: 165) using data from Northwood (1962), Seppala (1998: 122) and *Tanganyika Trade Journal* (1963).

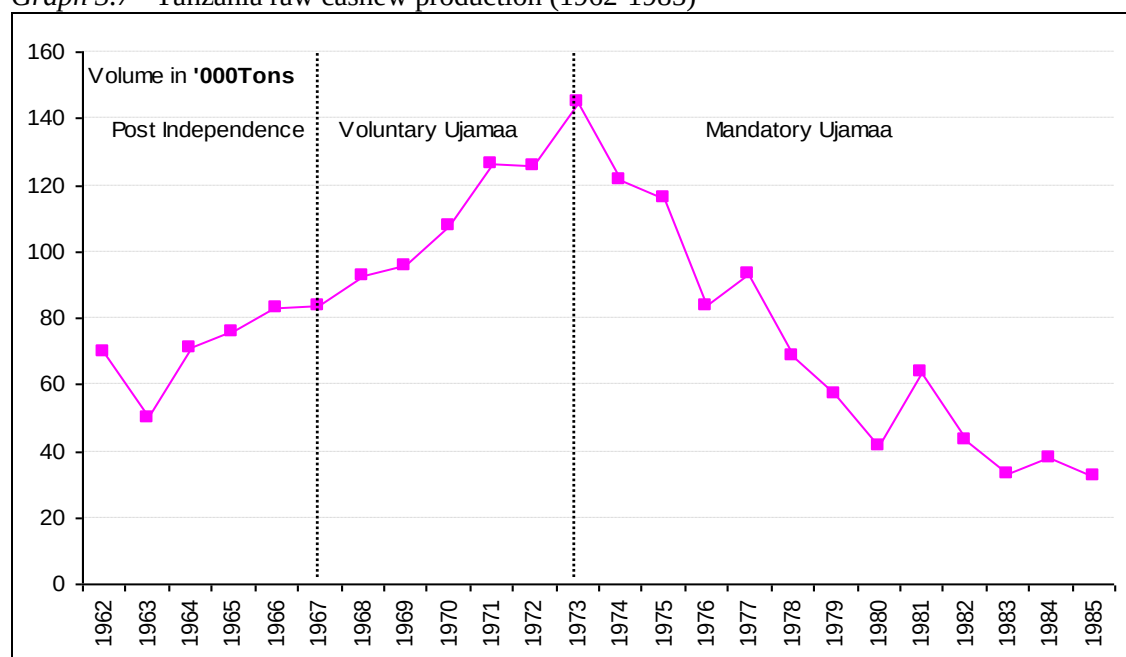
as the local supply was insufficient. Cashew from East Africa, i.e. Tanzania and Mozambique, were thus mainly exported to India.

Ujamaa period (1962-1973)

The Southern Agricultural Products Board (SAPB)²² was established in 1963 with the mandate to export cashew, and the National Agricultural Products Board (NAPB) then took over from it in 1964.

The NAPB, as a cooperative organization, had the monopoly on buying cashew from farmers through cooperative societies. Self-initiated cooperatives existed before independence, for instance in Kilimanjaro and Kagera. The NAPB was a three-tiered marketing system overseeing farmers, cooperative societies and a cooperative union. Prices offered by the NAPB were approved by the Cabinet for each zone.²³ The price offered was a residual payment, calculated by subtracting the marketing costs and non-market deductions from the estimated average sale price ($\pm$ any subsidy to the growers) (Westergaard 1968c).²⁴ Production increased in the period from 1962 to 1973 (Graph 3.7).

Graph 3.7 Tanzania raw cashew production (1962-1985)



Source: FAOSTAT | © FAO Statistics Division 2010

²² It took over from the Southern Region Cashew Nut Board.

²³ In 1968, the cashew-growing area was divided into four zones: (i) Tunduru, Nachingwea, Masasi I & II and Songea; (ii) Mtwara, Lindi, II, Newala I & II; (iii) Coast Region; and (iv) Kilwa and Lindi I (Westergaard 1968b).

²⁴ These deductions included export tax, district council levy, any NAPB surplus, union tractor levy, operational costs (NAPB, Cooperative), bags, financial costs, transport from the society to the NAPB warehouse and subsidies for local processes, together with 3% shrinkage.

Grading in this period was commissioned by the Tanzania General Superintendence Company Limited, an independent organization recognized by the buyers (exporters). It was done at the NAPB warehouses in Mtwara and Dar es Salaam where a standard grade fetched a higher price than a lower grade. Regardless of the outcome, farmers were paid the same amount for standard grades and lower grades. Efforts were also made to track output from primary societies (Westergaard 1968). For example, at the beginning of the season, societies were provided with bags marked with codes showing their registration number and the zone they belonged to.

Unfortunately, the NAPB incurred losses due to incorrect drying and grading during post-harvest periods (Jaffee 1995). With increased output, an attempt to develop local cashew processing was envisaged and, in 1964, Oltremare set up the first mechanized cashew-processing factory in Dar es Salaam under TANITA (Tanganyika Italian Company Ltd), with a 12,000 ton capacity.²⁵ The plant operated at a loss due to low-yielding kernels and Cashco from Japan set up another mechanized cashew-processing factory in Mtwara in 1968 with a capacity of 8,000 tonnes. With a lack of spare parts and insufficient power, the plant was not operational for years and by 1973 still only 10% of cashews were being processed locally. The low level of processing in the country is not only attributed to internal factors but also to the marketing organization. According to Kriesel (1970: 133),

India is the major processor of cashew nuts taking, at present, 90 percent of Tanzania's output and 80 percent of Mozambique production. Tanzania's harvest happens to come when supplies from elsewhere are at a seasonably low level. As a result, processors in India bid strongly for Tanzania's crop, thereby making it economically difficult for processors to operate in Tanzania. At present NAPB realizes a much lower return from sales to domestic processors than from export.

