

IDS

EVIDENCE REPORT

No 64

Reducing Hunger and Undernutrition

The Role of Businesses in Providing Nutrient-Rich Foods for the Poor: Two Case Studies in Nigeria

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March 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.

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The authors gratefully acknowledge the support and participation of senior management and staff at Lisabi Mills Nigeria Ltd and Dala Foods Nigeria Ltd throughout this project. Input to this report was also provided by Sahel Capital Partners and Advisory Ltd and by Mar Maestre Morales, 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: 7

THE ROLE OF BUSINESSES IN PROVIDING NUTRIENT-RICH FOODS FOR THE POOR: TWO CASE STUDIES IN NIGERIA

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March 2014

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First published by the Institute of Development Studies in March 2014

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Contents

	Executive summary	2
1	Introduction	3
2	Case study: Lisabi Mills Nigeria Limited	5
	2.1 Nutrition potential	5
	2.2 Supply chain challenges	7
	2.3 Distribution and marketing	7
	2.4 Summary	9
3	Case study: Dala Foods Nigeria Limited	10
	3.1 Nutrition potential	10
	3.2 Supply chain challenges	11
	3.3 Distribution and marketing	1
	3.4 Summary	1
4	Lessons from the case studies	1
	References	1
Boxes		
Box 1.1	Undernutrition in Nigeria	3
Box 2.1	Lisabi Mills at a glance	5
Box 2.2	Lisabi Mills' strategy for reaching 'bottom of the pyramid' markets	8
Box 3.1	Dala Foods at a glance	10
Box 3.2	Dala Foods' production for institutional buyers	12
Tables		
Table 1.1	Constraints to commercial viability for nutrient-rich foods	4
Table 2.1	Overview of Lisabi Mills' key products	6
Table 2.2	Sourcing of inputs for Lisabi Mills' products	7
Table 2.3	Affordability of Lisabi Mills' products	8
Table 2.4	How has Lisabi Mills addressed the challenges of delivering nutrient-rich foods?	9
Table 3.1	Overview of Dala Foods' products	11
Table 3.2	Sourcing of inputs for Dala Foods' products	12
Table 3.3	Affordability of Dala Foods' products and sourcing of key ingredients	1
Table 3.4	How has Dala Foods addressed the challenges of delivering nutrient-rich foods?	1

Executive summary

This report presents case studies of two Nigerian food-processing businesses and analyses their efforts to produce nutrient-rich foods for undernourished populations. It provides lessons for other businesses, and for donors, government agencies and NGOs that are committed to working with the private sector to tackle nutritional deficiencies. The companies examined are Lisabi Mills and Dala Foods, businesses which have pioneered successful and innovative strategies in food manufacturing. Lisabi Mills has been at the forefront of developing packaged traditional foods and fortified products in southern Nigeria, while Dala Foods is a leading manufacturer of packaged traditional foods in the northern part of the country. The two businesses use different models: Lisabi Mills focuses on premium and fortified products aimed primarily at middle- and upper-income consumers, while Dala Foods produces low cost products for a market where most consumers have limited spending power.

Although both companies have been successful, their experiences reveal a tension between producing fortified, nutrient-rich foods, and marketing these products to poor populations. A number of constraints make it difficult for mid-size companies to build commercially sustainable models around nutrient-rich foods for the poor. The two case study businesses, however, have had some success through working with non-profit organisations: Dala Foods developed a fortified product which it sold to a donor-funded programme. This programme then distributed the product free of cost to vulnerable populations. Lisabi Mills is also interested in producing for non-profit distribution as part of its strategy to reach low-income groups.

The case studies show that mid-size indigenous businesses – acting alone – face significant challenges in the development, production and marketing of nutrient-rich foods to reach poor and undernourished populations. Reaching these populations entails high costs, particularly related to distribution, building demand and signalling to consumers that products are of high nutritional quality. This makes it difficult for companies to produce these products at prices affordable to the populations that need them most. This problem is compounded by the difficult business environment present in Nigeria.

These challenges mean that food-based strategies to reduce undernutrition require public-private partnerships between businesses and public agencies or non-profit organisations. The case studies indicate that one type of partnership in particular has been successful: non-profit procurement and distribution. These systems reduce the risks faced by businesses and bypass the key constraints outlined above. They represent the best potential in the Nigerian context in the short term. However, chronic undernutrition is so widespread in the country that non-profit distribution will never be able to cover all those affected. To fill the gap, other types of public-private partnership need to be explored. Donors and federal and state governments can help by funding nutrition awareness campaigns in order to increase demand. They can also launch certification schemes that can signal to consumers which products are nutritionally adequate. Public action can also help businesses build links with farmer groups and develop higher-quality domestic supply chains for their products. Based on the case studies, it is not possible to assess whether such partnerships will be able to create businesses that can be sustained once public support is withdrawn. The central conclusion is that non-profit distribution is an urgent priority and appears feasible under current circumstances; other forms of partnership should be piloted and evaluated to learn what works.

1 Introduction

Reducing undernutrition is an increasing global priority for the public and private sectors alike. Globally, micronutrient undernutrition imposes a massive burden on human health, wellbeing and economic productivity. In Nigeria, the toll on human health and productivity is staggering and action is urgently needed. In response, national governments and development actors are working to mobilise the private sector, and seeking to identify successful models and enabling conditions for successful and sustainable business involvement. The case studies presented in this report aim to contribute to these efforts.

