

IDS

EVIDENCE REPORT

No 52

Reducing Hunger and Undernutrition

The Role of Businesses in Providing Nutrient-Rich Foods for the Poor: A Case Study in Tanzania

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February 2014

The IDS programme on Strengthening Evidence-based Policy works across seven key themes. Each theme works with partner institutions to co-construct policy-relevant knowledge and engage in policy-influencing processes. This material has been developed under the Reducing Hunger and Undernutrition theme.

The authors gratefully acknowledge the support and participation of senior management and staff at Power Foods Ltd, the Tuboreshe Chakula programme managers and participants, and the Department of Agricultural Economics and Agribusiness team at Sokoine University of Agriculture throughout this project. Input to this report was also provided by Jodie Thorpe, Institute of Development Studies.

The material has been funded by UK aid from the UK Government, however the views expressed do not necessarily reflect the UK Government's official policies.

AG Level 2 Output ID: 9

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First published by the Institute of Development Studies in February 2014
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List of Abbreviations

CAADP	Comprehensive Africa Agriculture Development Programme
COMPETE	East Africa Competitiveness and Trade Expansion
IFPRI	International Food Policy Research Institute
MDGs	Millennium Development Goals
MT	metric tonnes
NGO	non-governmental organisation
ppb	parts per billion
RUTF	ready-to-use therapeutic food
SME	small and medium-sized enterprises
TZS	Tanzanian Shilling
UNICEF	United Nations Children's Fund
UNSCN	United Nations Standing Committee on Nutrition

Executive summary

This case study of a Tanzanian food processing business analyses the potential of mid-sized businesses to contribute to tackling undernutrition. Particularly among young children and pregnant mothers, undernutrition has lifelong consequences and impedes individuals' health, wellbeing and life chances. Providing nutrients through food is one way to reduce undernutrition, in conjunction with improvements in health and sanitation. This report examines how private companies can contribute to producing and delivering nutrient-rich foods to undernourished populations, as well as the constraints they face in doing so. It offers recommendations to governments, non-profit organisations and other development actors on how to collaborate with businesses in this area to catalyse their potential. The study examines the case of Power Foods Limited, a midsize company, and the first in Tanzania to produce fortified nutrient-rich foods from traditional crops. It is also the first local company to produce ready-to-use therapeutic food (RUTF), used for the treatment of severe acute malnutrition.

Power Foods has had commercial success producing nutrient-rich foods. Nevertheless, the company's experience also demonstrates the challenges that midsize businesses face when trying to market such products to low-income consumers. Despite working towards this goal for 20 years, the company still struggles to reach the poorest and rural consumers. This is largely due to market characteristics and challenges outside the company's control. Firstly, nutritional awareness among consumers is generally low, and so the benefits of purchasing fortified foods are often not apparent to them. Secondly, companies like Power Foods struggle to distinguish their products from non-fortified alternatives that can be produced at lower cost and sold at lower prices due to the absence of mechanisms to signal products' nutritional quality. Although Power Foods has been able to differentiate its products through branding and a high public profile, this response increases costs and puts its products out of reach of poor consumers. Thirdly, there is a lack of distribution channels that reach poor and rural consumers, since these channels are more expensive to create. Finally, there are difficulties in sourcing good quality inputs. These problems are not unique to Power Foods - they have also been encountered by businesses in other African countries.

The case of Power Foods suggests ways in which the problems the company faces can be overcome. Power Foods has been able to reach some low-income consumers through

collaborations with non-profit organisations. In the short term, the best way to bypass the constraints faced by businesses is through non-profit distribution channels, which both reduce risks for business and cover the costs of delivering products to the people most vulnerable to undernutrition. Power Foods' experience of producing for the United Nations Children's Fund (UNICEF), as well as Tanzania's School Feeding Programme, exemplifies how public non-profit distribution can work. However, the scale of the undernutrition problem is such that non-profit distribution will never reach all those affected. Based on the case of Power Foods, it is impossible to assess whether public-private partnerships will allow businesses to move to models that can sell nutrient-rich foods to poor consumers on a commercially sustainable basis. To promote such models, donors, government agencies and non-governmental organisations (NGOs) need to explore other forms of partnership, including nutrition awareness campaigns, and investing in institutional mechanisms that signal nutritional quality to consumers. This business case study suggests that the challenges of making products available and affordable to low-income consumers are difficult to overcome. Available evidence indicates that non-profit distribution can be effective in the short term; other forms of public-private partnership also need to be explored to bridge the gap.