Processing was therefore developed at the expense of the farmers in the 1970s. If it was going to flourish, the market for kernels had to be thought through, farmers had to receive a high price and Tanzania would have to see intensive investment. Unfortunately not only was the price that was offered insufficient but so too was the technology adopted. Tanzania had failed as Indian buyers needed raw cashew and were still able to bargain for a lower price given their monopoly and the chaotic, non-functioning local processing. This explanation leads one to conclude that the forms of contracting were problematic for farmers. The decline after 1973 was spectacular in every way and so was the radical move by President Julius Nyerere to abolish the cooperative unions and introduce centralization and crop authorities in their place.

²⁵ <http://www.oltremare.biz/azienda.asp?idspag=3>

Ujamaa period (1974-1985)

Due to huge losses, the cooperative unions were phased out, although they were reintroduced later. A decentralization policy was adopted in 1972 and focused on decentralizing the key authorities and functions of government down to the grass-roots level.²⁶ The Cashewnut Authority of Tanzania (CATA) was established in 1973, with the aim of investing in large-scale processing and providing extension and grading services. It took over from the NAPB and introduced a tendering system for exports, which marked a move away from self-initiated cooperatives to state-controlled cooperatives. From 1977 to 1982 cooperatives were replaced with crop authorities that were required to market agricultural produce directly from the villages (URT 2005).

At the time, the country was implementing an import substitution strategy and encouraging local manufacturing.²⁷ The import substitution industries were to provide basic domestic needs under the Basic Industrial Development Strategy and the Small Scale Industries Development Organisation (SIDO). The CATA was busy trying to develop cashew-processing capacity in the country amid the challenges of untrained manpower and mechanical processing.

As seen in the previous chapter, Tanzania had donor support for its public sector and manufacturing in the 1960s and 1970s. Donor aid for social-service expansion was increasingly provided through donor-controlled projects and included a significant technical-assistance component (Semboja *et al.* 1994).

Project support was the main way of providing bilateral assistance and the creation of donor-assisted cashew-processing capacity followed the same trend, one that was happening for other crops too. There was some creation of capacity (Coulson 1982) but little utilization (Wangwe 1983; Wuyts 2001), which meant that these new factories had to hire people at different levels to run the factory and its machinery.

The ill-fated initiative by the World Bank-funded project of 36,400 tonnes of processing capacity for five factories was very expensive. To make matters worse, the government had requested installations for additional capacity and three more factories were put up as well as an additional two paid for by bilateral funding. This brought the total processing capacity in Tanzania to 113,000 tonnes by 1980.

Cashew production reached its highest level in 1974 and then went into free-fall until 1986 (Graph 3.7). The 1985 cashew harvest provided less than 20% of the installed processing capacity so it was not a lack of factories that led to the

²⁶ For further information, see Jaffee (1995), Ellis (1979) and McHenry Jr (1979).

²⁷ BIS was implemented between 1975 and 1995.

fall in production. A number of reasons, both socioeconomic and biological, are put forward below to explain the downward trend in production after 1974.²⁸

- The latest phase of villagization (*Ujamaa*) involved the compulsory movement of farmers to new development villages. This led to increased distances between their farms and their homes and prevented farmers from tending and harvesting their trees as well as in the past.
- This neglect of farms led to the onset of powdery mildew disease (PMD) and resulted in further declines in yield. The CATA was overstretched at the time and some of its main responsibilities were not fulfilled. Research and extension in particular were given less priority and extension workers even became involved in the procurement of raw cashew.
- With the onset of drought-induced food imports, falls in export volumes and higher oil prices in 1974-1975, the government increased agricultural prices, especially food prices and taxes, and the minimum wage for civil servants (World Bank 1981: 83). Prices of all necessities were fixed by the NPC and farmers started to switch to crops with higher incentives and to neglect cash crops, including, cashew production. The shortage of foreign exchange was aggravated by a fall in the volume of traditional exports. For instance, peasants in Rufiji started to produce charcoal as the market for it was not controlled by the state (Nindi 1991). The government tried to regulate production of other goods by introducing road blocks and other threats, but in vain. Ellis (1979) and Jaffee (1995) showed that, even with increases in international prices of cashew between 1977 and 1982, producers did not benefit. This view is supported by the actions taken by farmers who simply decided not to tend their trees. As mentioned in Chapter 2, the early 1980s were also a time of severe shortages of goods in general (Wuyts 2004) and, in the end, cashew producers were hit by falling incentives in terms of prices and a shortage of goods.
- Processing equipment was operating at below capacity and was subsidized by producers.²⁹ This led to further losses for the CATA, whose operating costs were increasing not only due to an increase in imported inputs (fuel, spare parts) but also to bad management.

As a result of these problems, processing factories never moved beyond their infancy or offered a good price to farmers compared to their Indian counterparts. The CATA's two-tier marketing system presented too many challenges and had to be replaced. By 1982, Act No. 14 called for the reinstatement of cooperative unions and rural primary societies.

Free market (1985-1991)

Cooperatives were reintroduced in 1984 and the crop authorities were turned into crop boards, which marked the return of a four-tier system. This period coincided with the introduction of the World Bank's and the IMF's structural adjustment

²⁸ For more information, see Ellis (1979), Jaffee (1995), Martin *et al.* (1997) and Poulton (1998).