Box 1.1 Undernutrition in Nigeria

Rates of poverty and acute and chronic undernutrition in Nigeria are alarmingly high and have remained unchanged for the past several years. Between 1999 and 2008, national rates of stunted and underweight children under the age of three hovered around 40 per cent and 25 per cent respectively. Rates of micronutrient deficiencies in vitamin A, iron and zinc are high country-wide, especially among the poorest households. Micronutrient deficiencies exact a very high toll on human health, with vitamin A deficiency contributing to 25 per cent of child and maternal deaths in 2003. To reduce undernutrition, poor and undernourished groups need to have greater access to a nutrient-rich diet, especially foods containing key micronutrients like vitamin A and iron. Although a majority of Nigerians eat a diversity of food types, consumption of nutrient-dense foods remains insufficient. At the same time, more than 15 per cent of the population does not have a diverse diet, and eats only nutrient-poor cereals or tubers.

Existing work has highlighted a set of conditions that need to be achieved in order for food to reduce undernutrition. These can roughly be summarised within three categories (adapted from Hawkes and Ruel 2011):

1. **Food must be nutrient-rich:** businesses need to produce safe food that contains all the necessary nutrients, especially micronutrients and minerals crucial to child health and development, such as vitamin A, zinc, iron, folic acid.
2. **Food must reach key populations:** these foods need to reach – and be eaten by – the people affected by undernutrition, especially poor households, infants and pregnant mothers. This requires that food is available in places these groups can access and at a price that is affordable to them.
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.

For businesses to contribute to these outcomes, they need to have incentives to build sustainable and profitable business models, including supply chains and distribution systems that provide nutrient-rich food to those who need it the most. Making products affordable is especially challenging, since nutrient-rich foods tend to be more expensive than nutrient-poor alternatives; making these foods available to the poor also increases costs. These challenges reflect wider market constraints, including imperfect information, uncertainty and opportunistic behaviour. These constraints are summarised in Table 1.1, and described in more detail in a forthcoming policy guidelines report (Robinson *et al.* 2014). The challenge for donors, NGOs and governments seeking to support businesses is to create an enabling environment so businesses can deliver nutrient-rich foods to the poor in a way that is commercially viable. Various organisations have made efforts to this end; several of these are mentioned in the course of this report, but a complete review is beyond its scope. The accompanying policy guidelines review a number of these efforts. The case studies in the

present report highlight some of the challenges that businesses face, and identify priority areas where public-private partnerships can make a difference.

Table 1.1 Constraints to commercial viability for nutrient-rich foods

Market constraint	Implications for businesses
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.	There is low demand and willingness to pay for nutrient-rich products. There is little incentive to invest in nutrition awareness, since costs would accrue to one company, while benefits would go to all those producing nutrient-rich food.
Absence of signalling. In most foods, nutrient content is 'invisible' to consumers. Mechanisms are required that signal (or communicate) this nutritional quality to consumers. ¹	Businesses face disincentives to invest in nutrient-rich products, because competitors can undercut them with cheaper, nutrient-poor products.
Distribution costs for delivering products to low-income and rural areas are very high.	Mid-size businesses lack the resources to build their own distribution networks, so must rely on distribution companies.
Sourcing. High quality inputs for food-processing are not available.	Poor and variable quality inputs raise processing costs and consumer prices. Mid-size companies lack capacity to coordinate farmers and middlemen to ensure quality.

This report differs from other types of business case studies that provide a total overview of a business; in contrast, this report focuses on the issues that inhibit *nutrient-rich* foods in particular, and make these products more difficult for businesses compared to nutrient-poor alternatives. The report recognises, however, that mid-size businesses in Nigeria also face a range of other important constraints to their success, especially related to trade policies, infrastructure, power supplies, access to credit and transportation. These issues are only covered in this report to the extent that they affect their potential for nutrition.

The information presented in this report was based on a series of interviews with senior management and operational staff in each of the businesses, conducted in October and November 2013. This information was then reviewed by the companies.

¹ For example, it is impossible to distinguish a fortified flour product from an unfortified alternative. 'Invisible' product attributes like these are often called "credence goods". For further details on the implications of this problem for nutrition, see Masters, Kuwomu and Sarpong 2011.

2 Case study: Lisabi Mills Nigeria Limited

Established in 1939, Lisabi Mills Nigeria Limited (henceforth simply Lisabi Mills) is the oldest indigenous food-processing company in Nigeria. The company's longevity and reputation are a major accomplishment in a context where few food-processing companies survive beyond a few years. It was also one of the first companies to introduce fortified products, beginning in 1984. Yet, despite its strong position, Lisabi Mills' impact on undernutrition is limited by difficulties in making products that are affordable for the poor. The company's reputation and success have been built through pursuing a model based on premium-quality products and strong brand reputation. In a market with known problems of pass-offs and poor enforcement of quality standards, this strategy establishes consumer trust, but makes products largely unaffordable to low-income consumers.