1 Nutrient-rich foods: the challenge for businesses

Undernutrition has become a top priority on the global development agenda. This is in large part because progress in reducing levels of undernutrition in many developing countries has been limited, in spite of the prominence of hunger reduction in the Millennium Development Goals (MDGs). More specifically, micronutrient undernutrition – including deficiencies in iron, iodine, folic acid, zinc and vitamin A – has proved particularly difficult to counter, and this is reflected in the increasing emphasis on 'hidden hunger'. Whilst the impact of micronutrient deficiency is less immediately obvious than energy and protein deficiency, research has documented impacts on maternal and child health on a massive scale (Black *et al.* 2008). In spite of the recognition of the social and economic impacts of common micronutrient deficiencies and the perception that the solutions to undernutrition are highly cost-effective, progress in reducing undernutrition has been limited in many countries over the past two decades.

Tanzania faces a major undernutrition problem, with one of the highest rates of stunting among children (a key measure of chronic undernutrition) in Africa. Box 1.1 highlights key indicators of the extent of undernutrition in the country. The development community is looking for private sector-led initiatives to form part of the food-based solutions to undernutrition.¹ However, there is a lack of evidence on what kinds of private sector involvement are effective and the constraints to be overcome in order for businesses to meet this expectation. This report focuses on the experience of one business in Tanzania, Power Foods, in an attempt to provide food-based solutions for undernutrition.

¹ For example, the US Government's Feed the Future Programme states that, 'The private sector can bring financial and technical resources, market access, cutting-edge business practices, in-country networks, and other expertise related to food security. We seek to leverage and coordinate our resources and efforts with NGOs, the private sector, and the full range of stakeholders interested in food security and agricultural-led growth' (USAID 2010: v). See also the special issue of *SCN News*, published by the UN Standing Committee on Nutrition (UNSCN), devoted to nutrition and business.

Box 1.1 Undernutrition in Tanzania

The undernutrition situation in Tanzania is critical, with one of the highest rates of stunting² among children under 5 years old in Africa. According to the 2010 Tanzania Demographic and Health Survey, undernutrition in Tanzania remains alarmingly high:

- Among children under age 5, 42 per cent were stunted in 2010, and 16 per cent were underweight.
- 69 per cent of children aged between six and 59 months suffered from anaemia, 35 per cent had iron deficiency, and 33 per cent had vitamin A deficiency.
- Among women aged 15 to 49 (hence including women of childbearing age), 30 per cent suffered from iron deficiency, 36 per cent from iodine deficiency, 37 per cent from vitamin A deficiency, and 40 per cent from anaemia.

Source: Tanzania Demographic and Health Survey 2010, cited in Comprehensive Africa Agriculture Development Programme (CAADP) (2013)

The biggest challenges facing food businesses and development agencies in the provision of nutrient-rich foods for the undernourished can be summarised under three categories (adapted from Hawkes and Ruel 2011):

1. **Food must be nutrient-rich:** businesses need to produce safe food that contains the micronutrients and minerals crucial for health and development, such as vitamin A, zinc, iron and folic acid.
2. **Food must reach key populations:** these foods need to reach – and be eaten by – the people affected by undernutrition. Particular priority is currently given to children under two (those in the critical 1000-day period from conception to 24 months old), and pregnant lactating women and adolescent girls more generally (see Bhutta *et al.* 2013). Reaching these populations requires delivering food to where these groups can access it and doing so at a price they can afford.
3. **Food must be produced through models that are commercially viable:** businesses need to produce and distribute these foods in such a way that they are commercially viable and sustainable. Achieving commercial viability is especially challenging.

