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# Can Business-driven Fortified Foods Reach Nutritionally Vulnerable Households? A Case Study of Tiger Biscuits

Rohit Parasar and R V Bhavani  
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**About LANSAs**

Leveraging Agriculture for Nutrition in South Asia (LANSA) is an international research partnership. LANSAs is finding out how agriculture and agri-food systems can be better designed to advance nutrition. LANSAs is focused on policies, interventions and strategies that can improve the nutritional status of women and children in South Asia. LANSAs is funded by UKaid from the UK government. The views expressed do not necessarily reflect the UK Government's official policies. For more information see [www.lansasouthasia.org](http://www.lansasouthasia.org)

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# Abstract

Fortification of food has been an effective way to address micronutrient deficiency. This paper presents a case study of iron-fortified Tiger brand biscuits of Britannia Industries Limited (BIL). The study uses a conceptual framework developed under LANSA research to analyse the value chain of iron-fortified Tiger biscuits and examines the potential that the value chain has to reach economically-poor households.

It is seen that the fortification initiative in the value chain has not been sustainable. Absence of both pro-nutrition focus in the larger corporate business strategy and thrust from the larger business environment may be seen as the reasons for this. Given the increasing dependence on markets for food, a mandatory regulation on fortification of biscuits could perhaps have ensured the continuation of the iron-fortified biscuit line. Governments can play an important role in creating a favourable environment for businesses to have a pro-nutrition focus.

## I. Introduction

The nutritional value of agri-foods can be enhanced through fortification interventions along the value chain. Bio-fortification and industrial fortification are pathways to address micronutrient deficiency (Bouis and Saltzman 2017). At the post-farmgate level, this is done by adding micronutrients and minerals to foods (e.g., iron-fortified flour, vitamin A-fortified edible oil, vitamin- and mineral-fortified biscuits). Lindsay et al. (2006:26), in an exhaustive publication of guidelines on fortification of foods with micronutrients, list different mechanisms of fortification of foods: **mass fortification** of foods that are widely consumed by the general population; **targeted fortification** of foods designed for specific population sub-groups, such as complementary foods for young children or rations for displaced populations; and **market-driven fortification** of foods available in the marketplace that are voluntarily fortified by food manufacturers. The last category is a typically industry-driven business-oriented initiative. In the European Union, fortified processed foods have reportedly been shown to be a substantial source of micronutrients such as iron and vitamins; market-driven fortification can also improve the supply of micronutrients that are otherwise difficult to add in sufficient amounts through the mass fortification of staple foods and condiments because of safety, technological or cost constraints (ibid.: 28-29). With a large proportion of the population in developing countries also depending on the market for their food needs, addressing malnutrition through such a fortification route assumes significance.

Country reviews of agri-food value chains aimed at increasing consumption of nutritious foods by the poor in South Asia under the research programme on Leveraging Agriculture for Nutrition in South Asia (LANSA)<sup>1</sup> followed the conceptual framework of Henson and Humphrey (2015) and examined three routes: naturally nutrient-dense foods, food fortification, and food distribution. In general, fortification interventions at scale are largely those led by private sector players in the food business, as highlighted in the India Country Review (Parasar and Bhavani 2016). Biscuits are a popular food product amenable to fortification. Manufactured by both large companies and by local bakeries in the unorganised sector, they are a common snack in India and about 90 per cent of all households consume biscuits. Iron-fortified Tiger Biscuits manufactured by Britannia Industries

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<sup>1</sup> See Parasar and Bhavani (2016), Zuberi et al. (2016) and Islam et al. (2017)

Limited (BIL) was shortlisted for further analysis of the value chain and its potential for impact on the focus segment, i.e., poor and nutritionally-vulnerable households.

### 1.1. Britannia Industries Limited

BIL is among the well-known brands in the Indian food industry. The company started as a small manufacturing unit in Kolkata in 1892; it went public in 1978 and was renamed Britannia Industries Limited (BIL) in 1979. BIL, with its presence of over 90 years in India, has made its space in the ‘culture and ethos of the country’ (Jarvis. and Magarinos 2008). The leading biscuit manufacturer refocused its product and marketing strategy toward nutrition in 1997 and came up with tag lines like ‘Eat Healthy, Awaken your body and mind’ (in Hindi: ‘Swasth Khao, Tan-Mann Jagao’).

