Unilever: building a black soy bean supply chain in Java, Indonesia

This case study provides an example of a company working with smallholder farmers through enterprise development to secure supplies of raw materials and to build its own brand, while benefiting farmers in terms of improved incomes and a guaranteed market for their produce.

Background

Kecap Bango, a specialty sweet soy sauce made from black soy beans, has been manufactured since 1928. It was originally produced using Javanese soy beans and was marketed and sold exclusively in Java, where the brand has close local associations and a high level of visibility. Recognising the potential to market the product throughout Indonesia, PT Unilever Indonesia, the local arm of multinational Unilever, acquired a majority stake in the Bango brand in 2000. In 2007 it acquired 100 per cent ownership of the brand.

Looking to expand its distribution and sales, Unilever undertook an assessment of its raw material requirements. This showed that the limiting factor were the black soy beans, which up until 2003 were grown solely in West Java and for which supply from existing sources could not easily be expanded. It was possible to import beans from abroad, but Unilever decided to use only locally grown beans, given that it was part of the Bango brand identity to be 'local' – and that Java provides ideal conditions in which to cultivate black soy beans. The company decided to focus its development of new suppliers in central and East Java.

With a product manufactured and distributed domestically, the value chain from farmers to manufacturer was relatively simple. In West Java, Unilever sourced supplies from third party suppliers, who took their produce to a company-owned factory for processing. In setting up its new programme, however, one of the major problems for Unilever was the lack of any formal structures or institutions with which it could work as a business partner. To address this issue, the company needed farmers to set up an entity which would represent them and which could help them to work collectively. Under Indonesian law, the best option for such an enterprise was a co-operative owned by the farmers themselves.

The main business driver for Unilever was expanding the market for the Bango brand. A second driver was to expand the sustainable supply of black soy beans and to maintain or improve the quality and price of the product. It was essential for Unilever to solve the supply problem in order to make the most of opportunities for growth.

Existing agricultural production in central and East Java is a mix of cash and subsistence crops, including peanuts and maize in the dry season and rice in the wet season. Women's involvement in agricultural production and marketing is limited by social attitudes and by a lack of education. In rural areas the primary employment for women is in the low-paid, labour-intensive harvesting and post-harvesting phases of production.

To develop the new supplies it needed, Unilever set up the Black Soy Bean Farmers Development Program to encourage Javanese farmers to grow the crop. As the programme aimed to develop new sources of beans, it did not target existing suppliers. No specific analysis of poverty levels or the extent of land cultivated by the smallholders engaged in the Unilever programme has been undertaken. However, from an initial pilot project in 2001 involving a dozen farmers, the programme has grown steadily and by 2007 involved the participation of some 6,600 smallholders, with 1,100 hectares of land under cultivation.

Key champions

Unilever was founded in the 1890s. Today the company has a global portfolio of 400 brands in the food and home and personal care segments. It is active in over 100 countries and generates nearly half of its sales volumes in developing and emerging economies. In 2008, it employed 174,000 people worldwide and had a turnover of €40.5bn. The company works on sustainability in the areas of agriculture, eco-efficiency, carbon, and water through a range of external initiatives and its own internal programmes. PT Unilever Indonesia was established in 1933, and today manufactures soaps, detergents, cosmetics, and dairy- and tea-based products, as well as soy sauce.

Smallholders living near the Unilever processing factory were identified as potential local partners. The smallholders, with help from Unilever, set up seven legally registered co-operatives, which they owned themselves, with management teams made up of farmers and other individuals. Three of these were based on existing co-operatives, while the other four were set up from scratch.

Gadjah Mada University (Universitas Gadjah Mada, or UGM) was a key educational partner. It had the agricultural knowledge base to provide technical assistance to help soy bean farmers to grow their crops. This assistance included training, capacity building, and the provision of extension services, in close co-operation with Unilever.

The Unilever Indonesia Foundation was set up in 2000 to carry forward the company's commitment to corporate social responsibility. In the Black Soy Bean Farmers Development Program it provided business development support for the farmers' co-operatives and also developed community initiatives such as a women's empowerment programme, co-coordinating and managing the programme jointly with UGM. The Indonesian Government has been generally supportive of the programme, but to date there has provided no concrete support or opportunities for partnership, apart from the supply of extension services.

How it works

The business driver for Unilever in developing the capacity of smallholders was the need to secure supplies of raw materials to enable the growth of the Bango brand. The primary consideration for smallholders was to increase their incomes. Diversifying production into a new crop marketed through a different channel also gave them a new and regular source of income.

The company describes below its holistic approach in developing the programme. Its strategy was to secure sustainable supplies from a dispersed network of smallholders by facilitating the formation of smallholder enterprises. Improving the livelihoods of farmers has had three positive outcomes for Unilever: it has allowed it to a) expand production; b) demonstrate commitment to its sustainable agriculture programme, including the economic and social development of farmers within its supply chains; and c) build loyalty to the Bango brand.