Achieving these three conditions simultaneously is the key challenge for businesses. Safe, nutrient-rich foods are frequently more expensive than other foods, and these qualities are 'credence characteristics' that consumers cannot easily verify.³ In addition, getting such foods to where the poor live adds costs, and poor people have limited resources for purchasing such foods. For these reasons, business sustainability can be jeopardised by a combination of higher costs and lower potential revenues.

The challenges faced by businesses reflect wider market constraints: imperfect information, bounded rationality, uncertainty and opportunistic behaviour lead businesses to underinvest

² Stunting is defined as a child being too short for its age; it is a sign of chronic deficiencies in macro and/or micronutrients.

³ Nutritional quality is a credence good, meaning that the nutrient content of foods is 'invisible' to consumers. This creates a lack of trust and disincentives to invest in nutrient-rich products. Businesses may respond by using high prices to signal the nutritional quality of food products, putting them further out of the reach of the poor.

in nutritious foods. These challenges are summarised in Table 1.1, and described in more detail in the policy guidelines report produced by this project (Anim-Somuah *et al.* 2013). In this context, donors, NGOs and governments need to create an environment that enables businesses to produce the right foods and provide them to the right people, in a way that is commercially viable and sustainable.

Table 1.1 Constraints to commercial viability for nutrient-rich foods

Market conditions	Implications for businesses
<p>1. Low demand. Most consumers, especially the poor, are not aware of nutritional needs, and are not willing to pay higher prices for nutrient-rich foods.</p>	<ul style="list-style-type: none"> • The cost of creating nutrition awareness is too high for a single business. • Collective action among businesses or support from public and non-profit sectors is needed.
<p>2. Absence of signalling. In most foods, nutrient content is 'invisible' to consumers. In order to make informed purchasing decisions, mechanisms are required that 'signal' products' nutritional quality to consumers.</p>	<ul style="list-style-type: none"> • Competitors introduce similar products that lack micronutrient content. This undercuts businesses that invest in nutrient-rich products, and leaves them unable to secure a higher price.
<p>3. Distribution channels are needed to bring products to consumers, especially to those in rural and low-income areas who are affected by undernutrition.</p>	<ul style="list-style-type: none"> • Distribution channels that reach poor and rural consumers are especially expensive to create. • This problem is especially daunting for medium-sized businesses, which lack the resources to build their own distribution networks.
<p>4. Sourcing and value chain coordination. In Tanzania, it is difficult to secure high-quality supplies of inputs for food processing.</p>	<ul style="list-style-type: none"> • Poor and variable quality inputs raise costs for businesses, which are passed on to consumers as higher prices. • Difficult to coordinate with farmers and other upstream actors to produce quality and sustainable inputs.

This report analyses Power Foods, a medium-sized company in Tanzania that produces fortified products from traditional crops and delivers them to children and mothers. While definitive conclusions cannot be drawn from a single case, this approach can provide lessons about similar businesses' ability to overcome the challenges in Table 1.1, and about the potential role of development actors in achieving this. The study addresses the issues of the nutritional benefits of the foods produced by the company, their supply chain challenges relating to input procurement and to their distribution and marketing channels. It considers first the company's production of therapeutic foods that are sold to international development agencies for subsequent distribution, and their challenges (or lack of challenges), and then contrasts these with Power Foods' commercially-distributed fortified food products.

The information presented in this report is based on a series of interviews with senior management and operational staff at Power Foods during December 2013. In addition, a number of other actors were interviewed, including staff in donor-funded projects, and participants in micro-enterprises and informal sector businesses. This information was reviewed by Power Foods.

2 Case study: Power Foods

Power Foods is a midsize food processor based in Dar es Salaam (see Box 2.1). Founded in 1993 by Mrs Anna Temu, an entrepreneur with training in food science, Power Foods was the first company in Tanzania to produce micronutrient-fortified foods from local crops such as millet, sorghum, maize, cassava and soyabean. Its products are targeted specifically at undernourished children and pregnant women. The company's operations are divided under two brands, each with a distinctive product range and business model. The company's traditional business focuses on cereal products, under the brand 'Power Flour'. The company also produces a ready-to-use therapeutic food (RUTF) under the brand 'Power Foods',⁴ their core business since 2010. Because the characteristics of these two brands (including sourcing and distribution) are radically different, they are discussed separately.