Lisabi Mills' key strength is its reputation and loyalty across generations of consumers. It has been successful in achieving acceptability for its products among its core consumer groups. The company achieves this by focusing on traditional foods, to which it adds value through fortification and convenience. To support its reputation for supplying quality food, the company has developed rigorous quality-assurance procedures and has invested in a testing laboratory and other technology, in order to ensure that its products meet national and international standards. While many mid-size companies in Nigeria misrepresent the ingredients and quantities in their products, Lisabi Mills is committed to high standards of integrity. Its products have received quality certification and awards from industry associations (see Box 2.1). The company also invests in its reputation through its corporate social responsibility strategy, which includes sponsoring schools and football teams.

Box 2.1 Lisabi Mills at a glance

- Based in Lagos; distributes across southern Nigeria.
- Lisabi Mills fortifies its entire product range.
- Gold's Custard product can be used for complementary feeding for infants.
- Reputation for premium-quality products consumed by the middle class.
- New strategy for selling Gold's Custard product to 'bottom of the pyramid' (BOP) markets.

Awards received (all in 2008)

- Mandatory Conformity Assessment Programme award (for Gold's Custard), from the Standards Organisation of Nigeria
- National Quality Management Award, from the Quality Management Development Institute
- Blue-Ribbon Complementary Food Award from the Country Association Network² and UNICEF

2.1 Nutrition potential

Based in Lagos, Lisabi Mills produces a wide range of traditional and convenience foods marketed across southern and central Nigeria. Core products include easy-to-prepare versions of traditional foods such as bean flour, yam flour, wheatmeal flour, as well as conventional convenience foods, including Gold's Custard and Wheat O breakfast cereal. Lisabi Mills is a mid-sized company which operates in relatively niche markets. It holds substantial market share in several of the product categories in which it operates (Table 2.1). In these markets, the company competes against both multinational corporations, large Nigerian corporations and other mid-size companies. Although south-west Nigeria is an

² The Country Association Network is a network of child rights organisations.

extremely competitive landscape, Lisabi Mills has benefited from increasing demand for processed products by the growing middle class in the region.

The products listed in Table 2.1 indicate the potential for nutritional benefits for the poor. The products are fortified with a range of vitamins. Gold’s Custard has especially high potential for nutrition because custard is often used as a weaning food for infants and young children.³ The company’s efforts in fortification have benefited from federal government policies promoting fortified products. In particular, greater enforcement of mandatory fortification legislation has meant that other manufacturers are being compelled to fortify products covered by the programme (e.g. wheat flour), and this reduces the price gap between Lisabi Mills’ products and those of its competitors. In addition, greater public awareness created by news coverage of the fortification scheme and by a social marketing programme launched by NGOs is helping to increase consumer demand for fortified products, which may benefit Lisabi Mills. Yet for Lisabi Mills to have a wider impact on nutrition, it needs to make its products more affordable and available to low-income populations. The company’s strategy for doing so is discussed below.

Table 2.1 Overview of Lisabi Mills’ key products

Product name	Product description	Nutrient content	Target consumers	Market share (approximate)
Gold’s Custard	Custard is Lisabi Mills’ flagship product. Custard is prepared as a breakfast food, and is commonly fed to infants and young children.	Protein 1.6%; fortified with vitamins A, B1, B2, B6, B12, C, D, E	Low-, middle- and upper-income Mothers of young children	60-70% ⁴
Bean flour	Used to prepare <i>moi moi</i> and <i>akara</i> ⁵	Protein 18.9%; fortified with vitamins A, B1, B2, B3, iron	Middle- and upper-income Institutional buyers	70%
Yam flour	Used to prepare <i>fufu</i> ⁶	Protein 2.0%; fortified with vitamins A, B1, B2, B3, iron	Middle- and upper-income Institutional buyers	20% (competition from informal sector)
Wheat-meal flour	Used to prepare wheat porridge, etc.	Protein 11.7%; fortified with vitamins A, B1, B2, B3, iron	Middle- and upper-income Institutional buyers	<4%
Wheat O Cereal	Breakfast cereal	Fortified with vitamins A, B1, B2, B3, B6, B12, C, D, E; folic acid, niacin, calcium, phosphorus	Middle- and upper-income	Unknown (competition from other breakfast cereals)

³ Nutrition science clearly shows that nutrition during the period of a child’s life from conception until two years old is crucial for lifelong health. Nutrient-rich weaning foods, when taken properly after the age of six months alongside breast milk, make an important contribution to child nutrition.

⁴ Based on recent market research, Lisabi Mills found that, although their product holds 60-70 per cent market share for custard in southern parts of Nigeria, approximately 50 per cent of products labelled as Gold’s Custard were pass-offs made by unknown businesses.

⁵ *Moi moi* and *akara* are traditional foods resembling dumplings.

⁶ *Fufu* is a dense, starchy food eaten with soups.

2.2 Supply chain challenges

For companies to provide nutrient-rich and affordable foods, they need reliable sources of good-quality inputs at low cost. Food-processing companies in Nigeria commonly face major challenges with sourcing such inputs. In general, it is easier and cheaper to meet quality specifications through imported supplies; therefore, many Nigerian businesses rely on imported supplies.⁷ However, Lisabi Mills' strategy is to source domestically whenever it can. This is in line with the priorities of the federal government, as well as many development agencies. Yet despite this focus, Lisabi Mills has been unable to procure all its key inputs from domestic sources (Table 2.2); the company imports cornstarch for Gold's Custard and wheat for its wheatmeal. In addition, Lisabi Mills also imports micronutrient premixes via nutrition companies affiliated with a European manufacturer. The key reason for importing these commodities is that it can obtain high quality inputs at lower prices.