The company had a turnover of USD 1.24 billion in 2015-16 by targeting different consumer segments (premium, mid-range and mass consumption) with corresponding price points and through enhancing diversified businesses like dairy. With a INR 5 billion (USD 77 million) business in dairy, it is now the second largest player after Amul, though the latter has a much larger share. The entire range of BIL products is listed in **Table 1**. According to a media report in late 2016,<sup>2</sup> Britannia serves 1.4 million outlets directly, and the total number of outlets reached through wholesale distributors is 4.5 million. It has commissioned a new R&D lab to spearhead innovation in existing and new categories.

**Table 1: Britannia Products**

BISCUITS	BREADS	DAIRY	CAKES	RUSK
<ol style="list-style-type: none"> <li>1. Good Day</li> <li>2. Crackers</li> <li>3. Nutrichoice</li> <li>4. Marie Gold</li> <li>5. Tiger</li> <li>6. Milk Bikis</li> <li>7. Jim Jam + Treat</li> <li>8. Bourbon</li> <li>9. Little Hearts</li> <li>10. Pure Magic</li> <li>11. Nice Time</li> </ol>	<ol style="list-style-type: none"> <li>1. Whole Wheat Bread</li> <li>2. White Sandwich Bread</li> <li>3. Bread</li> <li>4. Assortment</li> <li>5. Daily Bread</li> </ol>	<ol style="list-style-type: none"> <li>1. Cheese</li> <li>2. Fresh Dairy</li> <li>3. Accompaniments</li> </ol>	<ol style="list-style-type: none"> <li>1. Bar Cakes</li> <li>2. Veg Cakes</li> <li>3. Chunk Cake</li> <li>4. Nut &amp; Raisin Romance</li> <li>5. Muffills</li> <li>6. Biscotti</li> </ol>	<ol style="list-style-type: none"> <li>1. Premium Bake</li> </ol>

Source: <http://britannia.co.in/products/> accessed 3 March 2018

Over 35 per cent of BIL’s biscuit production is reportedly consumed by income groups earning less than USD 25 a month. In the latter half of the last decade, Britannia reportedly penetrated about 71 per cent of the urban market and about 45 per cent of rural markets (Jarvis and Magarinos 2008). According to a report by HSBC Global Research quoted in the media,<sup>3</sup> Britannia’s portfolio of biscuit brands is strong and formidable, and has a ‘large growth opportunity with its premium positioning in the growing part of the biscuits market along with a robust supply chain and operating model’. Around 55 per cent of BIL’s products sold through the commercial value chain are fortified (DFID 2011).

<sup>2</sup><http://www.thehindubusinessline.com/catalyst/britannias-battle-for-market-share/article9449608.ece> accessed 3 March 2017

<sup>3</sup> ibid

## 1.2. Britannia and nutrition

Britannia's foray into fortification can be traced back to its association with the United Nations World Food Programme in the early part of this century (Ghaswalla 2014). Following that, the company was given a clear health and nutrition steer under the leadership of Vinita Bali, who was Managing Director of BIL from 2006-2014. BIL became the first company in India to remove trans fats from its products. Many products were enriched with micronutrients, recognising the fact that for poor households 'cereal-based biscuits were a cheap source of calories that could also be nutritionally beneficial' (Jonathan 2014). The approach was accompanied by innovative pricing and packaging, making the biscuits affordable for different consumer segments. For instance, Milk Bikis was re-launched in 2006 as a product fortified with calcium, iron, iodine and four "smart nutrients"— vitamins B<sub>1</sub>, B<sub>6</sub>, B<sub>12</sub> and D. Sold with the message that four biscuits provided the equivalent energy of a glass of milk, it is popular across the country. A packet of 200 g for INR 10/- (USD 0.15) made it very accessible for consumption by both children and adults (Jarvis and Magarinos 2008). The company was cited as one of 8 examples of 'creative capitalism' by Bill Gates (Forbes 2012). BIL under Bali, founded Britannia Nutrition Foundation (BNF) in 2009 to focus on addressing child undernutrition through education and increasing awareness about challenges related to malnutrition.