Box 2.1 Power Foods at a glance

- Company size: annual revenue US\$520,000 per year, 40 employees, and output of 387 metric tonnes (MT) per year
- Based in Dar es Salaam; distributes across Tanzania
- Business is split across two divisions: Power Flour, which makes consumer products (around 40 per cent of total sales); and Power Foods brand, which makes RUTF for institutional buyers
- Main target customers are children and mothers (around 60 per cent of total sales)
- Three of the company's flour products are fortified with micronutrients.

The strength of the company is their commitment to delivering high-quality, nutrient-rich products, with the intent of making these products more accessible to all consumers in Tanzania. Since 2010, an important part of Power Foods' operations produces only Plumpy'Nut, an RUTF, developed initially by the French company Nutriset, the patent holder, which is the most widely-used RUTF product. The company signed a franchise agreement with Nutriset to produce RUTF to order, through contracts with UNICEF, as well as other donors and relief agencies. Power Foods set up this brand of the company as a wholly export-based operation in order to benefit from export tax exemptions. Therefore, its entire RUTF output is sold to relief agencies that distribute it when emergency feeding is required to alleviate severe and acute malnutrition. Power Foods has more than doubled its sales since starting production.

The second brand, Power Flour, is the company's initial business. The company specialises in producing packaged and convenient versions of cereal-based foods traditionally prepared in the home, and it continues to work on new formulas and products. They sell these products in the local market, mainly targeting mothers and children, but also working through non-profit organisations.

Traditionally, a pivotal part of Power Flour's demand were sales to non-profit organisations serving the Tanzania School Feeding Programme. It was demand from these organisations that motivated the company to begin fortifying some of its products. The first fortified products were produced in 2007, when Power Foods sold 106 MT of their fortified product

⁴ The brand shares the name with the overall company. Throughout this report, we use 'Power Foods' to refer to the company and 'Power Foods brand' to refer to the portion of the business dedicated to RUTF.

Lishe Nut to the World Vision-funded Tanzania Food Aid programme (see Box 2.2). After the contract finished, Power Foods continued fortifying Lishe Nut, which was then sold directly to consumers. It also added two additional fortified products to their catalogue. Power Foods has also produced on contract for other buyers, including Save the Children, Red Cross Tanzania, and Feed the Children. In 2010 institutional clients represented 30 per cent of their total sales, although in 2012 they only accounted for five per cent of total sales. This is due to the company's introduction of their RUTF production, which account today for 60 per cent of their total sales.

Box 2.2 School Feeding Programme in Tanzania

In parallel to its consumer products, Power Foods has produced speciality products at scale for large institutional buying programmes. In 2007 the company produced 106 metric tonnes of its cereal mix product Lishe Nut, which was purchased by the food aid programme of World Vision Tanzania and distributed in low-income areas of Dar es Salaam.

The Tanzania School Feeding Programme was managed by Feed the Children Tanzania and World Vision. It provided school-going children between ages 5 and 14 years old one meal per day in order to improve nutrition and promote school attendance. The programme reached 5,000 children in 2012. Lishe Nut was provided alongside Baby Porridge Flour and Lishe Soya Mix. These products were specifically formulated by the company, for the programme. This was the first time Power Foods fortified its products.

The programme encountered two main barriers. The first related to funding constraints. Although the programme initially covered the full cost of meals, it subsequently tried to introduce a small fee to be paid by the families of the children. However, teachers were unable to collect these payments, and many families could not afford them. A second challenge became evident after the fee was introduced: raising nutrition awareness. Although the programme asked teachers to provide nutrition information to students and parents, it was found that teachers had neither the time nor the training to do so.

In addition to its business, Power Foods is also involved in policy processes around nutritious foods in Tanzania. It has played a key role in developing the National Food Fortification Strategy. Yet despite the company's commercial success and the high regard in which it is held in Tanzania, it has come up against a number of constraints that have prevented it from making products affordable to low-income consumers. These are explored in this report.

