

Chapter 9

Global Value-Chain Participation and Development: The Experience of Ghana's Pineapple Export Sector

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Abstract

This chapter examines the extent to which local factors interact with external conditions to influence participation in global value chains (GVCs). The pineapple industry in Ghana is used as a case study to illustrate how relationships between second- and third-tier suppliers and firms have been influenced by the institutional context, with resultant implications on development. It provides an overview of how participation within the pineapple value chain grew over time, but also how a failure to effectively adapt to major changes in the international market inadvertently led to a subsequent decline. This includes the introduction of new product varieties. Within this context, lessons are derived regarding addressing financial constraints, which it is argued stifled Ghana's ability to respond effectively to dramatic changes in the external market, leading to the ceding of a large portion of market share within this sector.

9.1 Incorporating Ghana into the pineapple value chain

The expansion of high-value agricultural exports has underpinned Ghana's export diversification strategy for decades. Ghana's climate and proximity to consuming markets made it conducive to producing

and exporting pineapples, a non-traditional agriculture produce. Such a transition was considered imperative to reduce the economic vulnerabilities associated with a high economic dependency on gold and cocoa. Revolutions in the provision of trade finance, notably the exchange proceeds retention scheme, incentivised businesspersons to enter the pineapple value chain, since it enabled them to acquire foreign exchange (Jebuni *et al.* 1992; Whitfield 2011).

The European Union (EU) was and remains the main market for Ghana's pineapple exports. Exporters initially accessed the market mainly through friends and family (Whitfield 2010a). From 1989 to 2004, exports more than quadrupled, making the country the third-largest exporter of pineapples to the EU, after Côte d'Ivoire and Costa Rica. In 2004, it commanded a 10 per cent share of the market, though this has since declined. The expansion of this sector has assisted in the advancement of social and economic objectives. Horticultural exports have significant potential to increase employment and reduce poverty. According to the *Ghana Shared Growth Development Agenda II* (NDPC 2014, p. 112), the highest reduction in the incidence of poverty (64 per cent to 24 per cent) between 1991/92 and 2005/06 was experienced by households engaged in growing export-oriented crops, such as cocoa and horticulture.

9.2 Ghana's experience: 1986–2004

Initially, the relations between exporters and farmers were market based. This meant that co-operation and co-ordination were weak, as long-term relationships were not established between participants within the value chain. Contracts were usually oral (unwritten), simply indicating a promise to purchase produce at a later date. In a few cases, the provision of production inputs (such as fertiliser) was agreed (Danielou and Ravry 2005; Deb and Suri 2013). Exports were concentrated and the competitive driver was the price.

In 2000, the top five exporters accounted for 72 per cent of exports (Danielou and Ravry 2005). Although this concentration had fallen to 57 per cent by 2002 (Voisard and Jaeger 2003), only 12 out of 65 exporters in 2004 had export volumes of more than 1,000 tonnes per week (OECD 2007).² The majority of them (about 60 per cent) had capacities of less than 25 tonnes per week (NRI 2010). Price competition led to a high level of mistrust among exporters, as they undercut each other to sell more. It also meant that farmers could renege on their oral contracts without any consequences: the likelihood of selling produce to another exporter who offered a better price was very high.

This presence of opportunistic behaviour was not limited only to farmers. Exporters also engaged in such behaviour and began to use the approach as a risk management mechanism. Ghanaian exporters who also contracted with smallholders were usually more efficient at producing pineapples themselves. However, they engaged in contractual relations in order to manage their supplies and transfer risks. Exporters would pay lower prices than expected, or agreed upon, especially when fruits were oversupplied or when conditions in the European market turned unfavourable. This meant that the farmer received much less revenue than expected.³ If a farmer had

accessed finance for production, the likelihood of difficulties in repayment was increased.

Value chains thrive on flows of information. Producers, for example, must inform exporters and processors about production quantities, harvest schedules and production issues. Exporters must inform producers about new production techniques, quality and product handling, among other topics. Channels to acquire and share information were missing in the relationship between farmers and exporters. Generally, exporters confirmed orders with EU buyers around 1 week before shipping was due. If they had enough fruit on their own farms to fulfil the order, they did not purchase fruits from smallholders. However, if they did not have enough, the exporters or middlemen would visit known pineapple-farming communities to purchase fruits directly from farmers or in some cases to collect fruits already contracted for.

Farmer or producer training was virtually non-existent (Conley and Udry 2008). The only time that exporters intervened in the production process was near harvest time, when they inspected the fruit before application of the chemical Ethephon, which hastens ripening, and carried out harvesting themselves (Whitfield 2010a).

Through sheer determination, local entrepreneurs had propelled the pineapple industry forwards. From 1994 to 1999, horticultural exports increased by 24 per cent, with pineapples, yams and bananas as lead products (World Bank 2001). In this same period, pineapples contributed as much as 42 per cent of the total non-traditional agricultural export earnings, which includes those from horticulture. Nonetheless, the sector was badly in need of infrastructure. There was no cold chain system at the exit port, and infrastructure on the farms was rudimentary.⁴ In some cases, fruits were harvested and packed in the open and transported to the port in any available vehicle. It was not until the mid-2000s, when

the sector was in a crisis, that the government intervened to improve infrastructure.