Table 2.2 Sourcing of inputs for Lisabi Mills' products

Product name	Key ingredients	Sourcing of inputs
Gold's Custard	Cornstarch, premix	Imported
Bean flour	Cowpea (white), premix	Northern Nigeria
Yam flour	Yam, premix	Across Nigeria
Wheatmeal flour	Brown wheat, premix	Imported
Wheat O cereal	White wheat, premix	Northern Nigeria

For several of its products, Lisabi Mills sources domestically; these include cowpea (bean flour) and yam tubers, which are provided by aggregators or middlemen. Such supplies encounter the familiar problems of variations in quality and price fluctuations, in particular for cowpea. Lisabi Mills responded to these problems by attempting a contract farming venture in 2001. However, the company was unable to ensure that farmers would honour their contracts; as a result, this venture was closed. At present, Lisabi Mills does not have plans to initiate any other contract farming ventures. The experience of mid-size companies with building dedicated supply chains is discussed in the conclusion of the report.

2.3 Distribution and marketing

Lisabi Mills uses three main distribution channels to reach consumers:

- **Distributors** take products to local retailers. Lisabi Mills has established relationships with a number of distributors. The company does not provide credit to distributors, and this may make distribution to low-income areas less attractive. Many distributors do not find it profitable to sell into low-income areas because they require smaller pack sizes and typically purchase smaller volumes.
- **Supermarkets** and neighbourhood shops, which target middle- and upper-income consumers.
- **Direct sales**, accompanied by promotional events, are used to reach a range of communities, especially in areas where distributors are reluctant to sell. Lisabi Mills uses this strategy to try to encourage distributors to work in these areas.

Reliance on these distribution channels limits the ability of Lisabi Mills to contribute to nutrition for the poor, as none of these channels is well-suited for reaching these populations. Indeed, most mid-size companies face this same constraint, since they do not have the capital or sales volume to run their own distribution systems. They are thus forced to rely on existing channels, which are poorly suited for reaching low-income consumers, especially those in rural areas. In response to this challenge, Lisabi Mills is seeking to work with NGOs

⁷ There are a number of exceptions, especially very large manufacturers and multinationals such as Nestlé Nigeria and Cadbury Nigeria, which have established specific domestic supply chains.

and public agencies in order to have its products distributed through non-profit channels. This strategy is discussed in more detail below.

Box 2.2 Lisabi Mills’ strategy for reaching ‘bottom of the pyramid’ markets

Lisabi Mills has begun to pursue lower-income markets by introducing smaller packet sizes for its strongest product, Gold’s Custard. It also sees non-profit distribution as central to reaching poor populations. The company is developing a specialty product that an NGO will purchase from the company and distribute for free to people affected by HIV/AIDS. It is also interested in opportunities to sell other products to government agencies, public institutions or donor initiatives. Since Lisabi Mills’ strategy for reaching low-income groups is still under development, its impact cannot yet be evaluated.

Table 2.3 Affordability of Lisabi Mills’ products

Name of product	Pack sizes	Price	Price of equivalent ⁸
Gold’s Custard	500g 30, 50, 80g (planned)	N170-N195 N12-31	N/A Maize pap, N20 for single serving
Bean flour	500g	N250	Whole cowpea, N190-240 per kg Bean flour, N450-580 per kg
Yam flour	1kg	N335	Yam flour, N80-N100 per kg
Wheatmeal flour	1kg	N160	Honeywell wheatmeal flour, N370 per 2kg

As mentioned, most businesses in Nigeria face very high costs in distributing to the poor. Rates of underweight and stunted children in rural areas are double and 50 per cent higher than in urban areas, respectively (Federal Republic of Nigeria, National Bureau of Statistics, United Nations Population Fund and UNICEF 2011). Low population density and very poor road networks in rural areas substantially increase the cost of distributing to these populations, reducing the affordability of products.

Table 2.3 indicates the affordability of Lisabi Mills’ products, compared to equivalent products purchased in open markets in Lagos. It shows that, while for several products the price is roughly similar, yam flour is substantially more expensive. Gold’s Custard is currently only available in large packet sizes. The company is planning a small-size version, which may retail at a price comparable to maize pap (commonly used as an infant weaning food). However, consumers may not consider custard to be as filling a meal as pap. Until the smaller packet sizes are released, it is difficult to assess their affordability. The company would most likely incur additional distribution and transport costs if it begins to target low-income markets, especially those in rural areas outside Lagos.

In addition to distribution costs, Lisabi Mills faces high costs in signalling to consumers that its products are rich in micronutrients.⁹ At present, Lisabi Mills uses its brand reputation for quality to provide the signal. But this is especially challenging in Nigeria, since counterfeiting and fraudulent label claims are extremely common. Indeed, Lisabi Mills already faces problems from competitors who label their products as fortified without substantiation. In addition, the savvy Mills faces widespread counterfeiting of its brand, with 50 per cent of custard labelled as its own turning out to be pass-offs. Pass-offs dilute the value the company can earn from investments in product quality. In response, the company has

⁸ The figures in this column are estimates of the cost of a similar quantity of equivalent food in informal markets in the Lagos area. Note that Lisabi Mills’ products tend to have a longer shelf life and be more convenient to prepare, compared to informal sector equivalents.

