

Beyond Green washing: A Multi-Case Study of ESG Misrepresentation in Global Food & Beverage Brands



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Abstract:

Environmental, Social, and Governance (ESG) misrepresentation is a parallel and concerning phenomenon that has emerged as a result of the rapid growth of corporate sustainability communication in recent years. This study investigates the use of greenwashing and social washing tactics, where public disclosures significantly deviate from operational realities, in the Indian and developing economies' market, done by four major multinational companies in the FMCG industry: Mondelez International, The Coca-Cola Company, Kellogg's and Nestlé.

The study uses a qualitative exploratory multi-case study approach, based on secondary data, to examine three interconnected aspects of ESG misrepresentation: (1) differences in products formulation and ingredient standards between developed and emerging markets, suggesting the existence of intentional market asymmetry; (2) the widespread use of misleading claims about sustainability, nutrition, and health in marketing communications; and (3) the abuse of regulatory loopholes and weak regulatory systems typical of developing nations like India.

The results show a consistent pattern for all four brands: cost-optimized, nutritionally inferior versions of products, having obscured higher levels of added sugars, sodium, synthetic dyes and artificial additives, while the healthier, more strictly regulated formulations are being supplied to markets with strict oversight (mainly the European Union and Australia). These brands display a systematic type of ESG misinformation, which violates consumer rights, public health, and ethical marketing standards. This study contributes to the growing discourse on corporate accountability, responsible marketing, and the limitations of voluntary ESG frameworks, thus offering implications for policymakers, regulatory watchdog organizations and conscious consumers in developing economies, such as, India.

Keywords: *ESG washing, greenwashing, social washing, double product quality standards, false/misleading advertising, ethical and responsible marketing, market asymmetry, advertising watch dogs, EU guidelines*

Introduction

In recent years, sustainability metrics and CSR initiatives have emerged as a central pillar of corporate branding, with multinational corporations increasingly positioning themselves as environmentally and socially responsible. However, this rise in sustainability communication has also led to a number of firms adopting greenwashing and social washing practices to mislead consumers regarding the environmental practices or benefits of a product or company.

These brands project ethical commitments toward consumer well-being, labor practices, and social impact, while the ground reality shows stark contrasts and inconsistencies in the company's actual operations. These practices fall under the broader concept of ESG misrepresentation, where Environmental, Social, and Governance disclosures do not align with on-ground realities.

A critical dimension of this issue is the disparity between developed and developing markets. Emerging economies such as India and Mexico among others, often experience dual product quality standards. Companies exploit the weak legal frameworks, cost sensitivities and lower consumer awareness existing in such markets, resulting in variations in product

formulations, regulatory compliance, labelling information and marketing strategies.

This paper adopts a multi-case study approach to examine how global consumer brands (within the FMCG sector) such as Nestlé, Mondelez, Coca-Cola and Kellogg's use marketing tactics and sustainability narratives, and the extent to which these align with actual environmental, social, and consumer health outcomes.

Review of Literature

1.Green Washing and Social Washing as a form of ESG Misrepresentation

ESG reporting has gained institutional legitimacy over the past two decades and increased the practice of sustainability disclosures dramatically, which has also created fertile conditions for misrepresentation of data and operational practices. This is examined across four case studies in this paper, where firms use tactics to obscure harmful and unethical operations, such as green washing, which is the practice of making misleading or unsubstantiated environmental claims, as well as social washing, referring to assertions regarding product safety and consumer well being.

2. Market Asymmetry and Dual Product Quality Standards

The phenomenon of dual quality standards is when identical branded products differ considerably in composition, nutritional value, and ingredient quality, depending on the target market. A European Parliamentary Research Service briefing by Nikolina Šajn (2017) documented compositional differences in branded food products across EU member states despite identical front-of-pack presentation, providing the empirical foundation for consequent regulatory reform. Menon and Al-Ameen Law College (2021) provided a comparative analysis of food safety laws in India, The United States and the European Union as well as insights on how firms may exploit the regulatory gaps in infrastructure and fragmented implementation, across Indian states.

When consumers lack access to accurate or comprehensible product information, firms can position inferior products as premium, healthy, or sustainable. In the FMCG sector, this asymmetry is reinforced by brand equity and emotional consumer attachment, which reduce the likelihood of switching even when concrete evidence on product quality concerns emerges (Shaikh & Parikh, 2020). The European Union follows a more precautionary, science-based framework that mandates pre-market safety approvals and rigorous labelling norms. On the other hand, India and the US use a more reactive approach, illustrating how asymmetry in regulatory structures signals market behavior at a global scale.

3. Health, Nutrition, and the Social Dimensions of ESG Violation

Arnold and Chassaing (2018) identified maltodextrin, widely used in products such as Bournvita to be linked to chronic inflammatory conditions, while its classification as a carbohydrate rather than a sugar, enables manufacturers to label products as “sugar free”, thus obscuring nutritional transparency. Harvard Health (2023) draws a correlation between elevated health risks of type 2 diabetes and cardiovascular disease, and consumption of added sugar consumption, particularly in children. Tin (2024) similarly noted that synthetic coloring agents such as Red 40 and Yellow 6, which are mandated by the European Food Safety Authority to carry warning labels due to neurobehavioral concerns, continue to remain unrestricted in Indian and American product versions, hence underscoring how market asymmetry operates through selective regulatory compliance (Arthur, 2025).