Unilever pays new smallholder producers the same price for their soy beans as it does existing suppliers. To create an incentive to participate in the programme, its processing factory has committed to buying all production supplied by the co-operatives that meets Unilever's quality standards. The co-operatives also undertake the following activities:

- Register and formalise membership of new farmers who join the programme;
- Arrange meetings between co-operative managements and Unilever to agree contracts and to agree technical support from UGM, before the planting season begins;
- Purchase and distribute inputs including seeds, fertilisers, and agricultural machinery;
- Agree production plans with smallholders;
- Buy back crops from the farmers, managing their consolidation and transport to the Unilever processing factory.

The Unilever Foundation has funded the provision of financial services and low-cost credit for farmers, delivered through the co-operatives. Via the Foundation, Unilever offers farmers 'soft' loans to enable them to manage the increased costs of buying high-quality seeds, fertilisers, herbicides, and pesticides recommended by the company. These inputs are purchased and distributed by the co-operatives, and farmers repay the loans after they have sold their crops. This facility gives farmers an alternative to loans from traditional moneylenders who charge high rates of interest, in some cases up to 40 per cent.

This financing scheme has also allowed six women's groups to start their own small-scale business trading in local markets, which generates additional income for their families and communities.

The programme has seen the establishment of four new co-operatives and has supported these and three pre-existing co-ops to become independent, professional business entities. The locations of the co-ops were selected on the basis of an agronomic assessment and their proximity to the factory, with one co-op per district. Membership of each co-op ranges from roughly 500 to 1,000 farmers. The quality of the beans produced by the co-operative farmers is generally as good or better than that of the original suppliers.

The Unilever Foundation supports the co-operatives by means of mentoring, and has developed an individual business plan for each one. It also conducts training on the introduction of IT systems and standard operating procedures, while key managerial staff receive training in areas such as business and financial management. Unilever plans to develop the seven existing co-ops to maturity before setting up any new ones.

Extension officers from Gadjah Mada University deliver training to farmers on good agricultural practices from the planting period through to harvest time. These include crop management, optimum use of fertilisers and pesticides, crop rotation, and post-harvest handling. Due to improved agricultural practices trained farmers reach bean yields of 1 to 2 tons per hectare, while untrained farmers typically reach 0.7 tons. Training is delivered through a ‘farmer field school’ model, via the co-operatives. Training programmes are developed in consultation with Unilever’s own production management staff and with the management of the Unilever Foundation, to ensure that training meets both the farmers’ needs and those of the company. They also receive support from the Government’s extension programme.

In addition, the Foundation supports a social programme aimed at empowering women, to enable them to become more socially and economically active. This began in 2007, when it delivered a series of training activities on nutrition, entrepreneurship, and personal development to six groups of women. This pilot project proved successful, and in 2008 some 500 women participated in the scheme. In 2009 it is planned to extend the programme to other regions, with a planned 1,000 women participating.

Unilever’s processing factory delivers additional supporting components to the overall programme. It gives farmers secure, guaranteed access to the market by committing to buy their crops at a price that is agreed annually, based on the market price, before the crop is planted. In return it is assured of a steady supply of black soy beans. Contracts agree quantity and quality terms and stipulate incentives and penalties on quantity, time of delivery, and volume expectations. In 2008, an open-price contract was created, but given the choice, in 2009, the co-operatives opted for a pre-defined price mechanism to form the basis of the contract.

Together with UGM, Unilever has worked to develop new seed varieties. Black soy bean has been something of a neglected crop in Java, with production falling dramatically after the introduction of yellow soy beans from China. However, the university’s research programme has developed a new black soy variety called Mallika, which produces superior yields compared with the Cikuray variety that was previously widely used. This new variety has now been registered and nationally approved by the Ministry of Agriculture as the fifth black soy variety in Indonesia (there are 52 yellow soy varieties). Propagation of the Mallika variety is overseen and co-coordinated by UGM, while the Unilever Foundation supports the university in training farmers to produce the seed. The possibility of contracting out seed propagation as a commercial venture has been explored, but negotiations with seed companies have so far proved unsuccessful.

Post-intervention/innovation situation

The Black Soy Bean Farmers Development Program is still growing. To date it has involved, via the farmer-owned co-operatives, the participation of some 6,600 smallholder farmers, who now grow approximately 25–30 per cent of the black soy beans used to produce the Bango brand. All these farmers have diversified their production away from other cash and subsistence crops such as peanuts, maize, and rice. The remaining volume of raw materials required by the company is sourced from suppliers in the original growing area in West Java. Any further growth of the Bango brand will have to come from expansion of the East Java programme, as these traditional sources are limited.

All the actors have benefited from their participation in the programme, according to Unilever. The farmers' co-ops are now professional enterprises that manage production, train new producers, and supply low-cost finance, helping farmers to attain increased yields with reduced costs. Typically the yield of soy beans for new farmers is about 0.7 tons per hectare, while trained farmers can achieve yields of 1–2 tons per hectare. A guaranteed market allows farmers to make investments in black soy production and new seed varieties.

This new crop involves a high level of dependency, both for the farmers and for Unilever: currently farmers do not have any alternative marketing channels for black soy, with the co-operatives selling 100 per cent of their production to Unilever (although there is increasing interest from local traders). However, Unilever's investment in developing the capacity of the co-operatives and its transparency in the trade relationship help to mitigate the risks for growers.