²⁹ The World Bank was at the forefront in supporting the processing of cashew in the country. At the time, mechanical processing was preferred, Sepalla (1998) noted that this required less administrative follow-up from donors than implementing social projects.

reforms, which were known domestically as the Economic Recovery Programme. Macroeconomic stabilization and trade liberalization were given priority and 1986 saw the adoption of stabilization policies aimed at reducing domestic expenditure (Wuyts 2004), trade liberalization starting with import liberalization and the adjusting of local prices to world prices.

With regard to raw cashew, the CATA was replaced by the Tanzania Cashew Marketing Board (TCMB) in 1985. The regional cooperative union and the primary societies had the role of buying cashew and abandoned farms were brought back into production by the introduction of the CPIPP (1987-1989) and the CIP (1990-96), both cashew development projects sponsored by the World Bank and the UK's Department for International Development (DFID). The projects were set up to research PMD in the mid-1980s and knowledge about spraying, care and the maintenance of cashew trees was provided to farmers as part of the pilot study.

According to Martin *et al.* (1997: 8), farmers were taught 'bush clearing and weeding; thinning of overcrowded trees, controlling PMD through dusting with sulphur and intercropping with short term crops'. This was possible due to assistance from extension officers who used the T & V (training and visit) system. About 2000 villages were initially covered by the CPIPP and, following its success, the CIP covered all the cashew-growing areas in 1990, with these new procedures first being adopted by large farmers.³⁰

Free market II (1991-2006)

Trade liberalization meant that the marketing of both output and inputs was left in the hands of private traders who bought their cashew from the primary societies.³¹ The rehabilitation and liberalization process saw total cashew production start to pick up (Graph 3.8).

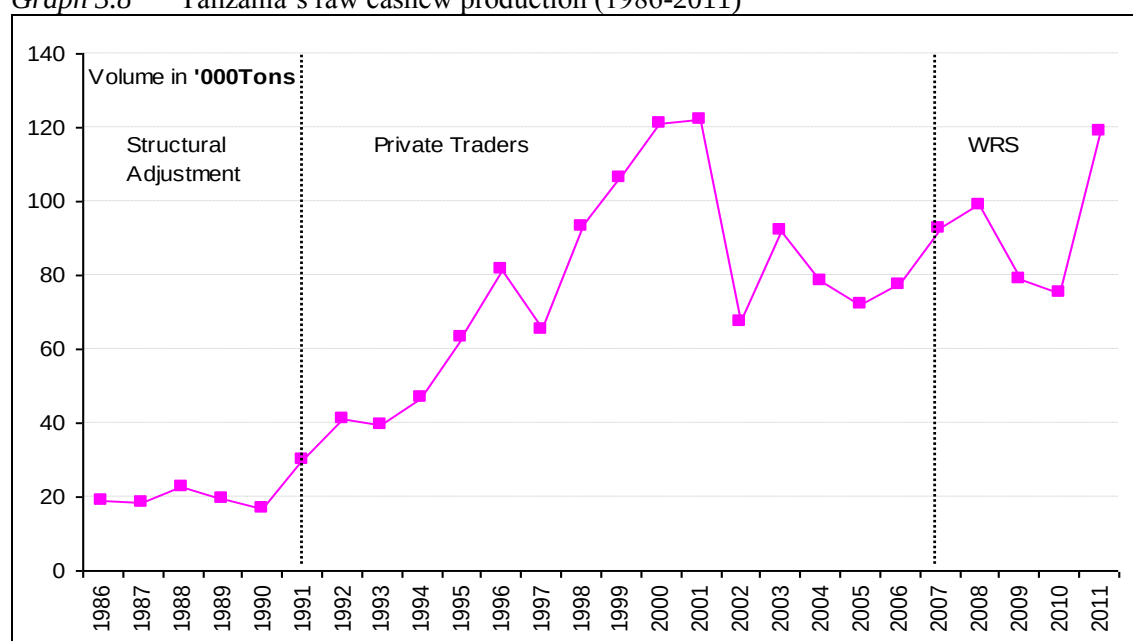
Traders had to obtain permits from the district office but to encourage easy traceability of levies, only traders who could manage a consignment of 100 tonnes were given permits (Box 3.1).³² The information in Box 3.1 is also confirmed by Seppala (1998: 127-128) who found that traders started by obtaining trading licences by specifying their buying location and amount. Then they would buy cashew from the primary society by providing initial funds to buy crops from farmers. The primary society was then responsible for buying, weighing and scaling the crop. The primary society and district then charge a levy, while transportation and the exportation of cashew are the responsibility of the trader. With

³⁰ Large farmers in the areas visited have an average of 25 ha and 660 trees. See also Chapter 4.

³¹ Interviews with buyers of cashew by email, 19 December 2011.

³² Box 3.1 shares an example from a trader who also happens to be a processor.

Graph 3.8 Tanzania's raw cashew production (1986-2011)



Source: Output from 1986 to 1998, FAOSTAT | © FAO Statistics Division 2010; production for 1998-2011 from the Bank of Tanzania and the Cashewnut Board of Tanzania

Box 3.1 Buying raw cashew 1991-2006 in Tanzania

As a cashew-processing company, OLAM Tanzania Limited was registered in 1994. OLAM is a subsidiary of OLAM International Limited with its headquarters in Singapore. Apart from processing and trading 20,000 MT of cashew annually from Mtwara, Lindi, Tunduru and Nachingwea, OLAM also trades cotton (15,000 MT) from Mwanza and Shinyanga, coffee (10,000 MT) from Mbeya, Songea, Bukoba, Kigoma and Moshi, cocoa (3000 MT), sesame (15,000 MT) from Mtwara and Lindi, and timber (8000C BM). OLAM thus operated in Mbeya, Mtwara, Mwanza, Musoma, Kagera, Shinyanga, Moshi, Igunga and Dar es Salaam. The produce is transported by hired market lorries of up to 5 to 12 tonnes.