This paper examines the potential of the Tiger brand of BIL in particular, as a product of enhanced nutrient value through fortification by a business entity, to reach vulnerable households and improve their nutrition status. By way of this case study, the requirements for private business to have a nutrition focus are examined. Tiger is a popular biscuit in India directed at children, and considered the best 'in-between' food (snack). BIL partnered with GAIN and Naandi Foundation to fortify the biscuit with iron (Jarvis and Magarinos 2008). Two variants of Tiger biscuits differentiated by the level of fortification were developed by the company in 2007 under this initiative: one, a high fortified variant with 5 mg of elemental iron per biscuit for supervised consumption of 4 biscuits per child a week; and two, a low fortified variant with 0.3 mg of elemental iron per biscuit for the wider market. The levels of fortification were decided in consultation with National Institute of Nutrition (NIN), Hyderabad. The high fortified biscuits were targeted for 'supervised consumption' under the state run Mid-day Meal programme (or through other initiatives of BNF) while the low fortified one was sold through regular commercial marketing channels.

The paper is organised as follows: the next section discusses the methodology and data sources. Section 3 examines the value chain of the two variants of the biscuit; this is followed in section 4 by a discussion around findings of efficacy trials, how the value chain aligns with the conceptual framework of Maestre et al. (2017) and a review of current company strategy and its consequences. The concluding section discusses the potential and challenge of the value chain in increasing the intake of nutri-dense food by low income households, in the larger context of similar business-driven fortification initiatives.

## 2. Methodology

Initial information about the company and the product was gathered from secondary data sources through internet search, published reports and papers, annual reports of the company and media reports. Two papers based on efficacy trials by BIL with the high fortified variant of the biscuit were also reviewed. An official of the company was interviewed for information on current company strategy/perception regarding the products. A former senior executive of the company during whose tenure the nutrition focus had received a lot of thrust was also interviewed.

Efforts to get updated information on plans and strategies and current thinking about the fortification initiatives of BIL from company officials was, however, not successful in spite of repeated attempts. Therefore, inferences had to be drawn largely from reports in the press.

The information collected was analysed using the framework discussed in Maestre et al. (2017) on how the value chain addresses the three desired outcomes — food safety, food being nutrient-dense at point of consumption, and food being consumed in adequate amounts on a sustained basis — as well as the different requirements from consumer and supplier perspectives.

## 3. Value Chain

BIL fortified Tiger biscuits with iron as a strategy to address anaemia, a pervasive problem in India (about 6 in 10 children below 5 years are anaemic). Some of the reasons for starting the initiative of fortifying Tiger biscuits are listed below:<sup>4</sup>