UGM's research programme has helped it to develop a model of best agricultural practice appropriate to Javanese smallholder agriculture; this, it hopes, can be replicated in other agricultural programmes.

As for Unilever, it has secured a guaranteed supply of quality raw materials that has helped it to expand production and sales of its Bango brand, a major part of its business in Indonesia. As long as the company's demand for black soy beans outstrips or matches the supply available, this business model is unlikely to change. If the market for black soy beans grows beyond Unilever's current production levels, it will allow for an expansion in production.

Business costs and returns

Establishing direct trading relationships with the Unilever factory has given farmers a higher margin on their primary product, even when the increased costs of overheads (in fees charged by the co-operative for managing supplies) are taken into account. The combination of the new crop, the reduced costs of finance, and increased margins has resulted in an improvement in farmers' incomes of approximately 10–15 per cent. In addition, the existence of a guaranteed market gives households increased security. The immediate benefit to Unilever is a significant expansion of the Bango brand, which has seen sales increase nearly nine-fold since 2001.

The cost to Unilever of delivering the programme ranges from IDR 700m to IDR 1,000m (€50,000 to €72,000) annually, plus the cost of staff to manage it. However, the company believes that the business model is commercially viable, given that it helps to ensure the sustainability of the brand, create brand value, and allow expansion of production to meet any future growth. In addition, it believes that investment in local enterprises and social development in producer communities helps to create loyalty to Unilever and enhances the company's social 'licence to operate' in Indonesia.

For UGM, the programme has created employment opportunities for graduates as extension workers, and has created opportunities for the university to carry out applied research and to implement its findings directly in the field. UGM has helped to train farmers in more efficient use of seed and fertiliser as well as pesticides to ensure sustainable farming practices. Over time, better farming practices and more efficient inputs are expected to increase yields.

Partially because of the interest created by this project, black soy is now highly sought after, with demand sometimes exceeding supply. This means that, increasingly, outside buyers have attempted to purchase farmers' production for high spot prices, above the contractual price agreed with Unilever. This development potentially offers increased income for farmers, but represents a potential cost to Unilever. However, the company is confident that the incentives created by the programme reduce the likelihood of farmers breaching their contracts.

Certain farmers have been specially selected to train others in the community on better agricultural practices, creating a self-reliant extension service for the future. This means that even when there is no longer direct support from the Unilever Foundation and UGM, the farmers will still be able to work directly with PT Unilever Indonesia.

Social costs and benefits, and sustainability

The following benefits have been observed:

- Increased production of black soy beans for Kecap Bango has provided an estimated 10–15 per cent uplift in income for 6,600 farmer families.
- There has been increased empowerment of women.
- The vulnerability of smallholders to changes in market demand has been reduced by the creation of enterprises that can potentially explore new markets.
- Formalisation of smallholder production and the creation of new co-operative enterprises have enhanced the political voice of the population.

- Unilever has provided assistance to participating farmers affected by natural disasters. In 2006, for example, it provided emergency assistance to farmers affected by an earthquake in the Yogyakarta region, and built five community health centres that black soy bean farmers can access free of charge. It has also provided assistance to farmers affected by flooding in different parts of Java.

How replicable is the innovation?

- The programme can continue to grow in scale if market demand continues to increase. The investments made since 2001 have enabled 6,600 smallholders to begin trading; this demonstrates the need for long-term commitment.

- Replicating the model requires a company to have an existing local presence, established networks, and partnerships with professional institutions and investors capable of delivering the various components of the programme to smallholders.

- The programme needs to be adapted to different agricultural conditions and levels of economic and social development in the target community. A supportive local government can help to enable the provision of agricultural training and research.

- Unilever has plans to replicate the model in two other supply chains in Indonesia, for coconut sugar and black tea.

Lessons for businesses

In Oxfam's and Unilever's estimation, the following are the lessons to be drawn from the business model of the Black Soy Bean Farmers Development Program in Java:

- There is a clear business case for Unilever and the smallholders to invest.

- The lead firm must ensure that there is clarity of vision for all trading and programme partners involved. Working with partner and trading organisations who share this vision is essential for all partners to invest for the long term.

- Unilever's buying commitment allows its business partners to take a long-term perspective and through close co-operation and a sharing of risks, builds long-term business relationships.

- The creation of smallholder-owned businesses reduces management costs for smallholder networks over time, making them competitive with larger-scale suppliers, and also reduces smallholders' dependency on the lead firm.

- Investment in social development – such as training in business skills and empowerment of women – alongside business development supports the long-term viability of the engagement.

- Smallholders can be a resource to help overcome supply constraints of key but limited raw materials.

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Oxfam is a registered charity in England and Wales (no 202918) and Scotland (SCO 039042). Oxfam GB is a member of Oxfam International.

In order to produce this case study, Oxfam has relied upon information provided by this company.

Acknowledgments:
Oxfam GB would like to thank ODI for their contribution. We would also like to acknowledge the contributions of Christof Walter, Maya Tamimi, Sinta Kaniawati, and other staff of Unilever.

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