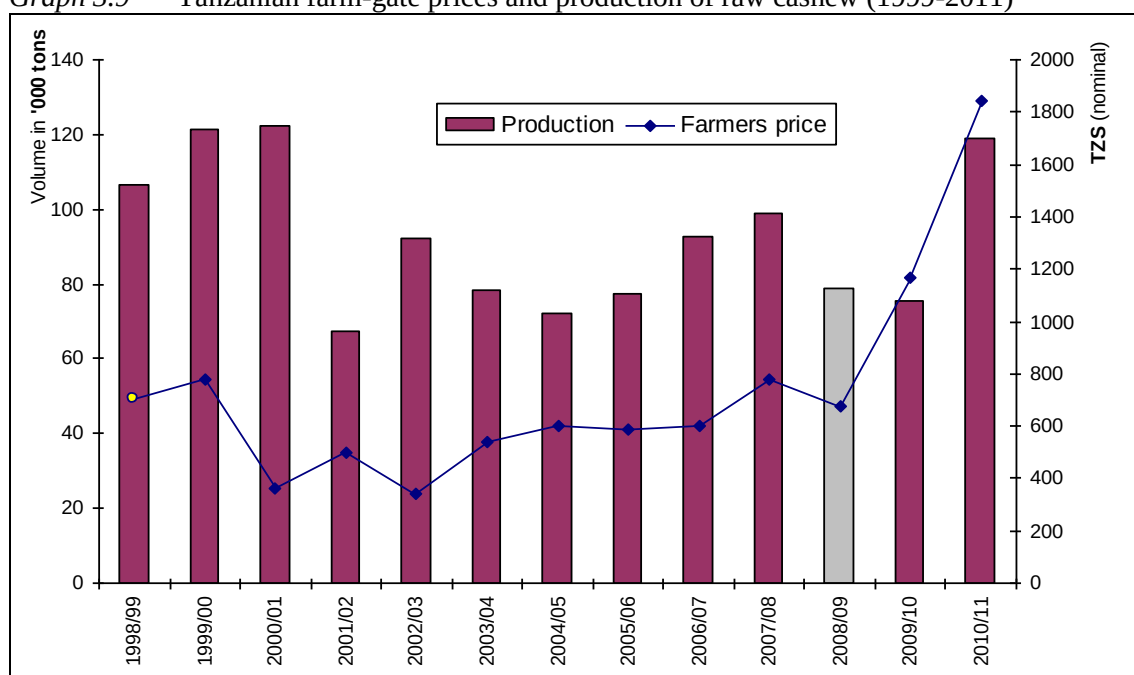
We sourced out our own credit and bought cashew directly from the primary society. Before going to the primary society, approval was obtained first from the Cashewnut Board for the company, then regional approval followed. Additional approval was obtained from the District Business Officer for Crop Shipment but this was very bureaucratic and good personal relations were needed to get it on time.

Once this annual licence was obtained, all accredited companies were required to deposit cash for procurement at the primary society and no limit or floor was sanctioned. A list of all companies with their specific buying dates was kept at the primary society, a list that will remain intact whenever prices are equal. The exception was when prices changed and whoever offered a higher price was given priority. Most primary societies had strong and credible people with little chance of loss of money. In case of theft, the stolen amount was deducted from the levy to be paid to the village. There was no official grading at the time, and cutting, location and time of trading were the best way to grade cashew nuts. Nachingwea and Tunduru cashew nuts were the best, while Liwale and Tandahimba were graded lower. Trading in the rainy season and the month of trading usually impacted on the quality of the cashew.

Source: Traders from OLAM. Interview by the researcher.

time, this system unfortunately led to clash among big traders and, at the beginning of the season, traders would offer high prices and mid-season prices would then fall or even collapse. The worst season was 2000/2001 when farmers received TSh 150, which was less than a quarter of the price received in the three previous years due to a fall in world prices but also to the CBT insisting on the use of sisal bags (Mitchell 2004).³³ The sharp fall in the price received by farmers meant that they could not tend their farms the following season. This is supported by the fall in production after 2001, as shown in Graph 3.8. The prices received by farmers in the early 2000s were never high enough in relative or absolute terms compared to those received prior to 2001 (Graph 3.9). Traders' failure to buy raw cashew with any sort of predictability led to an outcry among farmers. On the other hand, the supply of inputs, which are crucial for assuring output, rarely attracted traders. The government intervened and set up an input fund to replicate the Tunduru Input Fund and provide timely and reasonably priced inputs for producers.

Graph 3.9 Tanzanian farm-gate prices and production of raw cashew (1999-2011)



Source: Records from the primary society in Nanhyanga (various years) and cashewnut board of Tanzania

³³ Interviews with farmers confirm this.