⁹ The company needs to provide a guarantee to consumers, since it cannot independently claim that a particular product is fortified.

worked with the National Agency for Food and Drug Administration and Control (NAFDAC) to identify and shut down unregistered and fraudulent manufacturers. However, enforcement remains a major problem.

2.4 Summary

Lisabi Mills has established a highly successful business model around marketing fortified foods primarily to middle- and upper-income consumers. The company recognizes the challenges and constraints of extending its business to cover lower-income groups, and it is seeking to grow in the low-income market by introducing small packet sizes for Gold's Custard. However, as company managers point out, on its own, the company is unable to reach the poorest and most vulnerable populations, who have very low purchasing power. It is difficult for Lisabi Mills to deliver a product to these groups at a price they can afford. A key problem is the high cost of distribution systems and signalling nutritional quality to consumers in a very difficult business environment. In response, it is developing a partnership with an NGO, and seeking other opportunities to sell its products to public sector and non-profit organisations. Table 2.4 summarises how Lisabi Mills has responded to the challenges of acceptability, availability, affordability and signalling of nutritional quality.

Table 2.4 How has Lisabi Mills addressed the challenges of delivering nutrient-rich foods?

Challenge	Successfully addressed?	What's the challenge?	Company strategy
Acceptability	Fully addressed	By focusing on traditional foods, Lisabi Mills has successfully achieved wide acceptability.	Fortify widely accepted traditional foods.
Availability	N/A	There is insufficient evidence on how widely available Lisabi Mills' products are in low-income and rural areas.	Works with local distributors; organises promotional events to attract new distributors; aims to partner with NGOs on distribution.
Affordability	Insufficiently addressed	Affordability is the key challenge for Lisabi Mills. Its model involves high costs to ensure product quality. This makes products unaffordable to the poor.	Developing small packet sizes; seeking partnerships with NGOs, agencies and donors.
Signalling nutritional quality	Partially addressed	Lisabi Mills' competitors fraudulently label their products as fortified. The company has a strong reputation for its high quality products, but this makes it attractive for counterfeiters.	Label claims supported by regular testing; working with regulatory agencies to improve enforcement.

3 Case study: Dala Foods Nigeria Limited

Dala Foods Nigeria Limited (henceforth, Dala Foods) is a mid-size family business focused on processing and packaging traditional foods in northern Nigeria. It holds a substantial market share in this region for several consumer products. Incorporated in 1979, its focus was to sell processed products to substitute for foods that were traditionally prepared in the home. The location of its facilities in the city of Kano gives it a strategic position for distributing across northern Nigeria and in neighbouring Niger Republic. This location also allows Dala Foods to substantially reduce its transport costs by sourcing inputs locally. These factors have allowed the company to build a strong market share for its products.

Over the years, the company has succeeded both in competing in established product categories (i.e. packaged tea) and in introducing products based on traditional foods that are convenient to prepare and packaged for long shelf life.¹⁰ Dala Foods has built trust with consumers through its commitment to quality and to producing foods traditional to northern communities. It has been extremely successful in achieving acceptability for its products among its core consumer groups. Dala Foods is committed to making products that are affordable to all classes of consumers, and packages all of its products in small packet sizes in order to make them more affordable. Selling at a low price per packet is key to the company reaching a large market, since the average spending power is low in the north of Nigeria.

Box 3.1 Dala Foods at a glance

- Company size: N260m (USD 1.7m) annual revenue; 145 employees.
- Based in Kano; distributes across northern Nigeria.
- Packages all products in small packet sizes to make them affordable for lower-income consumers.
- Does not fortify its consumer products.
- From 2009-2012, produced a cereal mix fortified with vitamin A for a PEPFAR/USAID-funded programme that distributed the product for free to people affected by HIV/AIDS.

Awards received

1988	Quality Award (Bronze) from the Standards Organisation of Nigeria
1989	Gold Medal at the Leipzig Trade Fair, Germany
2003	Quality Award (Silver) from the Standards Organisation of Nigeria
2004	Merit Award, Federal Ministry of Science and Technology
2005	Quality Award (Gold Medal) from the Standards Organisation of Nigeria
2008	Global Food Industry Award from the International Union of Food Science and Technology
2013	Nigeria Fast Growth 50 Award from the Tony Elumelu Foundation

3.1 Nutrition potential

Dala produces a range of products; City Tea contributes approximately 50 per cent of total revenues, with cereal-based products contributing the balance. Instant Kunun Tsamiya generates the biggest revenue among the cereal products. By selling all of its products in small packet sizes and at low prices, the company targets a range of consumers, including lower-income groups. This is crucial for its target market, since rates of poverty are substantially higher in northern Nigeria, compared to the south. The primary source of

¹⁰ Other companies have taken note of the potential of packaged traditional foods. Nestlé plans to introduce a Goldmorn Millet product in the upcoming months.

competition for Dala Foods is informal sector processors of sorghum and millet-based foods. Fortification is not a major priority for Dala Foods, since the company believes that there is little demand for fortified products among its customers in northern Nigeria.