Anttila-Hughes et al. (2023) and Gaberell, Abebe, and Rundall (2024) document how Nestle’s infant food brands sold in lower-income markets, through aggressive marketing and misleading claims, caused large scale public health consequences and deaths. The

IBFAN reports continue to condemn the contrast in how high levels of added sugar are absent from identical products sold in Switzerland, France, and the United Kingdom— a disparity that directly contradicts WHO guidelines on infant nutrition. Ma et al. (2025) visualize these patterns in rising global burden of chronic diseases linked to diet-related risk factors, which have disproportionately affected those populations in emerging economies, where processed food consumption is rapidly expanding.

4. Regulatory Frameworks and Corporate Accountability in India

India's regulatory architecture for food safety has undergone significant reform since the enactment of the Food Safety and Standards Act in 2006, which established the FSSAI as the primary regulatory body. However, the Advertising Standards Council of India (ASCI) has flagged multiple FMCG brands for misleading health and nutritional claims (TNIE Online Desk, 2024). The Bournvita case—where the Government of India directed e-commerce platforms to remove the product from the “health drinks” category in April 2024— demonstrates the capacity and reactive character of Indian consumer protection governance (TOI News Desk, 2024). Countries such as the United Kingdom and Italy have introduced sugar taxes that measurably reduced beverage sugar content (Arthur, 2025), while India's absence of such strict oversight allows brands to supply high-sugar formulations without any reformulation pressure.

Shaikh and Parikh (2020) concluded that, in the case of the Maggi controversy, decades of brand-building and emotional attachment shielded the reputational damage that would otherwise result from documented food safety failures and it enabled rapid market recovery. Current data indicate that Maggi noodles sold in India contain substantially higher sodium levels than the UK variant, a disparity that Merschel (2021) points, has an adverse effect on renal function and cardiovascular health.

To summarize, these cases highlight the need for stronger enforcement mechanisms, transparent ESG reporting standards, and harmonized international food safety frameworks.

Research Objectives

1. To understand the extent of responsible business practices with regard to market asymmetry and health and sustainability communication in food and beverage products sold in emerging markets as compared with those in developed markets.

2. To analyse the extent of ESG misrepresentation in relation to environmental claims, consumer health and product compositions.

Research methodology

This study adopts a qualitative, exploratory research design, using a multi-case study approach, to examine ESG misrepresentation in four global consumer food and beverage brands namely, Mondelez International, The Coco Cola Company, Kellogg’s and Nestlé.

The study objectives necessitated choosing global brands in consumer food and beverage sector, which have a strong multi country presence to facilitate cross country comparison, analyse real- world corporate practices and regulatory responses, and gather insights on industry-wise practices. These brands operate extensively in emerging markets, have a significant influence within the FMCG sector, and have faced controversies related to food safety and health claims, sustainability practices and environmental impact. The diversity of cases improves credibility of the findings by identifying recurring patterns across product categories. A qualitative approach is appropriate since the study explores complex corporate behaviors, ethical concerns, nuances in sustainability narratives and regulatory inconsistencies. These issues are interpretive and contextual in nature, requiring in-depth examination

rather than statistical measurement. An exploratory research design allows the researcher to identify recurring patterns and examine relationships between misinformation, regulation, ethical corporate conduct and consumer impact.

This study relies on secondary data sources, including:

- Corporate sustainability and ESG reports
- Official company websites, product ingredient lists and nutritional information, public statements issued by the company, and marketing materials
- News articles, investigative reports, consumer advocacy publications, and regulatory communications
- Academic journals and prior research studies.

This methodology is suitable for investigating ESG-related concerns as it allows for a holistic assessment of the extent of greenwashing and social washing across different regulatory environments.

Case Study Analysis

Table 1: Comparative matrix of ESG metrics violated, Market asymmetry and Misleading claims/ communication across different products under the four FMCG companies:

Metrics	Mondelez International			The Coca-Cola Co.	
Product	Cadbury	Oreo	Bourn Vita	Fanta	Plastic
Analyzed-	Dairy Milk				packaged bottles (Coca-cola, Coke, Fanta, Sprite, etc.)
Environmental (E) Metric Violated	X	X	X	✓	✓
Social (S) Metric Violated	✓	✓	✓	✓	✓

Governance (G) Metric Violated	✓	✗	✗	✗	✗
Market Asymmetry	✓	✗	✗	✓	✓
Misleading claims/ communications	✓	✓	✓	✗	✓

Metrics	Kellogg's Company	Nestle			
Product Analyzed-	Breakfast Cereals (Cornflakes, Chocos, Special K)	Infant food products (Cerelac and Nido)	Maggi	Cookie Dough Products	Bottled water brands (Pure Life, Perrier, San Pellegrino, etc)
Environmental (E) Metric Violated	✓	✗	✗	✗	✓
Social (S) Metric Violated	✓	✓	✓	✓	✓
Governance (G) Metric Violated	✓	✗	✗	✗	✓
Market Asymmetry	✓	✓	✓	✗	✓
Misleading claims/ communications	✓	✓	✓	✓	✓

(Created by: Author)

Case 1 : Mondelez International, Inc.**Claims / Marketing:**

Through its advertising campaigns, packaging and website descriptions, Mondelez markets its products using strong narratives of globally standardised quality, nutritional value and health- oriented benefits.