Free market III (2007-present)

During the 2005 Tanzanian presidential campaign, the then presidential candidate Jakaya Kikwete promised to solve the marketing problem and offer better prices. Once he was in power, the Warehouse Receipt System (WRS) was introduced in 2007 with the Warehouse Receipts Act No. 10 of 2005, the Tanzania Cashewnut Marketing Board Act No. 21 of 1984, the Cashewnut Industry Act No. 18 of 2009 and the Cooperative Societies Act No. 20 of 2003. Under this system, cashew producers would send their cashew to an approved warehouse and receive payment when their goods had been auctioned. To curb delays on payments, an agreement between depositors and financial institutions was set with government guarantees whereby depositors received a percentage of an indicative price and once the produce was sold, the buyer would clear it with the bank and the depositor would receive the remaining percentage of the price from any cashew sold. The depositor is a farmer and the buyers are mainly processors and exporters, and the Cashewnut Board of Tanzania oversees the quality of the cashews that are produced by the farmers and kept in the warehouse before being sold on to buyers.

This led to a combination of marketing for cashews and the provision of inputs. The WRS began as a pilot project in Mtwara and was later expanded to all cashew-growing regions. At the beginning of the season, an indicative price is provided and remains the same throughout the season. Farmers sell their output through the WRS or *kangomba* and a farmer is initially provided with a part of the suggested price, with the remainder being paid after auctioning has taken place.³⁴ Farmers also sell to other traders in the communities that play an important role for those farmers who need cash before the official opening of trading in the primary societies. The unofficial buying of cashew³⁵ is known as *kan-gomba*,³⁶ but by selling *kangomba*, farmers forego subsidized inputs that would have accrued to them. The government has repeatedly condoned the act, but it still persists.³⁷ Since the introduction of the WRS, a certain part of the price is

³⁴ Chapter 5 describes the WRS in relation to cashew marketing in more detail.

³⁵ The Weights and Measure Act No. 20 of 1982 stipulates the international system of units (SI) to be used in trade. The Act also 'direct[s] that a person who has received an advantage under such contract, bargain, sale or dealing so declared to be void shall restore it or make compensation for it to the person from whom it was received'.

³⁶ In *kangomba*, the traders set the price of cashew per kilo. Traders, especially large-scale farmers, place a set of weighing scales in front of their house to indicate that they are buying cashew. By selling through *kangomba*, farmers get paid the full cash price on the spot. Though *kangomba* is illegal and the amount paid is less than that offered by the official primary society, farmers needing instant cash have no other alternative.

³⁷ For instance, while answering a supplementary question (no. 230 in Session 8 on 17 July 2007), the then Deputy Minister for Industries, Trade and Marketing, the Hon. Chibulunje informed Parliament that 'it is prohibited to use unauthorized measurements including *kangomba*, *lumbesa*, etc.' for trade. He then added 'I continue to insist by stipulating the government stance that whoever will be found

deducted for the advance purchase of inputs for the next season, TSh 10 per kilo for village development and TSh 10 per kilo for security.³⁸ With the exception of deductions for inputs, the other deductions are agreed upon beforehand and thus differ between villages.

The fall in production in 2008 was the result of insufficient rainfall, whilst the drop in price was due to the world financial crisis. Graph 3.9 shows that, following a change in price, the next season's output is affected. For instance, when the price dropped in 2000/2001, output dropped in 2001/2002; and a rise in price in 2009/2010 subsequently led to increased production in the 2010/2011 season.³⁹ This implies that price is the single most important determinant of production. This cobweb behaviour by cashew farmers, for example not clearing under trees after a fall in prices, shows that farmers are heavily influenced by prices.

The suggested price received by farmers per kg of cashew includes deductions (Table 3.3 and Table 3A3 in the Appendix) associated with operating costs, marketing costs, financial costs and those for purchasing cashew. The operating costs of the primary society, the union and district councils account for most of the costs. The operating costs have been on the rise since the introduction of the Warehouse Receipt System in the 2007/2008 season. While the amounts paid to the primary society and the union were fixed at TSh 50 and TSh 21 respectively, the amount paid as a levy to the district council has been rising and reached TSh 40 in the 2010/2011 season. Marketing accounts for the second highest set of costs and transporting the cashew to the warehouse is the biggest part of the marketing costs involved. Transport costs are twice as high as those the primary society levies. Marketing costs also include shrinkage that is valued at 2% of the suggested price. This is paid, like all the other items, irrespective of whether there has actually been any shrinkage and regardless of the amount of shrinkage.

Table 3.3 Percentage of deductions for cashew marketing costs in Tanzania (2007/2008-2010/2011)

	2007-8	2008-09	2009-10	2010-11
Operating costs	36.8	42.0	42.6	45.4
Marketing costs	35.1	39.1	35.3	34.0
Finance costs	8.9	3.2	7.2	7.4
Cost of purchasing cashew	19.3	15.7	14.9	13.2

Source: CBT and author's calculation.

using these measures is breaking the law and should be prosecuted. I call upon all of us in charge of this issue, to collaborate to ensure that informal measurements are not used.'

³⁸ Interview, Hamidu Rashid Mahundo, Deputy Secretary Mambamba AMCOS, 16 December 2008.

³⁹ The effects of the price spike in 1999 due to crop shortfall led to intense upward pressure on prices and production in the following season. On the same note, the price plunge in 2000/2001 reflected higher worldwide supplies.

The cost of bags accounts for more than 80% of the cost of purchasing cashews.⁴⁰

In summary, the existence of a thin market (one with few buyers and sellers) led to an interventionist approach in an attempt to solve the failure of the cashew market in Tanzania. The country opted to have boards such as the SRCB, the CATA, the TCMB and the CBT to oversee the sector. The first peak occurred in a period of good producer prices and grading and when few inputs were needed. The subsequent decline was due to a fall in producer prices in favour of food crops, compulsory resettlements in *ujamaa* villages (especially in cashew-growing regions) and problems with powdery mildew disease that led to plants being neglected. Scientists were thus involved in PMD research from the late 1980s until 1986 when production hit rock bottom. A recovery was then seen.