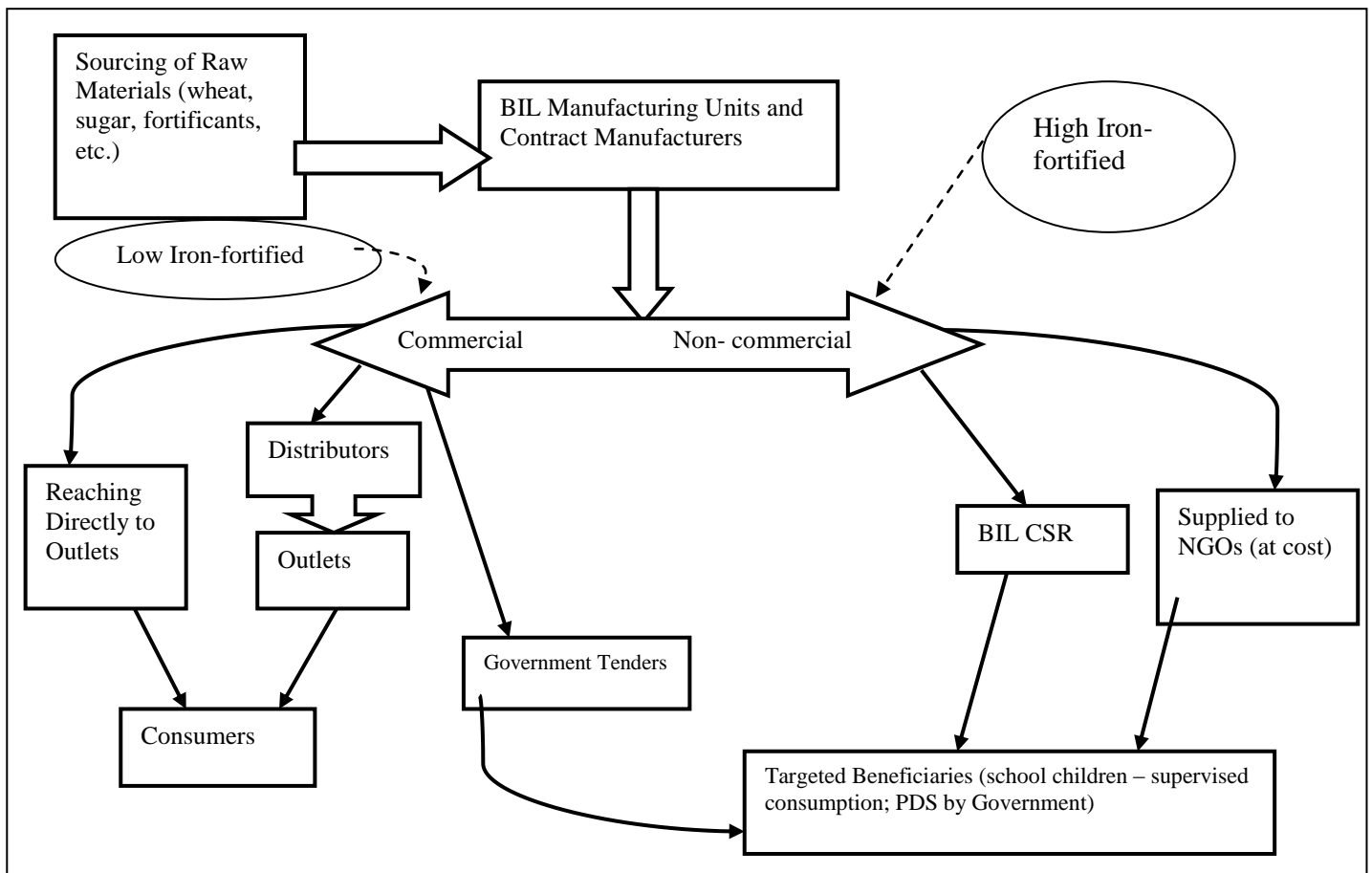
1. **Demand for biscuits:** Biscuits are among the most popular food products. They are consumed by all age groups and across India. So using biscuits as a carrier of micronutrients seemed a viable option to work on.
2. **Affordability:** Tiger brand biscuits are low-cost biscuits; one can buy a packet of 7-8 biscuits for just INR 3/- (USD 0.05). Hence it can be seen as an excellent value-for- money proposition.
3. **Targeting:** The product with the picture of a tiger on the packet is aimed to captivate children's interest.
4. **Existing production capacity:** BIL was manufacturing calorie- and nutrient-dense biscuits for the UN World Food Programme. The company had the capacity to produce nutritious biscuits without major overhauling, for supply through their value chains to reach consumers.

As stated earlier, two variants of the biscuit were developed and they came to be distributed through two models of the value chain, the commercial market value chain and non-commercial food distribution chain; the latter model can be further classified into two and the commercial can be classified into three. **Figure I** shows the structure of these value chains.

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<sup>4</sup>Interview with former senior executive of the company, 2015

**Figure 1: Value Chain for Britannia Tiger Biscuits**



**Note: BIL: Britannia Industries Limited, CSR: Corporate Social Responsibility, PDS: Public Distribution System**

**Source: Author’s own, based on qualitative assessment**

The commercial value chain of the product operates through the company’s network of direct outlets and distributors. Tiger brand biscuits were also sourced by different state governments (e.g., West Bengal, Puducherry) for targeting under different food distribution programmes like the public distribution system (PDS) and school mid-day meal scheme. The selection under this was through bidding in response to an open tender call by the concerned government body.

The non-commercial supply chain focused on highly fortified biscuits; there were two models of distribution under this. One was selling biscuits to NGOs and agencies for distribution as part of school meal programmes. BIL sold the biscuits to the NGOs on a regular basis at cost of production (no profit-no loss). The recovery of cost was important for regular and sustained supply of biscuits (Jarvis and Magarinos 2008). The second chain — of limited nature — provided biscuits to some NGOs at no cost for a limited period, on trial basis.

The biggest challenge faced by the fortification initiative was the formulation of a product line that would be preferred by consumers. The iron-fortified biscuits may taste metallic. The formulation of the product was done in close consultation with scientists at NIN, Hyderabad, and several rounds of trials/testing were undertaken before launch. The biscuits are fortified with ferrous fumarate that has high bio-availability of iron.<sup>6</sup> There were several challenges in arriving at the right mode and level of



fortification. There are two sources of iron: ferrous ( $\text{Fe}_2$ ) and ferric ( $\text{Fe}_3$ ); the latter has less bio-availability; on the other hand, ferrous sulphate has very strong metallic colour and taste and potential to reduce the absorption of other micro-nutrients. Finally, considering the limitations, ferrous fumarate was used for fortification. The cost was extremely low at 6 paise or 6.65 US cents per 1000 g (Jarvis and Magarinos 2008). This was absorbed by reduction in cost of production rather than passing it on to consumers through increase in price.