2.1 RUTF production

The Power Foods brand started its RUTF business in 2010, when the company signed a franchise agreement with French firm Nutriset, the patent holder for Plumpy'Nut, the most widely-used RUTF product. The only product under this brand is Plumpy'Nut, specifically formulated to treat people suffering from severe acute malnutrition.⁵

⁵ For a more detailed discussion about Plumpy'Nut and similar products, see Lybbert (2011).

Power Foods sources all raw materials used to make Plumpy'Nut through imports, in order to ensure the product complies with international food standards and UNICEF's auditing.⁶ Power Foods follows Nutriset's guidance on the use of technology, sourcing of inputs and processing procedures. Since Nutriset provides this information as a package, the risks are reduced for franchisees like Power Foods, while ensuring that international standards are met, and that the supply chain is stable. RUTF is not available in consumer markets in Tanzania or elsewhere; the only buyers are relief agencies and a small number of government programmes. Power Foods is a small player in the global market for RUTF, which is worth approximately US\$1.5 billion. UNICEF buys the majority of Power Foods' production (see Box 2.3). Other buyers include governmental and non-governmental organisations.

Box 2.3 Power Foods and UNICEF

In 2007 UNICEF purchased 78 per cent of the global production of RUTF. Of a total production of 18,000 MT, Nutriset and its franchisees produced 16,000 MT (USAID 2009). UNICEF operates a centralised procurement facility, which groups total demand from its country offices into a single tender that is issued once every two years. Power Foods signed a long-term agreement with UNICEF to supply Plumpy'Nut during 2013, and a pre-emptive agreement for 2014. Because UNICEF pre-orders its stocks, Power Foods knows it has a guaranteed market before it begins production, reducing the risk born by the company. Power Foods was audited and validated as a UNICEF safe supplier in 2011.

2.2 Production of cereal products

The company's brand, 'Power Flour', includes a line of flours derived from locally grown cereals and tubers (maize, cassava, etc.), as well as other products such as a soya drink. The company produces packaged versions of foods that were traditionally prepared in the home for children while growing up. This helps make its products widely accepted by consumers. Three of these products are fortified with vitamins and minerals: Baby Porridge Flour (a weaning food aimed at children over six months of age), and two cereal mixes—Lishe Nut and Lishe Soya Mix Flour. Lishe Nut is the company's bestselling flour product. It has a particularly high nutrition potential because it is often used as a weaning food for infants and young children. Table 2.1 summarises the company's fortified products.

⁶ In a number of African countries where Plumpy'Nut is produced under franchise, a key challenge has been finding local supplies of groundnut that are not contaminated by aflatoxin, a harmful compound introduced when groundnuts are stored in humid conditions. The UNICEF standard is that aflatoxin levels should be below 5 parts per billion (ppb) in RUTF; this requires very high-quality supplies of groundnut.

Table 2.1 Overview of Power Foods’ key fortified products

Product name	Product description	Nutrient content	Consumer groups reached
Baby Porridge	Targeted directly to babies older than six months Cereal mix of corn, soyabeans, rice, planted sorghum and millet	Protein 14.2% Fortified with vitamins A, B1, B2, B6, iron, niacin and folic acid	Middle and upper income Mothers of young children Institutional buyers
Lishe Nut	Bestseller product Cereal mix, including finger millet, rice, soya protein, groundnuts and wheat	Protein 1.6% Fortified with vitamins A, B1, B2, B6, iron, niacin and folic acid	Middle and upper income Mothers of young children Institutional buyers
Lishe Soya Mix Flour	Cereal mix, using finger millet, sorghum, pearl millet, maize, soya protein	Protein 1.6% Fortified with vitamins A, B1, B2, B6, iron, niacin and folic acid	Middle and upper income

2.2.1 Supply chain

Finding reliable sources of safe food inputs of the requisite quality is a problem faced by many food processors in sub-Saharan Africa. Power Foods sources all the raw materials for its cereal products from within Tanzania. The ingredients include soyabeans, corn, rice, finger millet, sorghum and peanuts. Their only imported material is the micronutrient premix used for fortification. Power Foods benefits from the premix programme developed by the Global Alliance for Improved Nutrition, which has a Premixes Facility, based in Kenya. The Facility was designed to help food processors that have trouble testing the quality of premix sources by pre-certifying a set of suppliers located around the world, and providing a facility for tendering bids. This reduces the costs of sourcing for food processors and increases the reliability of their supply.