With trade liberalization in the early 1990s, the government stopped intervening in the sector. Paradoxically, liberalization led to an absence of higher payments for better quality crops. Production increased but markets remained limited with traders (cartels) in raw cashew and none in input-related services. Rehabilitation and favourable prices led to a peak in output at the end of the 1990s but when prices collapsed at the end of 2000, farmers were not protected and were hit hard, earning less than expected. This led to a fall in production in subsequent years. Falling revenues meant that income from cashew could not finance maintenance, particularly in the absence of credit. Furthermore, liberalization implied the absence of any grading of output and cashews were not sold at different prices depending on quality (the ‘Problem of Lemons’⁴¹). In 2007, WRS was introduced and grading was reintroduced. There is little processing capacity in Tanzania and most of the cashew crop is exported in its raw form to India.

Vietnam: The whirlwind

The cashew tree arrived in Vietnam in the 18th century and was initially grown in household gardens and on plantations.⁴² In 1975, it was chosen as a tree suitable for covering bare hillsides to prevent soil erosion. Political discussions began in the early 1980s when cashew was selected as a prospective export crop. A foreign trade conference was held in Song Be (now Binh Phuoc and Binh Duong) in 1982 in the presence of the then Prime Minister Pham Hung. Researchers subsequently started to develop processing technologies from scratch, coming up with a raw-cashew nut-splitter that uses both hands and feet.

⁴⁰ See Table 3A2 in the Appendix for Tanzania’s kernel production from the 2005/2006 to 2009/2010 seasons.

⁴¹ A persistent fall in quality.

⁴² Information in this section is courtesy of Mr Hoang Giang, General Secretary of VINACAS. Additional information was obtained from VINACAS video tapes viewed in November 2009 and April 2010.

Photo 3.3a Shelling cashew in Vietnam



Photo 3.3b Shelling cashew in Tanzanian facilities



The *Doi Moi* reforms of 1986 gave farmers and producers more say about what to produce and more control over their earnings. And, importantly, a resettlement programme (from the North to the South) was introduced allowing for the concentrated production of cashew.

The Vietnam Cashew Association (VINACAS),⁴³ which was established in 1990, plays a coordinating role for all cashew stakeholders. It is a socio-professional organization made up of enterprises in the field of cashew production, processing and trading, and assists members with coordinating trading activities, promotes production development, guarantees reasonable prices for cultivators and advises on exports. In general, it aims to raise the product quality and trading efficiency of the Vietnam cashew sector. Its formation went hand in hand with the start of official statistics on cashew production.

Cashew gained prominence as an export crop⁴⁴ in Vietnam in the late 1980s. While occupying Cambodia from late 1978 to 1989, Vietnam did not trade much globally and it was only in 1992 that it moved into the Chinese market and in 1994 into the US market. In the early 1990s, China became the main importer of Vietnamese kernels but Vietnam banned all exports of its raw cashew in 1996 to concentrate on the increasing needs of its own processors. It also started importing raw cashew from other countries, especially Africa. The shortage of raw cashew has been solved by importing from Ivory Coast, Nigeria, Indonesia and Ghana.

Vietnam has been the world's leading kernel exporter and top earner from cashew since 2006 and currently has more than 300 cashew processors (VINACAS 2009). Its main markets for kernels are now China, the US and the Netherlands. Production has been on the rise since 1990 and more than 200,000 tonnes of raw cashew and more than 60,000 tonnes of kernels were being produced annually by 2000 (Graph 3.10).

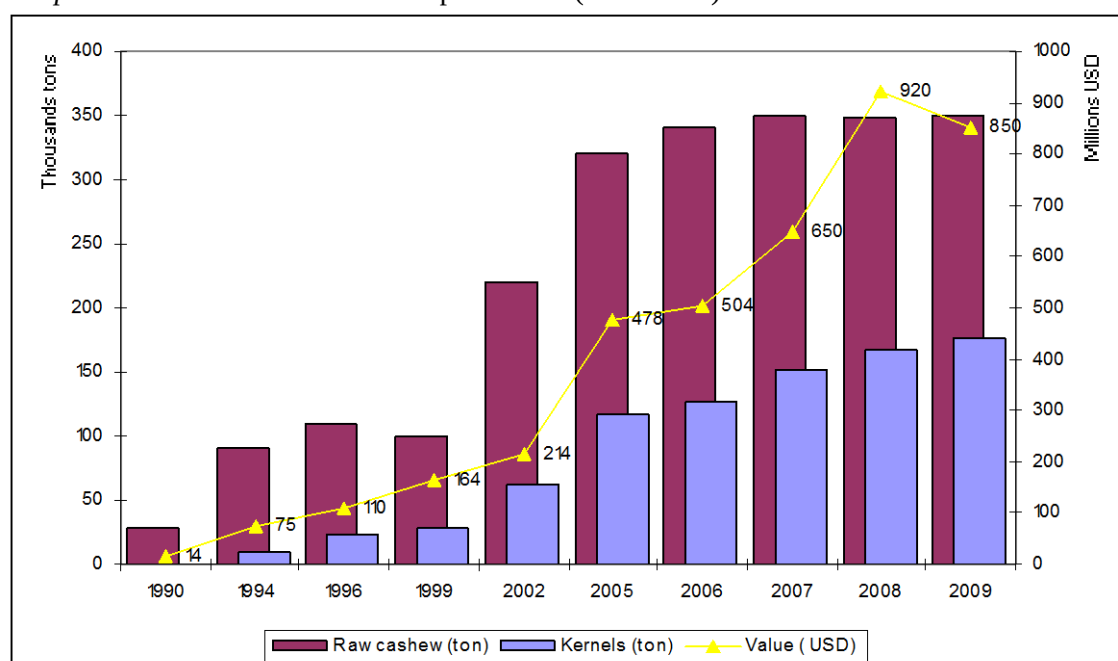
On 7 May 1999, the government approved Decision No. 120/1999/QĐ-TTg for a cashew development project that would run until 2010. This aimed to increase productivity and expand the area under cashew cultivation by improving the provision of credit for farmers, using better varieties and training cashew experts.

