



Feasibility Study to Introduce Low Cost Fortified Energy Foods In India Through Private Sector Participation

Executive summary

The Karnataka State Rural Livelihood Promotion Society (KSRLPS), under the aegis of the Karnataka Nutrition Mission, with support from the World Bank and the Japan Social Development Fund (JSDF), has been implementing a multi-sectoral nutrition pilot project, since June 2014¹, in two backward *taluks* of Karnataka, namely Devadurga in Raichur district and Chincholi in Gulbarga district. **One of the innovative projects proposed within the JSDF-/World Bank-assisted Karnataka Multi-Sectoral Nutrition Pilot Project is to conduct a ‘Feasibility Study of introducing low cost Fortified Energy Food in the Market through the Private Sector’.**

KPMG was engaged by KSRLPS to study the feasibility of introducing low-cost Fortified Energy Food through private sector participation. The objective of this engagement is to conduct a detailed study of the need and undertake an assessment of the demand, the market entry strategy, and the investment feasibility, to address the vacuum in the market for low-cost Fortified Energy Food for BPL families.

Empirical evidence for the study was captured from stakeholder groups on the demand side covering households, doctors, nutritionists and frontline workers (ASHAs and AWWs) as well as on the supply side covering manufacturers, distributors and points of sale such as *kirana* stores, village *haats* and pharmacies to assess the feasibility. The study was spread across five states — Karnataka, Odisha, Uttar Pradesh, Gujarat and Maharashtra. The study covered ~790 demand-side stakeholders and ~85 supply-side stakeholders.

This section summarizes the findings from the demand side (interviews with households, frontline workers, doctors at PHCs and CHCs, and nutritionists) and supply side (interviews with retailers, distributors and manufacturers), and provides recommendations on the feasible model to introduce low-cost Fortified Energy Food through private sector participation.

1. Findings from demand side

Terms of reference	Key findings
Conduct an assessment of the need and demand for low-cost energy food for infants, women, adolescents, the elderly and sick among BPL families, in urban and rural areas.	<ul style="list-style-type: none">• Dietary intake of calories, protein, fat, calcium and iron was observed to be inadequate indicating a minimum gap of 30% in dietary intake in comparison to the recommended dietary allowance².• A large proportion of the respondent group subsists on diets consisting mostly of plant-based foods (70% of the respondents do not consume meat) with low nutrient bio-availability³, making access to Fortified Energy

¹ <http://projects.worldbank.org/P149811?lang=en>

² As per Revised RDA for Indians 2010 (Report of the Expert Group of ICMR)

³ Dietary Guidelines For Indians (2011), National Institute of Nutrition, Indian Council of Medical Research

	<p>Food essential to meet the RDA requirements in the diet.</p> <ul style="list-style-type: none"> • Average monthly expenditure on food is ~60% for households with monthly income in the range of INR 1,000–10,000 and ~29% for households with monthly income in the range of INR 10,000–30,000. • Based on the analysis it is observed that the consumption of Fortified Energy Food currently available in the market increases with increase in the monthly household income. <ul style="list-style-type: none"> ○ Monthly household income between INR 1,000-10,000 : ~30% of the respondents consume Fortified Energy Food ○ Monthly household income between INR 10,000-30,000 : ~55% of the respondents consume Fortified Energy Food ○ Monthly household income between INR 30,000-60,000 : ~67% of the respondents consume Fortified Energy Food • Potential target groups for low-cost Fortified Energy Food are households with monthly income in the range of INR 1,000–60,000 to address the low dietary intake.
<p>Examine the correlation between high incidences of low weight, stunting and wasting among children; low body mass index and stunting among adolescents; and lack of low-cost Fortified Energy Food in the market.</p>	<ul style="list-style-type: none"> • As per the findings above, there is a direct correlation between high incidence of low weight, stunting and wasting among children; low body mass index and stunting among adolescents; and lack of low-cost Fortified Energy Food in the market.
<p>Identify and list the most popular or preferred variants of low-cost Fortified Energy Food.</p>	<ul style="list-style-type: none"> • Most preferred variants of Fortified Energy Food identified were protein powders and health food drinks. • Consumer preferences regarding flavor, form, price and packet size for Fortified Energy Food are as follows: <ul style="list-style-type: none"> ○ Flavor: Preferred flavors for Fortified Energy Food are chocolate and fruity. Some respondents suggested new flavors such as coffee, lemon, sweet (sugary) and vanilla.