Power Foods faces two main challenges in sourcing cereal inputs: the first is seasonal fluctuations, in the price and availability of the crops. In response, Power Foods buys and stores large quantities after harvest (it tends to hold at least three months’ inventory). The second challenge is the unreliable quality of the inputs it purchases in Tanzania. The company has established relationships with buyers in each region of Tanzania that help source the quantities and quality required. But quality variations oblige the company to clean and sort all of its local inputs. In an effort to improve quality and reliability, the company tried to develop a contract farming model, providing training and seeds to a group of farmers, in exchange for a commitment to sell to the company after harvest. However, the company

reported that the scheme broke down when farmers failed to fulfil the terms of the contract, demanding higher prices or engaging in side-selling to other buyers.⁷ Power Foods currently depends on more than 600 different farmers to ensure their production capacity, and it has not been able to set up a workable contract farming scheme.

2.2.2 Distribution and marketing

Power Foods distributes its cereal products across Tanzania, but the strongest market is Dar es Salaam. The company uses four main distribution channels to reach consumers:

- **In-house distributors:** the company employs and trains in-house distributors that specialise in promoting and selling the products in small outdoor exhibition outlets and areas of high customer concentration, such as church congregations.
- **Independent distribution companies:** Power Foods sells directly to independent distribution depots and wholesalers located throughout Tanzania.
- **Direct sales:** Power Foods has a truck that takes orders from and delivers to a number of independent shops in Dar es Salaam. The company modelled this scheme on a similar distribution strategy used by Coca-Cola in Tanzania. The company also sells from a shop at its factory.
- **Institutional sales for school feeding programmes:** as mentioned above, selling to non-profit institutions (which then distribute via the School Feeding Programme) was initially an important part of Power Foods' business, although this channel has been in decline.

Although Power Foods aspires to reach all categories of consumers, at present most of its sales are to the middle and upper income groups. All of its products are sold in medium and large unit sizes (the smallest packet size is 500g). Producing small-unit-size products that might be more attractive to low-income consumers is currently unfeasible since production and distribution costs would be increased to unacceptable levels. Table 2.2 shows that Power Foods' products are more expensive than basic cereal products in the informal sector (e.g. maize flour), although its cereal mixes (fortified Baby Porridge) have similar prices compared to the mixed flours sold in the informal sector. More information on the informal sector for cereal flours in Tanzania is presented below (see Box 2.4).

The capacity of Power Foods to distribute its products broadly is severely limited. Its modest size means that it lacks both the scale and the capital to develop and operate its own distribution, with the exception of its direct marketing in Dar es Salaam. Hence, it depends on wholesalers and distributors, and these businesses have little incentive to target rural and remote markets, where profit margins are lower. As a result, thus far, non-profit distribution via the School Feeding Programme has proven the most effective way for Power Foods to reach children in undernourished areas in Tanzania.

⁷ A parallel study of two medium-sized food processing firms in Nigeria found that they encountered similar problems with managing farmer schemes (Nwuneli *et al.* 2014).

Table 2.2 Affordability of Power Foods’ products, compared to alternatives in informal market

	Name of product	Pack sizes	Price Tanzanian Shilling (TZS)
Power Foods’ products	Lishe Nut	1kg	3,500
	Baby Porridge	500g	2,500
	Lishe Soya Mix Flour	1kg	2,500
	Maize Flour	1kg	2,500
Informal sector products ⁸	Maize flour	1kg	1,000
	Cereal mix for infant feeding	500g	2,000–2,500

2.2.3 Signalling and nutritional quality

Under current market conditions for cereal and flour products in Tanzania, it is difficult for midsize businesses like Power Foods to convince consumers of the nutritional value of their products in a way that does not unduly increase the cost of products. There are several reasons for this. Firstly, as was discussed in the introduction, nutritional value is a credence good that is ‘invisible’ to consumers. This is especially true of fortified flours, since there is no way for a consumer to distinguish a product with added micronutrients from one without. Secondly, willingness to pay for nutritional content is low, both because consumers have limited spending power and because awareness of nutritional needs is low. Finally, the market for cereal mixed flour in Tanzania is large, fragmented and subject to intense competition on price (see Box 2.4). All businesses, including Power Foods, are under pressure to reduce costs. Fortifying products increases costs, and due to the signalling problem and low willingness to pay, it is difficult to recover these costs. This makes it especially difficult to form a viable business model around fortification.