Vietnam continued to see an increase in production of both raw cashew and kernels. Since 2006, annual production levels of raw cashew have stabilized at around 350,000 tonnes while the volume of kernel production has increased from 115,000 tonnes in 2005 to 180,000 tonnes in 2009 respectively (Graph 3.10). The value of exported cashew (both raw and kernels) has also been increasing over

⁴³ Decision 346 NN-TCCB/QĐ, taken in Ho Chi Minh City on 29 November 1990.

⁴⁴ Others include rice, coffee, rubber and pepper.

Graph 3.10 Vietnam: Raw cashew production (1990-2009)



Source: General Statistics Office of Vietnam GSO; Vietnam Cashew Association (VINACAS)

the years and is outperforming production, with kernels having a higher value than raw cashew. In 1990, the first year for which data are available, earnings of around US\$ 14 million were recorded, despite fewer than 30,000 tonnes of raw cashew being produced. As the leading processor of kernels, Vietnam saw its exports more than triple between 2000 and 2007. Vietnam exported 153,000 tonnes of kernels in 2007, while it only exported 40,000 tonnes in 2000 and about 27,000 tonnes in 1990. By 1999, the value of its cashew crop had increased more than tenfold to US\$ 164 million as production tripled. And for the years 2007 to 2009, earnings went up from US\$ 650 million to almost US\$ 1 billion, dropping to US\$ 850 million in 2009. In 2008, there were 420,000 ha under cashew cultivation, with an average productivity of about a ton per hectare. This resulted in a turnover of US\$ 920 million, as is shown in Graph 3.10. Even though the cashew sector was a business valued at over US\$ 1 billion in 2008, it is still considered a smallholder crop in Vietnam.

Raw cashew production stabilized in 2005 at 350,000 tonnes per year (although this conflicts with FAO data), while kernel production kept growing, fuelled by imports. The Ministry of Agriculture and Rural Development issued Decision No. 39/2007/QĐ-BNN on 2 May 2007. It is planning to expand its cashew development plan from 2010 to 2020 and increase the amount of land and output production of raw cashew and stabilize the production of kernels from 2010 to 2020. The aim was to reduce the number of small processors and have

more large processors that are easier to monitor regarding adherence to food hygiene and safety. For 2010, the targeted output for raw cashew was 500,000 tonnes and 140,000 tonnes of kernels, with an area under cashew of 450,000 ha with an average yield of 1.4 tonnes per hectare. These targets were met and even exceeded, with the exception of the production of raw cashew which has stabilized (Graph 3.10). The goal for 2020 is to have an export turnover of US\$ 820 million.

In summary, Vietnam opened up its economy and started trading in both raw cashew and kernels in the early 1990s after setting up VINACAS. Its enormous processing capacity and earnings from cashew are due to value addition.

Contrasting resettlement stories

People have been moved from one area to another in the country as part of development projects that will improve the lives of relocated citizens, and the nation as a whole. To undertake these projects, the government has had to convince the community to move by ensuring the provision of added benefits. People were mostly convinced to move voluntarily but in some cases compulsory relocation has been forced on villagers. According to International Financial Corporation (IFC), the resettlement policy needs to ensure that people who are physically or economically displaced as a result of a project end up no worse off, and preferably better off, than they were before the project began. Examples of development projects leading to resettlement include dam building, road building, mineral extraction and community building. All have called for the movement of people against their wishes and have needed to employ different means of persuasion. When persuasion and inducement have failed, force has been used.

Resettlement is involuntary when it occurs without the informed consent of the persons being displaced or if they give their consent without having the power to refuse resettlement (IFC 2002). People have little recourse to oppose the government's expropriation regardless of their desire to continue occupying or using the land in question.

Tanzania: By adapting to the ideal of African Socialism in 1967, Tanzania endorsed the implementation of socialism and self-reliance (*Ujamaa na Kujitegemea*). All major means of production were nationalized and a countrywide rural resettlement scheme was implemented that involved persuading people to move to new villages equipped with all the necessary social services. When persuasion and inducement produced negligible results, force was used. Making people live together was not such a challenge but having them work together was (McHenry Jr 1979) because regardless of the effort they put in, all the members of the community were to earn the same amount of money. People had to leave the homes they had invested in all their lives and to start from scratch.

Vietnam: After the reunification of North Vietnam and South Vietnam, fighting poverty was a top priority for the Party. To cater for the poor in the north, the Vietnamese government provided credit and input incentives for all farmers who wanted to relocate to less densely populated areas in the centre of the country. Many farmers have thus migrated from the north to the cashew-growing areas in Binh Phuoc, attracted by land suitable for cultivation as part of the village resettlement scheme. Most of them migrated about nineteen years ago from Thanh Hoa and Nam Dinh Provinces and also Ben Tre, and many heads of household today reside in an area that is different from their place of birth.