In general, consumers eat Tiger biscuits for taste and not for health reasons and hence palatability can be a deterrent factor with fortified products. According to a company official quoted in a media report, several rounds of testing had to be done with consumers before launching the fortified product in the market.<sup>5</sup>

The initiative, especially for promoting the high iron fortified variant of the biscuit in partnership with government food distribution programmes, was accompanied by nutrition awareness about iron deficiency in children and its impact, among teachers, children and their parents.<sup>6</sup> For instance, BIL partnered East Delhi Municipal Corporation, the local body, for nutritional assessment of school-going children. The high fortified biscuits were distributed along with the mid-day meal to school children. This effort was accompanied with nutritional awareness strategies like providing educational materials in the local language, house visits, banners and posters with nutritional messages as well as organising parent interaction workshops. The efforts were found to have reduced the level of anaemia in children and brought changes in dietary preferences in parents.<sup>7</sup>

## 4. Discussion

### 4.1. Evidence from efficacy trials

A pilot study that examined the efficacy of improving the quality of mid-day meals through fortification across 4 states of India included the high iron fortified variant of Tiger biscuits as one of the fortified items. One of the findings of the study was that parents were aware about fortification of the food and were satisfied with the quality of food served (Bhagwat et al. 2014). An efficacy trial of consuming the high iron fortified Tiger biscuit reported increment in blood haemoglobin levels with consumption of the biscuits for 140-150 days (Maharaj et al. 2014). The trial was conducted with pregnant women in the urban slums of Delhi. The study also concluded that the rise in haemoglobin was higher in the group that was consuming biscuits compared to the group consuming iron folic acid (IFA) tablets that are distributed to pregnant women under a government programme. The difference could be attributed to the rate of absorption as Tiger biscuits have ferrous fumarate, and IFA tablets have ferrous sulphate. Further, the compliance to consuming biscuits was better than for IFA tablets.

Another study on the efficacy of low and high fortified biscuits concluded that both the biscuits significantly increase the body weight and haemoglobin in school-going children (Bal et al. 2014); the trial was conducted in a rural set up in Shimoga, Karnataka. It was also observed that the mean increment in haemoglobin level of children consuming high fortified biscuits was higher than in the children consuming low fortified biscuits. The study highlighted fortified biscuits as an ideal vehicle

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<sup>5</sup> "It took us close to 16 trials to manage costs, taste and effectiveness", Ali Harriss, Marketing Director, BIL in Ghaswalla 2014.

<sup>6</sup> Interview with former senior executive, BIL

<sup>7</sup> <http://healfoundation.in/wp-content/uploads/2016/02/Suposhan-case-study.pdf>

for addressing anaemia and other micronutrient deficiencies, especially due to the reason that the diets were deficient in micronutrients.

The efficacy trials suggest that Tiger biscuits significantly improve the blood haemoglobin level and hence are an effective vehicle to reduce micro-nutrient deficiency. The lesser compliance with consumption of IFA tablets supports the view of not having tablets as it indicates ‘something is wrong’ with the person consuming it. Fortification of biscuits can be an effective way of enhancing micronutrient intake; in terms of costs, a pilot study found the provision of fortified biscuits with the school mid-day meal to be around 5 per cent of the total cost of the meal (Bhagwat et al. 2014). BIL’s Annual Report for 2014-15 reports that BNF partnered with the All India Institute of Medical Sciences (AIIMS), New Delhi to do a field study on the efficacy of nutrition intervention through fortified food to “at-risk child populations”. The study yielded positive results, in that an increase of haemoglobin to the tune of 1g/ dL in a period of approximately 90 days was observed in the study population. The strong recommendation made by AIIMS included in the study report was that ‘iron fortification using biscuits as a vehicle is an effective strategy to address iron deficiency anaemia among school-age study children in India’ (Britannia Industries Ltd 2015).