Nevertheless, Power Foods has successfully built a line of fortified products. The company addresses the problems of signalling as best it can, given the circumstances. Working with non-profits and with the School Feeding Programme has strengthened the company’s reputation. Overall, the company’s strategy involves investing in its public reputation, so that its brand will allow consumers to distinguish its product from alternatives on the informal market. Power Foods’ key strategy for strengthening its brand is to build relationships with Tanzania’s regulatory agencies in order to gain public recognition for meeting quality standards.⁹ However, this strategy has an important limitation: it raises the costs of Power Foods’ products, making them unaffordable to poor consumers.

⁸ There are no 100 per cent equivalent products in the market, since often these are not fortified, or have fewer ingredients. The price comes from conversations with women’s groups that produce blended flours, and with traders.

⁹ The company does not do direct marketing of their cereal products targeted to children due to both legal restrictions and the company’s own concerns about advertising for complementary food products.

Box 2.4 Small and micro-enterprises in the cereal flour sector

Maize and cereal flour markets in Tanzania are characterised by many small players, producing similar products. Cereal foods are traditionally prepared in the home, and large numbers of women (mostly) operate micro-enterprises that process and sell mixed cereal flour. The primary consumers are the rural poor. Informal sector products are generally unbranded and lack nutritional information; processing facilities do not have formal quality control procedures. Very few, if any, informal operations use fortification. Given the size and fragmentation of the market, it is very difficult for the government to control the safety or quality of the products sold.

Most small food processors lack technical knowledge, right facilities to produce safe and nutrient-rich foods, and they are largely unaware of legal requirements or nutrition issues. On the other hand, government extension officers (who are responsible for enforcing the National Nutrition Strategy and the National Food Fortification Programme) lack the expertise and facilities to control the quality of fortified products. As a result, many unfortified products make false claims about their nutritional benefits.

In this context, several programmes funded under USAID's Feed the Future programme are trying to build the capacity of small and micro-enterprises in the flour milling sector. One programme, Tuboreshe Chakula, has focused especially on outreach to small-scale millers, raising awareness and building the technical capacity of millers with equipment and training. However, these programmes alone cannot address the signalling problem, which may prevent businesses from capturing the value of investments in product quality and fortification.

Working with small and medium-sized enterprises (SMEs) in the Tanzanian flour sector is crucial, since it is these actors that sell products to the poor and to populations most affected by undernutrition. However, addressing the problems relating to signalling nutritional quality, strengthening willingness to pay and building capacity requires intensive support and investment from donors. This explains the context in which Power Foods operates, and the challenges that SMEs in Tanzania face when trying to produce nutrient-rich foods.

3 Lessons from the case study

Power Foods has been able to develop a business model around the sale of fortified foods, and has established a reputation for high-quality products and a commitment to nutrition. However, it has not been able to develop the business model that makes it profitable to make these products both available and affordable to low-income groups. At this stage, it is unrealistic to expect midsize businesses like Power Foods to overcome these challenges without some degree of public support. Power Foods has had more success reaching the poor by producing for non-profit distribution channels, both by selling RUTF to agencies like UNICEF, and by producing cereal products for the School Feeding Programme. These systems get around the problems of distribution, awareness and signalling nutritional quality, and they also reduce uncertainty by providing a predictable source of demand. Table 3.1 summarises the extent to which Power Foods has been able to meet the conditions for addressing undernutrition, as outlined in the introduction.

Table 3.1 How has Power Foods addressed the challenges of delivering nutrient-rich foods?

