

# Fortified Food for Infants in Low-Income Communities

## HIGHLIGHTS

- To combat high under-nutrition rates, enterprises have developed a fortified infant food business model to provide specially formulated food for infants.
- The food can be porridge, flour, or yogurt mass-produced in a local factory and sold through different channels of distribution: local shops, door-to-door, or baby feeding centers.
- Hundreds of thousands of children have already been reached but further evidence is needed along with closer collaboration with the government to drive impact and scalability.



## Development Challenge

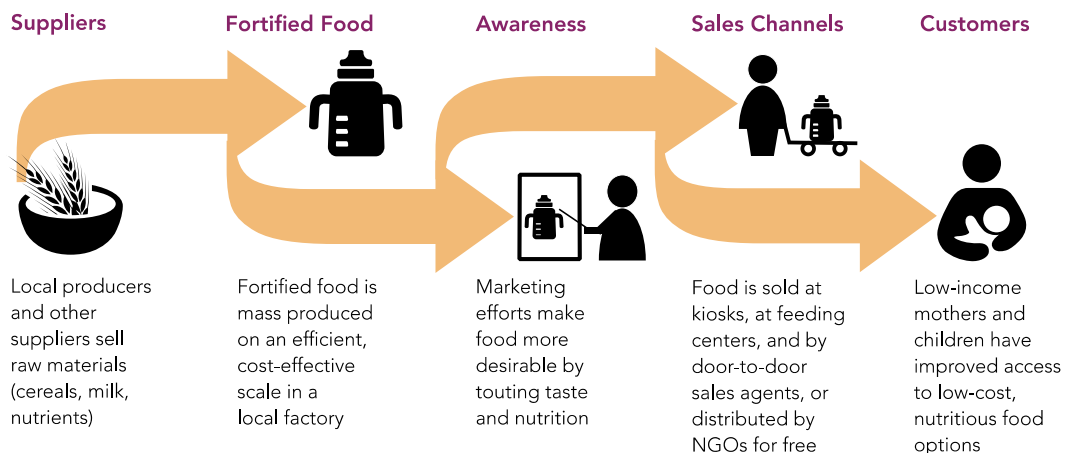
The poorest populations in Asia and Africa lack awareness about proper infant feeding practices and have limited access to nutrient-rich infant food, contributing to childhood under-nutrition and its long-term, damaging effects. Vitamins and minerals, or “micronutrients,” are a critical component of good nutrition. Folate (vitamin B9), iodine, iron, vitamin A, zinc, and other B vitamins are particularly important for child health. Without proper nutrition, infants with undernourished mothers can develop birth defects in utero, are more susceptible to disease, encounter learning difficulties and are less likely to finish school, and have lower earning potential among other long-term health and development issues.

The cost to the global economy caused by under-nutrition because of lost productivity and direct healthcare costs, accounts for as much as five percent of global gross domestic product, equivalent to \$3.5 trillion per year or \$500 per person. As a result, the social returns generated by investments aimed at combating malnutrition are high. Investing \$1.2 billion annually in micronutrient supplements, food fortification, and bio-fortification of staple crops for five years would generate annual benefits of \$15.3 billion and result in better health, fewer deaths, and increased earnings.

## Business Model

The fortified food business model provides specially formulated food for children ages 6-24 months in low-income communities through a value chain. Companies develop the fortification formula with the support of nutrition experts. The food can be porridge, flour, or yogurt mass-produced in a local factory. Companies sell it through local shops, door-to-door, or baby feeding centers or distribute it for free through humanitarian organizations. For example, Nutri’Zaza sells locally produced Koba Aina as porridge door-to-door and at feeding centers, or as 35 gram sachets of pre-cooked flour.

### Features of the Fortified Food Business Model



## Implementation: Delivering Value to the Poor

### Awareness

A significant marketing effort is required to explain the benefits of the products, as close as possible to customers. Marketing fortified food must include information about when and how to combine food with breastfeeding for a comprehensive education and to ensure the best outcomes for children. Sales women provide advice on nutrition directly to the mothers at their homes.

### Acceptance

Adapting products to local tastes is crucial to ensure acceptance. Food must taste good and attract customers with its packaging. To understand demand, businesses conduct market studies and collaborate with NGOs that know the local market. For example, Insta is an adaptation of the local porridge “uji,” which is eaten by 80 to 90 percent of the local population in Kenya across all age groups and income segments.

### Accessibility

Businesses use a variety of sales channels to reach mothers and children, including door-to-door sales, kiosks, and feeding centers. Rural areas are more difficult to penetrate, since roads are often poor and the population can be widely dispersed. To address this issue, the Malagasy enterprise Nutri’zaza invested in motorbikes to sell its products in rural areas.

### Affordability

Providing small packages such as sachets increases affordability. In rural areas of Bangladesh, where people earn an average of \$40 per month, a Shokti yogurt of 60 grams is sold for \$0.13. In Madagascar, where the average monthly salary is approximately \$75, a Koba Aina portion sells for between \$0.06 and 0.09. Some companies cross-subsidize the product with other more profitable products. For instance, five percent of the Shokti yogurt sells in a bigger quantity (80 grams) at a higher price (\$0.5) to wealthier populations in Bangladesh. This allows for greater margins on the product.

Often, companies aim to develop local value chains that can be self-sustained after the initial intervention period. They can then involve low-income people along the value chain, to supply raw ingredients, produce the food in a factory, or sell it as sales agents. For example, Grameen Danone Foods, which sells micronutrient-rich yogurt, creates business and employment opportunities for local people since raw materials and production are sourced locally. They built their first factory in the Bogra district, which is approximately 140 miles north of the capital city of Bangladesh.

A number of examples show that companies can reach low-income mothers with affordable fortified food products at a broad scale. The comparative advantage in improving nutrition is grounded in companies’ core commercial operations and value chains. Companies have complementary capabilities to those in the public sector:

- Operations delivered efficiently, cost effectively and at scale.
- Capabilities and resources to develop product and service innovations that can make nutritious food more available, affordable and desirable.
- Embedded quality management and safety systems along the food value chain, particularly in food storage facilities and packaging.

- Unique position to create demand for nutritious food, by incentivizing distributors and retailers to sell nutritious foods, and by using their consumer insights, brands, marketing resources, expertise, and channels to build understanding of nutrition and change behaviors among consumers.

### Results and Effectiveness

While the negative impact of under-nutrition is well documented, the benefits of regular consumption of fortified food is challenging to scientifically prove. Under-nutrition is the result of many factors in addition to diet, such as illnesses during childhood, access to clean water, and sanitation. For example, children who have been malnourished in the uterus will not respond to fortified food. Other factors, such as the psycho-affective environment, can lead to biased results.

However, in a 2013 review of evidence-based nutrition interventions, *The Lancet* recommended fortified foods as one of 10 proven strategies to reduce childhood under-nutrition. After a systematic review of existing evidence from trials and studies, the review concluded that fortified foods are one of the most cost-effective interventions for reducing under-nutrition. The report also concluded that “Fortification has the greatest potential to improve the nutritional status of a population when implemented within a comprehensive nutrition strategy.”