Table 3.1 Overview of Dala Foods’ products

Product name ¹¹	Product description	Nutrient content	Target consumers	Market visibility in northern Nigeria (approximate)
Instant Kunun Tsamiya	Millet and spice mix used for porridge	Protein 6%; vitamin C, calcium	Low-, middle-, upper-income Young children	50%
Diet Kunun Tsamiya	Millet and spice mix used for porridge, with wholegrains	Protein 9%; vitamin C, calcium	Low, medium, upper income	30%
Instant Fura	Millet and spice mix used for porridge	Protein 12%	Low-, middle-, upper-income	20%
Instant Biski	Millet couscous	Protein 7%	Low-, middle-, upper-income	10%
Action Meal	Mix of maize, groundnut, soya with fortificants	Protein 25%; fortified with vitamin A	Women and children affected by HIV/AIDS via USAID-PEPFAR programme	N/A

The one important exception to this focus on non-fortified foods is ‘Action Meal’, a fortified cereal product, manufactured as part of a collaboration with the Institute of Human Virology, Nigeria (IHVN)¹² (see Box 3.2). Dala Foods hopes to build on the experience of producing the fortified product to launch a version for retail. The key constraint is that the company requires large sales volumes to make the product viable, and this would require a wide distribution network. In addition, in order to sell Action Meal to consumers, Dala Food would need to signal the product’s added nutritional value. As discussed in the case of Lisabi Mills, this entails additional costs for branding and enforcing the brand against competitors and counterfeiters. Producing Action Meal for IHVN allowed Dala Foods to circumvent these constraints, since IHVN (not individual consumers) makes the decision about purchases. Dala Foods’ previous experience achieving regulatory compliance for its other products helped the company with the development of Action Meal.

3.2 Supply chain challenges

Dala Foods sources the majority of its raw materials from local wholesale markets, including millet, tamarind, chilli pepper, ginger and cloves. The only imported ingredient for its cereal products is vitamin A premix, which is used in Action Meal; for this, the premix is sourced through a local affiliate of a European producer. Local sourcing means that the company is less affected by the difficulties of importing foodstuffs than other food-processing companies.

Dala Foods’ reliance on the domestic market creates two major challenges. First, the company has challenges with seasonal price fluctuations. Prices of raw materials vary dramatically in Nigeria, with millet costing approximately 55 per cent more during the high season. In response to this problem, Dala Foods has invested in silos that allow it to stock

¹¹ City Tea (a packaged black tea product) is Dala Food's best-selling product, making up approximately 50 per cent of total company revenues. It is excluded from the tables and analysis in this report because the focus here is on nutrient-rich foods that can help address undernutrition.

¹² IHVN is an NGO affiliated to the Institute of Human Virology at the University of Maryland, USA and the Center for Disease Control, USA.

grains for two to three months. Domestic sourcing also commonly entails issues with quality. To cope with the low quality of most domestic grain supplies, the company invests significant amounts of time and manpower in sorting, cleaning and drying grains bought from local markets. Similar to Lisabi Mills, Dala Foods sought to overcome these problems through creating dedicated sources of supply, establishing a contract-farming venture with the Millet Growers Association in Jigawa state in 2011. However, the farmers did not honour the agreement, so the company terminated the venture. As was discussed above, such difficulties with creating and managing contract-farming schemes are widespread.

Box 3.2 Dala Foods’ production for institutional buyers

In parallel to its consumer products, Dala Foods has produced speciality products at scale for large institutional buying programmes. Between September 2009 and February 2012, the company produced 135 megatons of the maize-soya-groundnut product Action Meal, which was purchased by the Institute of Human Virology, Nigeria for distribution to mothers and children in northern Nigeria affected by HIV/AIDS.¹³ The programme supported 70,000 people, 10 per cent of whom were children, by providing both therapeutic foods to treat severe acute malnutrition (SAM) and fortified foods to help those recovering from the condition. Action Meal was specifically formulated to aid recovery from severe acute malnutrition. Since 2012, there has been relatively little demand for the product, due to limited funding; Dala Foods only produces Action Meal to order from institutional buyers.

Although the company is interested in making Action Meal a retail product, this would require producing at a larger scale, hence requiring significant capital investment. Additional problems relate to the regulatory status of Action Meal. The product was approved for non-profit distribution, so it is not legally permitted for sale (the package includes a label which states “not for sale”). Further, since IHVN is registered as the owner of the product idea, Dala Foods might be required to pay royalties for the sale of Action Meal.

Dala Foods has also produced for other institutional buyers, such as the Association for Reproductive and Family Health. More recently, the company was in discussion with the Kano state government to produce a variety of products for distribution through the state school feeding programme. However, in the end, the state selected another manufacturer.

Table 3.2 Sourcing of inputs for Dala Foods’ products

Product name	Key ingredients	Sourcing of inputs
Instant Kunun Tsamiya	Millet, tamarind pulp, chilli pepper, ginger, cloves	Northern Nigeria
Diet Kunun Tsamiya	Millet, tamarind pulp, chilli pepper, ginger, cloves	Northern Nigeria
Instant Fura	Millet, ginger, chilli pepper, cloves	Northern Nigeria
Instant Biski	Millet	Northern Nigeria
Action Meal	Maize, soya, groundnut, vitamin A premix	Northern Nigeria

¹³ Distribution was funded by the US President's Emergency Plan for AIDS Relief (PEPFAR), through the programme AIDS Care and Treatment in Nigeria (ACTION).