Enabling conditions	Successfully addressed?	What's the challenge?	Company strategy
Acceptability	Fully addressed	<ul style="list-style-type: none"> Acceptability of new foods to consumers 	<ul style="list-style-type: none"> Product development together with the target market, using traditional foods
Availability	Partially addressed	<ul style="list-style-type: none"> Products are present in the main urban areas Distribution network indicates that availability may be low in rural areas, although no precise information on where products are sold was available 	<ul style="list-style-type: none"> Work with local distributors Increase promotional events to attract new distributors Sell products to government and NGO-managed distribution systems
Affordability	Insufficiently addressed	<ul style="list-style-type: none"> Affordability is a key challenge for Power Foods Key barriers include lack of large-scale efficiencies, and the high costs of distribution and of signalling quality 	<ul style="list-style-type: none"> Seek partnerships with NGOs, agencies, donors Efforts to control the supply chain, and distribution mechanisms
Signalling nutritional quality	Partially addressed	<ul style="list-style-type: none"> Power Foods meets government regulatory standards It is difficult to distinguish fortified flours from informal sector and non-fortified products 	<ul style="list-style-type: none"> Invest in the brand's public reputation for premium quality (this strategy increases costs) Label claims supported by regular testing Work with regulatory agencies to improve enforcement of quality standards

Public policy and development interventions can play important roles in overcoming these constraints. The two sides of Power Foods' operations function under very different models, and lessons can be learned from each. For its consumer-focused cereal products, Power Foods faces the constraints of low consumer awareness about nutrition and low willingness to pay, the absence of distribution channels that reach the most vulnerable areas and difficulties in establishing the nutritional quality and value of its products in the minds of consumers. Together, these challenges create an environment where businesses that invest in fortification struggle to distinguish their products from less nutrient-rich competitors and have very limited success in selling these products to the people that are most in need of them.

The evidence from Power Foods' experience with RUTF production exemplifies one model for reaching the poor and undernourished. UNICEF and other non-profit organisations play a key role in product specification, quality control and distribution; at the same time, free

distribution bypasses the problems of low willingness to pay and low awareness. Furthermore, public agencies serve as a steady source of demand for companies such as Power Foods, and this increases the incentives for them to invest in the production of such products. Yet, at present RUTF distribution is limited to emergency situations and treatment of the most severe forms of malnutrition. The question is whether non-profit distribution could be used preventively to provide fortified foods to supplement the diets of broader populations.

Clearly, funding is the key challenge for non-profit distribution. Given that chronic undernutrition affects over 30 per cent of all children in Tanzania, it is very unlikely that public support could be sufficient to provide nutrient-dense foods on an ongoing basis to all those in need. Given limited funding, non-profit distribution will have to target those most vulnerable to crises and severe undernutrition, as well as those most susceptible to the effects of undernutrition (infants and pregnant mothers). In order to cover the gap left by public funding, other types of partnerships between public organisations and businesses also need to be explored.

There are a number of ways public-private partnerships could expand coverage beyond that of non-profit distribution. The case of Power Foods suggests some ways public organisations can contribute. First, government and donors can help to mitigate low levels of nutrition awareness by running nutrition behaviour change communications and campaigns. Broad nutritional awareness is a public good, and there is little incentive for businesses, working on their own, to provide it. However, public agencies might be able to motivate businesses to provide marketing messages that are complementary to the public campaign. Second, donors may be able to help address the signalling problem in order to prevent false claims and undercutting by non-nutritious products. Yet addressing this challenge is complex. Options include partnering to create certification schemes covering particular product categories (such as complementary food products aimed at infants). It is possible that public support could defray the costs of setting up such a scheme and allow it to become self-sustaining over time. The advantages and challenges of certification schemes are discussed further in the policy analysis reports that accompany these case studies (Anim-Somuah *et al.* 2013; Robinson *et al.* forthcoming). These reports found that addressing the signalling problem requires public support, a base of evidence and a relatively long-term commitment.

This case study will be accompanied by a report analysing policy in Tanzania, which will provide greater depth and recommendations on how public agencies can address the constraints facing markets for nutrient-rich foods. The overall conclusion of this and associated business case studies is that for development agencies to strengthen the contributions of midsize businesses to nutrition, it is essential that they understand the strengths and weaknesses of businesses and create partnerships specifically designed to address the constraints they face.

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