There has been a concerted effort in Vietnam to increase raw cashew production as it is seen as a way out of poverty. Interestingly, both the Tanzanian and Vietnamese governments undertook involuntary resettlement programmes of the rural peasantry but in different contexts and with different purposes, leading to quite different results. In Tanzania, villagization, which also involved compulsory local resettlement leading to the grouping together of people regardless of their wealth, aimed to deliver social services (and, some argued, central control) to newly constituted villages. Production featured little in its set-up but suffered the most. Resettlement in Vietnam aimed to disperse the entire population into several hundred ‘agro-industrial districts’, with poor people and households from the north being given access to land in the south and programmes to help them settle.

Discussion of findings

The demand for cashew is growing worldwide and as producers take advantage of this healthy situation, incentives are important. In the case of Vietnam, interventions by the state have ensured higher yields and increased output per tree has proven to be crucial, while interventions by the state, or the lack thereof, in Tanzania have resulted in sporadic production, which signals a failure of coordination. Interventions have aimed to coordinate the market and focused less on non-market coordination. As a result, Tanzania has ended up being trapped in a cycle of low production. Options for overcoming this include supporting all the actors within the cashew sector, increasing investment that will expand economic activities, especially those in the private sector, and encouraging the adoption of new technologies that will increase productivity (Poulton *et al.* 2006). Increases in productivity need to be supported with the right incentives, such as the availability, accessibility and affordability of inputs together with improved quality, that will result in better prices and returns for producers. As suggested in PHDR 2005 and 2007, integrated producer systems are also a viable option.

The market in Tanzania has changed from being a liberalized market to a monopoly market and better incentives are required at different levels. The Ware-

house Receipt System gives traders a monopoly and there is therefore the need to disentangle parts of the system to allow for more competition. Efforts need to be directed to encourage the smooth coexistence of all actors, with producers (both farmers and processors) at the centre of the decision-making process. When the economy was led by the state, the cashew authorities/boards provided coordination between producers and buyers, supplying inputs and providing credit and an assured market for farmers. In the free market era, there was a market for outputs but one for inputs has never developed. A monopoly situation tends to create dependency among the excluded and this in turn creates an interlocking market where, for example, farmers find themselves with less control regarding the procurement of farm inputs. And in *kangomba*, farmers in need of cash sell their produce to large-scale farmers not only at a lower price but they also forgo inputs. Ashley *et al.* (2003: 17) note that ‘interlocking markets are particularly open to abuse because the terms of all transactions are inter-related and the low returns offered are much easier to conceal from the moral and competitive scrutiny of others in society’. Tanzania lacks a clear provider of credit and farmers mainly depend on earnings from cashew as their sole supplier of credit (see Chapter 4). Credit availability in Tanzania would therefore be beneficial for producers and a better solution for farmers than the current residual payment system through the WRS, which does not encourage effective and efficient reductions in the transaction costs associated with marketing.⁴⁵ Credit is important for maintaining cashew trees as money is needed not only to buy inputs but also to hire labour and tools. Reaching remotely located cashew farmers remains a challenge.

Tanzania’s cashew value chains were governed by *captive* means during the period of liberalization. On the other hand, Vietnamese cashew value chains are governed by *relational* and *market* means, given that the price is always important for farmers.

Resettlement in Vietnam led to a boom in production while in Tanzania it disrupted production. It follows that ‘redistribution policies introduce distortions and thereby reduce potential growth’ (Alesina *et al.* 1994: 479). Proper preparation for resettlement of any size is crucial: ‘Countries that experienced a land reform and hence reduced the inequality in land ownership should have had higher growth than countries with no land reform’ and ‘there will be a strong demand for redistribution in societies where a large section of the population does not have access to the productive resources of the economy’ (*Ibid.*: 483-484).

⁴⁵ It is good that marketing is being centralized to protect farmers. They need more say in marketing especially on issues such as jute bags, shrinkage and transportation. There should be more competitive suppliers of jute bags and transport and primary societies require more education on managing finances. Lack of credit is also a complaint from processors who are finding raw cashew more expensive given the additional transactional costs. Since local processors are competing with foreign traders to obtain raw cashew, it is becoming costly to store a year’s stock.

The observations from Vietnam present a challenge for Tanzania to replicate due to the level of its technology and its limited availability of credit. Tanzania could consider improving the different bottlenecks in its production process by providing incentives to all actors, thus expanding its economic activities. There is more room for expansion in Tanzania but this mainly depends on the availability of credit and the flexibility of research institutions and other coordinating bodies in the cashew sector. Investment in cashew is a continuous process and the availability of credit is crucial. This chapter has shown that cashew productivity depends much more on structural factors and that, for producers, the price is the most important factor influencing their decisions.

To maintain its status as a leading kernel exporter, Vietnam needs to sustain or even improve the quality of the kernels it exports. African countries have also started expanding their processing capacities, which means that Vietnam will be faced with the challenge of obtaining sufficient raw cashew in the near future.

With the volatility of cashew prices, producers need to be shielded to sustain the industry. The growth of the middle classes in China, India and other countries with emerging markets will lead to a rise in demand for cashew and countries such as Tanzania and Vietnam will need to produce more than they currently do. It is to be hoped that the cashew price will increase enough for consumers to continue buying it and for producers to continue producing it. If there is a fall in prices, producers will be likely to neglect or abandon the crop.