3.3 Distribution and marketing

Dala Foods' distribution network is limited to northern Nigeria, where it has a strong network, with some presence in the Republic of Niger. It uses two distribution channels for its commercially distributed products:

- **supermarkets**, which target middle- and upper-income groups;
- **local distributors** who sell to wholesalers and retailers in open markets. Dala Foods has about 20 major distributors located in the northern states.

It is difficult to assess the availability of Dala Foods' products, especially for the poor and in rural communities. The fact that Dala Foods produces all of its products in small packet sizes indicates that these are indeed purchased by households with limited spending power. However, distribution networks in northern Nigeria are poorly developed compared to the south, and this makes distributing to the poor especially difficult and expensive. Dala Foods has a policy of requiring cash on delivery from all distributors, and this may limit the company's ability to work with some distributors that might provide greater availability of its products. This policy is the result of limited access to capital to provide credit to distributors, as well as the difficulty associated with enforcing contracts and prosecuting non-payment in Nigeria. Overall, it is clear that distribution challenges affect the availability of Dala Foods' products in poor communities, but the extent of this has not been quantified.

Dala Foods uses various marketing strategies to attract and retain customers, including advertisements on radio and television. It also periodically runs promotional events to increase awareness of its products among distributors and consumers, by providing discounts to distributors who buy in bulk and giving away free gifts and vouchers for consumers and retailers. Promotions are the key to motivating distributors to carry the company's products, and to promote them with retailers.

Despite the company's emphasis on small packet sizes, Dala Foods' products tend to be more expensive than alternatives in the informal sector.¹⁴ For example, maize pap (porridge) in informal markets in the Kano city area retails at about one-third of the price of Dala Foods' main products (Table 3.3). This price differential means that it is crucial for the company to signal the added value of its products if it is to motivate poor consumers to purchase them.

Table 3.3 Affordability of Dala Foods' products and sourcing of key ingredients

Product name	Pack sizes	Prices	Price of equivalent ¹⁵
Instant Kunun Tsamiya	100g	N60	N20-30
Diet Kunun Tsamiya	100g	N65	N20-30
Instant Fura	100g	N50	N10-20
Instant Biski	250g	N80	N20-30
Action Meal	100g	N80 ¹⁶	N/A

Although its focus on markets in northern Nigeria means that Dala Foods already targets lower-income groups more than many companies located in southern Nigeria, non-profit institutional buyers have been the channel through which Dala Foods has reached the very poor and vulnerable. Involvement with the Institute of Human Virology, Nigeria allowed the company to economise on product development costs and avoid the common problems of

¹⁴ Note that Dala Foods' products tend to have a longer shelf life and be more convenient to prepare, compared to informal sector equivalents.

¹⁵ The figure in this column is an estimate of the cost of 100g of maize pap in informal markets in the Kano city area.

¹⁶ Action Meal has not been sold as a consumer product. This is the price at which it was sold to the PEPFAR programme.

signalling the nutritional value of fortified foods to consumers. These factors allowed Dala Foods to reduce its costs and risks when producing fortified Action Meal.

Donors generally expect that non-profit purchasing programmes allow companies to develop new products and achieve scale, and that this is sufficient to make products ready for market-based distribution. The experience with Action Meal indicates that it may not be this simple. Although Dala Foods is interested in distributing Action Meal through private channels (i.e. distributors), it remains unlikely that these channels can reach the poorest and most vulnerable consumers in the north of Nigeria. It is also unclear whether there will be sufficient consumer demand to make the product commercially viable. Other companies' experiences also suggest there may be serious challenges with distinguishing the product from non-fortified competitors.

3.4 Summary

Dala Foods has established a successful business model marketing packaged traditional foods in northern Nigeria, as demonstrated by the company's longevity and growth. Currently, the company is hoping to attract investment in order to double its production and launch its fortified product, Action Meal, as a retail product. Yet, as discussed above, there is reason to believe there may be substantial challenges in distributing Action Meal and signalling its value to consumers. At the same time, Dala Foods remains interested in producing-to-order arrangements with institutional buyers. In the short term, this will remain the best channel for the company's products to have an impact on undernutrition, even as the company explores the potential for marketing fortified products to consumers in the North. Dala Foods' experience reveals that without sustained commitment to buying fortified products by government agencies, donors and NGOs, specially prepared products are unlikely to reach the poor and remote populations who are most affected by undernutrition.¹⁷ Table 3.4 indicates how Dala Foods has responded to the various challenges.

Table 3.4 How has Dala Foods addressed the challenges of delivering nutrient-rich foods?

Challenge	Successfully addressed?	What's the challenge?	Company strategy
Acceptability	Fully addressed	By focusing on traditional foods, Dala has successfully achieved wide acceptability.	Produces packaged versions of widely accepted foods.
Availability	Not known	There is insufficient evidence on how widely available Dala products are in rural areas.	N/A
Affordability	Partially addressed	Dala has made affordability a key priority. The challenge is that purchasing power is very low for most consumers in northern Nigeria.	Produces only small packet sizes; produces for non-profit institutional buyers.
Signalling nutritional quality	Partially addressed	Dala does not fortify its consumer products. It relies on non-profit distribution to overcome signalling challenge.	Produces for non-profit institutional buyers, which guarantee nutritional content and distribute for free.