With regard to the commercial chain of the low fortified variant of the biscuit, it is difficult to attribute increment in sales exclusively to the fortification initiative, as the sales are influenced by many other factors like distribution and promotion. While Britannia has about 35-40 per cent of market share demand depending on the brand segment of biscuits, Tiger biscuits have about 50 per cent reach in rural areas. This penetration is because of price, packaging and the distribution chain. Britannia uses high-volume, low-margin strategies for Tiger brand biscuits that help to achieve greater market share (Hills et al. 2012). These practices enhance the availability, accessibility and affordability of the product, all of which are important considerations for low-income households (Henson and Humphrey 2015)

## 4.2. The alignment of the value chain with the conceptual framework

Following the conceptual framework outlined in Maestre et al. (2017), it is evident that, as standardised packaged food products, both variants of the iron-fortified Tiger biscuits fulfilled the first two outcomes of being safe and nutrient-dense at the point of consumption. However, while adequacy of consumption is assured under the *targeted fortification* approach, it cannot be under the *market-driven fortification* mode which also runs the risk of overdose of iron. Further, examining the five consumer requirements of *availability*, *affordability*, *awareness*, *signalling*, and *acceptability*, one finds that the first two are satisfied with the product being available in affordable packets at a multitude of outlets, and reaching the mass consumer segment. Nutrition awareness and signalling are achieved under the *targeted fortification* approach but not guaranteed under *market-driven fortification*. *Targeted fortification* ensures the quantity of intake and protects the consumer or beneficiary from overdose of iron. *Acceptability* in terms of taste is a determining factor; the formulation of the product was done in consultation with NIN, Hyderabad, and several rounds of trials/testing were undertaken before it was launched. Maestre et al. (ibid.) also outline five supply-side requirements, viz., ‘capturing value’, ‘distribution of incentives along the value chain’, ‘coordination and governance’, ‘managing costs, risk and uncertainty’, and ‘appropriate institutional environment’. BIL’s officials were not accessible in order to discuss current business strategy; therefore, it was not possible to comment on the company’s supply-side requirements. But that the cost of fortification was minimal indicates cost management.

### 4.3. Reformulation of biscuits

Following forays with both the high and low iron-fortified variants of Tiger biscuits in the market through the different value chains discussed in the previous section, BIL initiated a process of reformulating both variants in 2015. This was revealed during an interview with a company official in mid-2015. The targeted food distribution initiatives for supervised consumption were therefore on hold.

The formulation of the low fortified variant of Tiger biscuits was also under review; the official interviewed indicated that with upcoming changes in focus and marketing strategies, the company may not necessarily promote them as micronutrient rich / health biscuits. As a practice, all companies in a highly competitive sector like food products would reformulate, re-strategise and promote their range on a regular basis to retain their consumer base, attract new segments and maintain visibility; the former senior executive interviewed had also indicated this. The focus of such an exercise would be decided by market trends and the management's priorities.

Recent reports in the press indicate that the company is focusing on rural penetration and has started making inroads into the rural market by setting up a hub-and-spoke rural distribution model; it has supposedly increased the number of outlets by over 8000 within a year. BIL reportedly planned to bring the 'entire range of Britannia's value brands under the Tiger umbrella, targeted at rural markets' (Shashidhar 2015). The company plans to increase penetration in northern India over the next 5 years for this value segment, i.e., the Tiger brand (Kanungo and Agarwal 2016). The company website now shows 3 different kinds of biscuits under Tiger — Tiger Glucose, Tiger Butter Krunch (2 flavours) and Tiger Kreemz (5 flavours).<sup>8</sup> Tiger Glucose, the website says, is 'fortified with 25 per cent of daily growth nutrients like iron, calcium and vitamins'; there is no such nutritional information provided with the other two variants of Tiger.

Britannia's competitors, particularly in the rural space, have had relatively longer and stronger presence, but not necessarily with a thrust on fortification and nutrition focus. In the case of Britannia, Tiger Glucose is the only variant with focus on fortification. While the rural foray is welcome, an active nutrition focus in the agri-food supply chain is uncertain.