9.2.1 Co-ordination of the chain

On the whole, given the nature of organisation, it was clear that within the node of production there was no dominant player to ensure that transactions were undertaken effectively and efficiently.⁵ Smallholders supplied between 40 and 60 per cent of fruits in the sector (Goldstein and Udry 1999; Jensen 2005; Whitfield 2011). Low-volume capacities meant that the exporters did not have economies of scale and so could not sustain the supply of fruits on a regular basis. Thus exporters participated in the lower-value end of the global chain, e.g. wholesalers and corner shops, rather than at the high end of the market, e.g. supermarkets (Dixie and Sergeant 1998; Whitfield 2012).

9.2.2 Increased financial constraints

Provision of credit for agricultural activities is rare and challenging in Ghana. When the fruits were exported, payment was made on a consignment basis. This involved buyers making payment after the produce had arrived, been verified as meeting the buyer's quality standards, and had been accepted by the buyer and sold on the market. According to our interviews and the African Development Bank (AfDB 2005), exporters used sales agents located in Europe, who indicated (a) the final selling price, (b) the quantity discarded as being of low or poor quality and (c) the expenses deducted for quality inspection, labelling and storage. After the fruits had been sold, the buyer (retailer/wholesaler) deducted its costs and commission and the remainder was paid to the exporter (TAC 2004).⁶ This payment method had implications for risk management in the chain, as an exporter's funds were ultimately tied up with the buyer until the goods were sold and payment made. Sometimes, an exporter had to wait for 3 months or more to be paid (Takane 2004), and

farmers were paid after that. It also meant that exporters competed on volume, worsening the problems of opportunistic behaviour and unreliable supply.

9.2.3 High levels of risk

Smallholders faced both price and credit risks. These risks were high because it was possible for an exporter to completely renege on its contractual obligations (Harou and Walker 2010). As the farmer's main objective was to sell without making a net loss, smallholders' response to a price risk they encountered was to avoid or mitigate it by selling to the highest bidder regardless of prior agreements with other exporters. This practice, known as 'side-selling', was extremely prevalent. Another response was to contract with a number of exporters and/or processors at the same time.

In interacting with farmers, exporters mainly bore a supply risk, the inability to deliver contracted quantities at a set time. This was likely if a contracted smallholder sold all or part of his or her produce to another exporter, leading to less than expected quantities for export. On the other hand, the exporter was able to transfer its supply risk to the smallholder in times of abundant domestic supply, by not showing up to collect fruit agreed on. Usually, supply risk results in financial risk and/or reputational risk.

Exporters also bore price risks in interacting with buyers. Price risks arose from the perceived quality of the fruit at delivery, a possible drop in consumer demand at certain times of the year, e.g. in summer, and an excess supply of pineapples from other countries. At such times, exporters could, and did, transfer these risks to farmers by reducing the price they paid per fruit, by reducing the volumes they collected or by not collecting fruit at all. Furthermore, lower than expected prices translated into credit risks, as the expected income from supplying a quantity of produce was reduced.

9.3 Ghana's experience: 2005–2013

Dramatic changes in pineapple varieties, as well as the stringency of product and quality standards, began to exert a significant influence on the production and exchange of pineapples between 2005 and 2013. This is because, around the mid-2000s, the pineapple variety MD2 had begun to dominate the EU market. Ghanaian exporters had two choices: diversify to MD2 or develop a strategy to maintain or increase their share of the market with the smooth cayenne variety. Although some exporters had begun efforts to diversify to MD2 in the early 2000s (Voisard and Jaeger 2003; Whitfield 2010b), generally, Ghanaian exporters perceived that they could maintain and even increase their market share by continuing to produce smooth cayenne. Hence, MD2 was not considered a significant threat to production at that time.

However, the EU market demand for smooth cayenne abruptly collapsed in 2005. This price collapse was driven by the resolution of patent issues affecting the MD2 variety. This meant that the price premium of MD2 was eroded dramatically as supply increased (Jaeger 2008; Whitfield 2010b; Whitfield 2012). Because this variety saturated the market, Ghanaian exporters were left with tonnes of smooth cayenne fruits for which there was little demand.

The MD2 variety requires a minimum level of economies of scale to be profitable: the NRI (2010) estimates 16 hectares (40 acres) for smallholders and a minimum of 54 hectares (133 acres) for outgrowers. It also required a new set of agronomic knowledge and skills and used more inputs, e.g. fertiliser, agrochemicals and plastic mulch, than smooth cayenne. While smooth cayenne suckers had been freely available from producers' own farms, or from others at a cost of between US\$0.01 and \$0.06 (World Bank 2011), MD2 suckers were individually priced at between \$0.70 and \$0.80. Producers were required to

use only those agrochemicals (i.e. fertilisers, pesticides, chemicals) that were authorised for the cultivation of fruits. Sourcing approved fertilisers and chemicals in some cases meant that exporters had to import their own supplies from Europe. Furthermore, to meet retailers' quality standards, exporters had to make investments in infrastructure (e.g. packhouses) and institute worker health and safety practices. Farmers had to be trained in 'good' agricultural practices, e.g. keeping a record of fertiliser dosage and applications, and in knowledge about pesticide residue-limit requirements. Given the already weak knowledge transfer networks and contractual relations between exporters and producers, the new rules entailed higher monitoring and supervision costs.