¹⁷ For a discussion of the problems of selling therapeutic foods through commercial channels, see Lybbert (2011).

4 Lessons from the case studies

The two Nigerian businesses examined have different models and different regional focuses; yet both have encountered similar challenges in selling nutrient-rich products to the poor. Limited demand for fortified products and other nutrient-rich foods is a key constraint. Dala Foods sells primarily to lower-income consumers (in a region where consumer spending power overall is much more constrained). But although it targets lower-income groups, the company has not attempted to motivate them to purchase fortified products. In contrast, Lisabi Mills does produce fortified products, but sells them to wealthier consumers. The company hopes to expand to lower-income groups, but this strategy is too recent to have yielded results. The experiences of both businesses point out that the high costs of creating nutritional awareness and developing distribution channels that reach the poor mean that mid-size businesses cannot undertake these activities on a commercially sustainable basis without support.

These problems are exacerbated by a difficult business environment and the problem of signalling nutritional quality to consumers. Mid-size Nigerian firms operate in an environment where consumers are sceptical about product quality, trust is low between actors in the value chain, and it is difficult to enforce contracts and trademarks. This environment discourages innovation, and particularly creates biases against products whose nutritional value must be signalled to consumers (such as fortified foods). The case study companies have done what they can to respond to these problems: Lisabi Mills uses its brand reputation for high quality to assure consumers of the nutrient content of its products. But this approach entails high costs that put products beyond the reach of the poor. Dala Foods similarly relies on its reputation for quality. However, because it does not sell fortified products to consumers, the company has not yet faced the issues encountered by Lisabi Mills. Instead, Dala Foods has avoided these constraints by linking with non-profit distribution programmes.

These two case studies lead to the conclusion that public-private partnerships are necessary for mid-size businesses to make a broader contribution to addressing undernutrition in contexts such as Nigeria. Government, donors and NGOs can contribute by funding programmes to purchase nutrient-rich products and distribute them on a non-profit basis to populations vulnerable to chronic undernutrition. In a context where it is virtually impossible to assess the quality of products in private markets, non-profit distribution can also play a key role by validating the nutritional quality of products. In the short term, funding non-profit distribution appears the most effective way to work with businesses to provide nutrient-rich foods to the poor.

Yet non-profit distribution involves its own risks and challenges. The key challenge is funding. Scaling up support from donors and the government is an immediate priority to address the vast scale of undernutrition in Nigeria. However, given that chronic undernutrition affects more than 11 million children in the country, public support will never be enough to provide total coverage. Sustaining commitment over time is also a challenge; it may shift with the changing priorities of donors and government administrations. Given limited funding, non-profit distribution will have to target those most vulnerable to crises and severe undernutrition, as well as those most vulnerable 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. But achieving business sustainability – even with public support – is not easy. The experience of Dala Foods further shows that public purchasing does not necessarily allow businesses to develop commercially sustainable distribution and marketing systems.

Governments and donors can help build business sustainability in several ways. First, they can help address problems in the supply chain. Both case study companies faced procurement problems, but neither of them has the scale or market power to impose requirements on other value chain actors or to run dedicated supply chains. Most mid-size businesses do not have the time, patience and networks required to put in place these systems. In the short term, donor support could help companies (or groups of companies) to build links with farmer clusters. One implication of this supply issue is that, without considerable support, federal government policies on import substitution are likely to make it more difficult for local food-processing companies to deliver foods that are safe, nutrient-rich and affordable.

Secondly, government and donors can help address low nutrition awareness by running nutrition awareness and behaviour change communications campaigns. Broad nutritional awareness is a public good, while businesses working on their own have few incentives to provide it. Public awareness campaigns could motivate businesses to incorporate nutritional messages in their marketing. Third, donors may be able to help bolster mechanisms to signal nutritional quality to consumers. This would allow companies to sell nutrient-rich products without relying on branding strategies that make products unaffordable to the poor. Yet addressing the signalling challenge is complex. Options include establishing certification schemes for particular product categories (such as complementary food products aimed at infants). Public support could defray the costs of setting up such schemes and allow them to become self-sustaining over time. The advantages and challenges of certification schemes are discussed further in the policy guidelines reports that accompany these case studies (Anim-Somuah *et al.* 2013; Robinson *et al.* 2014). For now, it should be noted that addressing the signalling problem requires some form of public support in the long term, and requires building a base of evidence.

The two businesses examined in this report demonstrate that some mid-size businesses are engaged in producing nutrient-rich foods in Nigeria, and are seeking ways to expand their markets to reach low-income populations. However, acting on their own, there is a limit to what these companies can do. They face structural constraints in building distribution systems that reach the poor and in convincing consumers of the nutritional value of their products. They also face a very difficult business environment that makes it expensive to maintain the integrity of their brands and to engage with producers to improve the quality of inputs. Mid-size businesses, therefore, need sustained support from the government, donors and non-profit organisations in order to achieve their potential for reducing undernutrition. As mentioned above, this report is accompanied by a complementary set of policy guidelines, which recommend broader ways to address the constraints in markets for nutrient-rich foods. The overall message is that donors and governments urgently need to invest in non-profit distribution in Nigeria; other forms of public-private partnership also need to be explored in order to reach the maximum number of people affected by undernutrition.

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