## 5. Conclusion

The constraint in this case study that could not be overcome was the limited information base of BIL. However, it is evident that food fortification can be an effective and viable solution to increase nutrient intake and address micronutrient deficiency; this is also revealed by the experience of other food fortification interventions in India.<sup>9</sup> The study set out to analyse two value chains, the commercial and non-commercial, for supply of low and high iron fortified biscuits, respectively. The value chains seemed to present a sustainable business model for fortification catering to a large number of consumers. Efficacy trials showed the usefulness of iron-fortified Tiger biscuits in reducing anaemia in pregnant women and children. Given this, the market share and penetration of BIL has scalable potential to improve the intake of micronutrients in diets. Therefore, prima facie, the iron-

<sup>8</sup><http://britannia.co.in/products/tiger/tiger-glucose> accessed 3 March 2017

<sup>9</sup>Salt Iodisation Program in INDIA <http://saltcomindia.gov.in/>

fortified Tiger biscuit seems to be a potential vehicle to reach populations from varied economic and demographic backgrounds, including children in poor households.

However, during the study it was found that, following business re-strategising, the company is not promoting Tiger particularly as a nutrient-dense biscuit. Reports in the press also indicated that there was a feeling in the company that they had lost market share by focusing too much on health: 'most Indians buy food more for taste than nutrition' (Shashidhar 2015). A clear message that had come from the former senior executive of BIL interviewed was that large-scale food fortification 'should be made mandatory' to address the problem of micronutrient deficiency. Another key message was that the company should see fortifying its products as a 'corporate responsibility' and not just a 'social responsibility'.

One point that clearly comes out is that the priority of the top management and the direction given by it to the company is what largely determines business strategy. The general thrust of expanding the market share of the commercial value chain and reaching out to consumers with suitable products is a proven way to impact on nutrition outcomes. It appears that with the change in top management, BIL had lost its overt commitment to improving consumer education and nutrition and that the product distribution and promotion strategies have been re-oriented towards expanding market share and purely business objectives.

This case illustrates that there is an opportunity for the state to harness such kinds of private business value chains to address the problem of undernutrition. Food businesses like Britannia are capable of recognising the contribution that they can make to public nutrition objectives. The website of Unilever, for instance, states its commitment to addressing undernutrition upfront.<sup>10</sup> In fortifying biscuits with iron, BIL was reported to have seen the fulfilment of two of its goals, viz., 'tackling malnutrition issues in the country and building a sustainable business model' (Ghaswalla 2014). It is evident, however, that company strategies can and do change, and ultimately management has the power to direct the organisation, keeping in mind the competition, shareholder perceptions and company priorities, in an environment where there is no mandatory binding.

It appears that thrust on business or market-driven fortification would require some level of supportive measures that could range from creating greater consumer awareness about the value of fortification to mandatory fortification of food products. Factors such as low level of nutrition awareness and poor signalling limit the private sector to reach out to the masses with nutritious products (Gelli et al. 2015); at the same time, easy access to unhealthy, high sugar content food is also leading to problems of overnutrition and obesity in developing countries (Rodrigues et al. 2017). Factors like nutritional awareness at scale and signalling of products can create an environment in which private businesses take decisions with a pro-nutrition focus.

A favourable institutional environment can sustain such business-driven initiatives. An encouraging institutional environment will also motivate other private businesses to be nutrition sensitive (GloPan 2014). Government policies can play an important role in this regard. Steps being taken in this direction in the country in recent years are encouraging. The Food Safety and Standards Authority of India (FSSAI) has set standards for fortification of milk, salt, edible oil, wheat flour and rice and has also released regulations to that effect. A food fortification resource centre was

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<sup>10</sup><https://www.unilever.com/sustainable-living/the-sustainable-living-plan/improving-health-and-well-being/improving-nutrition/addressing-undernutrition/> accessed 19 March 2017

launched in late 2016 to serve as a platform for interaction between all stakeholders, such as central government ministries, development partners, and, particularly, food manufacturers, processors, and fortification pre-mix makers.<sup>13</sup> These measures signify greater scope for addressing undernutrition through the market-driven food fortification route in the country in the near future.

The case study showcases the potential that private businesses have in delivering nutrition to poor households. Private agri-food value chains are increasingly targeting the rural segment and low income groups, as is seen in the case of Tiger biscuits; leveraging this expansion for attaining larger nutritional goals, therefore, has immense potential. Clear nutrition focus in a company's business strategy is key for sustenance of nutritional initiatives. Businesses however do not take decisions in isolation; hence an environment where private sector agri-food value chains can be more nutrition sensitive is required; government can play an important role in shaping this environment. The state's role in sensitising and regulating private agri-food value chains can promote healthy food products, thereby increasing consumption of nutrient-dense food and limiting the intake of unhealthy foods that may, for instance, be high in sugar and trans fat content.

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