	<ul style="list-style-type: none"> ○ Form: Preferred form for Fortified Energy Food are fine amorphous form (powder form), biscuits and tablets. ○ Size of packaging: Preferred size of packaging for Fortified Energy Food is between 100g and 300g. ○ Price: Preferred price range for Fortified Energy Food is INR 10 or less for one-time consumption.
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2. Findings from supply side

Terms of reference	Key findings
Study the present availability of low-cost Fortified Energy Food for infants, women, adolescents, the elderly and sick among BPL families, and their accessibility to both urban and rural families.	<p>Presently, there are no low-cost Fortified Energy Food available in the market. The Fortified Energy Foods that are currently available in the market cannot be classified as 'low-cost Fortified Energy Food'. These include:</p> <ul style="list-style-type: none"> • Health food drinks (HFDs): Malt- and dairy-based health food drinks are expensive. • Local food products manufactured by regional companies: These products are based on regional diets and food preferences of people in different states, but are not fortified. • RUTFs (ready-to-eat therapeutic foods): These products are administered to people suffering from severe acute malnourishment but are not distributed in retail markets. <p>As there are no low-cost Fortified Energy Food presently available in the market, there is no defined route to market (accessibility of the product) for the target consumers.</p>
Estimate the size of the market for low-cost Fortified Energy Food in India.	The estimated market opportunity in India for low-cost Fortified Energy Food is ~42.7 million tons per year. Out of this, the estimated opportunity for rural market is ~30.8 million tons or 72% of the total opportunity, while for urban market, it is ~11.9 million tons or 28% of the total opportunity.
Examine why in spite of a large potential market, which would make for a viable business proposition, there are no major initiatives from the private food industry sector to enter the market for low-cost	<p>The reasons why the private sector has no major initiatives for addressing the large opportunity for low-cost Fortified Energy Food are different for different types of manufacturers. These include:</p> <ul style="list-style-type: none"> • The large corporates that manufacture and sell expensive malt- and protein-based health food drinks, and protein- and cereal-powered foods, focus on high income groups as their target consumers. • The local products manufactured by regional companies

Fortified Energy Food.	<p>have limited focus on quality and are more concerned about sales and margin.</p> <ul style="list-style-type: none"> • Small and medium enterprises that manufacture RUTFs do not have retail distribution, and are focused on government or non-government channels for the distribution of their products. • Regional fast-moving consumer goods (FMCG) companies and small and medium enterprises (SMEs) in the food sector are most appropriate for manufacturing and selling low-cost Fortified Energy Food, given their strong regional presence and established infrastructure. However, the regional FMCG companies and SMEs have limited awareness about the opportunity in low-cost Fortified Energy Food. Regional FMCG companies stated that relatively lesser purchasing power of poor and lower-middle class consumers have resulted in limited interest from private companies such as SMEs and large corporates. • Also, they stated that low margins and high investments associated with these products make the manufacturers unsure about the returns on their investments. • However, the growing consumption of non-traditional food products by the poor and lower-middle class consumers indicates their increasing purchasing power, and suggests that the private sector should enter the market of low-cost Fortified Energy Food.
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3. Proposing sound business models and recommending most effective and appropriate rural distribution and marketing strategies for the new low-cost Fortified Energy Food

The following business models including distribution and marketing strategies are proposed for introducing low-cost Fortified Energy Food in the market based on evaluation of the existing market structure of Fortified Energy Food and key considerations for serving rural markets.

- Own manufacturing through own premises — commercial launch of the product using FMCG channels
- Own manufacturing from leased premises — commercial launch of the product using FMCG channels
- Contract manufacturing — commercial launch of the product using FMCG channels

For all the business models, multiple manufacturing units may also be an option.

Assessing the investment feasibility for manufacturing, distributing and marketing the low-cost Fortified Energy Food

After discussions with manufacturers, the following models are proposed. The investment feasibility of different business models was assessed based on business plans. The summary of internal rate of return (IRR) for the models is given in Table 1.

Table 1: Summary of IRRs of proposed business models

Model	Strategy	Project IRR
(i)	Own manufacturing through own premises — commercial launch of the product using FMCG channels	24.1%
(ii)	Own manufacturing from leased premises — commercial launch of the product using FMCG channels	23.9%
(iii)	Contract manufacturing — commercial launch of the product using FMCG channels	Not viable ⁴

Source: KPMG Analysis

The most appropriate and effective rural distribution strategy:

- Sales and distribution:** The proposed channels for sales and distribution would be a combination of 'direct coverage' (company controls distribution by directly servicing the distributors) and 'controlled distribution' (sub-distributors deployed for serving smaller markets). 'Direct coverage' would be used for markets with population greater than 150,000. As a strategy to generate sales, higher margins should be provided to channel partners during the initial years of product launch. These margins can then gradually be reduced to industry levels.
- Marketing:** The proposed strategy should use a mix of ATL (Above the Line)⁵ and BTL (Below the Line)⁶ marketing. In order to create a local connect with the target consumers, use of regional languages and local newspapers is proposed. To increase awareness and promote the product, channel schemes should be offered to distributors and retailers and trade promotions such as distribution of pamphlets and in-store merchandising should be undertaken. Featuring popular celebrities as brand ambassadors is also suggested to enhance the reach and connect of the product with the target audience.

After discussions and analyses, it is proposed that the business models with own manufacturing (models i and ii) provide better returns and also help retain control over the manufacturing process, and are thus more appropriate as compared to contract manufacturing (model iii). For own manufacturing, operations from leased premises is proposed, even though returns is marginally lower (project IRR of 23.9%) as compared to operations from own premise (project IRR of 24.1%) due to lesser complications related to land purchase-related issues.

⁴ As IRR is negative

⁵ ATL marketing are activities such as newspaper, television, digital advertising

⁶ BTL marketing are promotional offers given to channel members