Donor organisations actively participated in the sector to disseminate MD2 suckers and transfer knowledge of production processes. The overarching goal of such programmes was the establishment of effective agriculture–industry linkages (AfDB 2005; USAID 2009), and this translated into the belief that efforts to disseminate MD2 suckers and knowledge to farmers and exporters would be enough to integrate them into the value chain.⁷ However, although laudable, this form of technical assistance needed to be accompanied by other initiatives in the realm of finance. A one-off subsidisation was useful, but to cover their recurrent costs producers also needed access to finance. Their ability to access finance also depended on their access to export markets, which in turn depended on their connection to exporters and ability to access the necessary inputs and knowledge. Hence, co-ordination between chain actors to enable effective and sustainable GVC engagement needed to be strengthened.

9.4 The restructuring of relations

Since the fragmentation of producers was a challenge to the development of the chain,

efforts were made to strengthen producer networks, typically through the use of farmer cooperatives. Moreover, since 2008, written contracts began to form the basis of relationships between farmers and exporters or processors. Having a written contract became standard business practice. Other reasons for insisting on a written contract are market access, guaranteed prices and avoiding opportunistic behaviour. The contracts indicate the price per kilogram, quantity, quality, contract duration and technical assistance. However, in many cases, the contract does not link the farmer with credit from either the buyer or a financial institution. It is only in the production of the sugar loaf variety where producers are able to use their contracts to secure finance from commercial banks, with donor support as a guarantor. Subsequently, producers were able to use their contracts to secure finance from commercial banks, with donor support as a guarantor.

9.5 Improved supply and quality of fruits

The incentive for producers to behave opportunistically is limited in the new governance structure. Both producers and processors make financial and physical investments (i.e. learn about and apply processes) for a crop which has very limited local demand (MD2) or for which the local market has low or no standards (smooth cayenne and sugar loaf).⁸

Transactional dependence, i.e. dependence on one or a few buyers or producers (Pietrobelli and Saliola 2008), served as a major factor eliminating the incentive to behave opportunistically. The organisational practices of processors enhanced their reputation as reliable contractual partners. Such practices included prompt payment, as well as flexibility in payment schedules (previously, producers could wait as long as three months before they were paid for their produce). Nowadays, producers are paid

by cheque directly into their bank accounts, two weeks after delivery. According to the small- and medium-scale producers interviewed, processors have never reneged on this.

9.6 Conclusion

This case study demonstrates how effective value-chain development depends on the responsiveness of the domestic enabling environment to changes occurring in the international environment. The inability of the domestic enabling environment to respond in a timely and efficient manner had a significant impact on the chain, especially with respect to access. Horizontal co-ordination has, however, proved useful to allow participants to access resources that they would not have been able to access as individuals. Also, the use of written contracts and a small number of both buyers and sellers has led to a stability of relations, reduced investment risks and smoothed farmers' income flows. Finally, accessibility of credit remains a challenge that hampers the productivity of chain farmers and exporters. Bank lending preferences, the cost of credit and collateral requirements are some of the factors limiting farmer access.⁹ A representative of a financial institution commented: 'The long gestation period of pineapple, one year and over, makes it difficult to finance. Assuming you give a moratorium of even four months, you lose some money, as the same amount of money given to a trading business will yield interest and profit over the same period.' The government and financial institutions have to find innovative ways to combat this challenge in order to release the full potential of participation in the chain.

Notes

- 1 PhD candidate, School of Oriental and African Studies, University of London.
- 2 The top five exporters in 2002 were Jei River, Farmapine, Koranco, Milani and Prudent (Voisard and Jaeger 2003).

- 3 Fruits not sold to exporters and/or processors were sold on the local market.
- 4 The ideal temperature for pineapple soon after harvest is between 7° and 8° Celsius (CBI 2014).
- 5 In 1994, the Sea-Freight Pineapple Exporters of Ghana (SPEG) was formed as a result of innovations in sea freighting of pineapples and air transport capacity limitations in Ghana. As sea freighting of pineapple required a sizeable and consistent volume throughout the year, economies of scale were required. SPEG is in charge of negotiating transportation of pineapples by sea from Ghana for its members.
- 6 The sales agents charged a commission of between 5 and 7 per cent of the net selling price (AfDB 2005).
- 7 For example, programmes have taught farmers how to select suckers, force pineapples and degreen them, as well as cultural practices that will ensure high yields (USAID 2009).
- 8 International supermarkets, e.g. ShopRite, and hotels operating in the country request adherence to the GlobalGAP standard, which began as an initiative across European retailers to harmonise private standards. They generally purchase from exporters and/or processors who they know adhere to such standards.
- 9 Interest rates are consistently above 25% p.a.

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