Reality:**Variation in Product Composition seen in Cadbury Dairy Milk.**

It has been observed that, Cadbury Dairy Milk products sold in the UK and Australia contain higher levels of cocoa and stricter ingredient disclosures, whereas versions available in countries like India may contain lower amounts of cocoa, artificial flavors and cheap vegetable oil. The variations in cocoa content and ingredients composition of Cadbury Dairy Milk Chocolate across different markets draw speculations surrounding transparency and uniformity, towards a brand that promises globally standardised and quality products. Here's a comparative overview of variations in the product formulations of Cadbury Dairy Milk per 100g, sold across the UK, US, India and Australia:

Table 2: Variations in Cadbury Dairy Milk composition

Ingredients	UK	USA (Hershey's)	India	Australia
Cocoa Solids	Minimum 20%	26%	undisclosed	25-27%
Minimum legal amount of cocoa solids	20%	10%	20%	24%
Primary ingredient (by weight)	Milk first, then sugar	Sugar first, then milk	Milk and sugar in balance	Milk and sugar in balance
Sugar Content	56g	56-60g	57g	55.8g
Milk Solids	20-23% (high fresh milk content)	20-23% (Powdered milk)	23-25%	24-28% (higher milk content; creamier)
Fat Source	Cocoa butter, supplemented with 5% vegetable fats (shea+palm)	Primarily cocoa butter (no vegetable fats)	Vegetable fats	Mostly cocoa butter (with a cleaner fat profile)
Overall Formulation	Creamy, smooth and balanced	Sweeter with a tangy aftertaste; no cocoa richness	Cost and taste optimization	Climate-adapted; rich taste

(Created by author, sourced from <https://eathealthy365.com/cadbury-dairy-milk-the-honest-truth-about-the-bestchocolate/>
<https://www.bbc.com/news/magazine31924912>
<https://cadbury.com.au/products/cadburydairymilkmlkchocolateblock180g/>
<https://www.hersheyland.com/products/cadbury-dairy-milk-milk-chocolate-candy-bar-3-5-oz.html>
<https://www.cadbury.co.uk/products/cadbury-dairy-milk-chocolate-bar-110g/>

Although localisation strategies, climatic conditions, logistic factors and even the specific type of fat used, may justify such discrepancies in taste and texture (Silas,

2026), the lack of clear consumer communication regarding these variations contributes to potential misleading of consumers. This form of market asymmetry shows that identical branded products do not necessarily guarantee uniform composition or quality.

Oreo's Cream vs Crème subtle nuance

Mondelez's Oreo brand provides an example of strategic labeling practices used by firms, as seen in the nuanced use of terms such as "crème" instead of "cream" in its marketing campaigns. This creates a perception in

consumer's minds that the biscuits contain milk or have "creamy" rich flavors, when in reality, the white filling in Oreo biscuits does not have any actual dairy cream and instead, it primarily consists of sugar, refined vegetable oils (such as palm oil), emulsifiers, and artificial flavoring. (OREO website- <https://www.oreo.com/products/oreo-cookie>).

Thus, manufacturers get away with facing any legal issues because they are not directly implying the presence of significant dairy content (Check, 2025). Such loopholes in labelling compliances reflect how brands like Oreo use social washing tactics to misinterpret the product ingredients and promote premium quality or richness of their product by leveraging sensory and emotional cues in consumer's minds.

Bournvita no longer a "health drink"

Cadbury Bournvita has been a favourite in Indian households as a chocolate-y flavored powdered mix that can be added in milk for better nutrition and appeal to children.

It is a malt-based beverage, but has historically been marketed as a health drink containing essential nutrients such as iron, vitamin D and Zinc, which supports growth, energy and cognitive development. Advertising campaigns frequently emphasize its role in enhancing children's physical and mental performance. The packaging claims that Bournvita is suitable for regular consumption with milk as it supports 50% of Daily Vitamin D needs, immunity strengthening and other health benefits.

However, upon scrutinising its nutritional composition, the label reveals high sugar content along with ingredients such as maltodextrin, which do not align with its health-oriented branding. The food additive maltodextrin, often found in processed foods, has been approved by the FDA, Fssai as well as EFSA. However, recent studies show that this food additive could be a risk factor for chronic inflammatory disorders such as inflammatory bowel disease and metabolic syndrome. (Arnold & Chassaing, 2018) In addition, maltodextrin has a high glycemic index, which means it can spike blood sugar instantly. Since it is considered a carbohydrate and not a sugar, it is only mentioned in the ingredients list and its actual quantity is never specified in the nutrients list, so products can still be labelled as "sugar free" whilst still containing maltodextrin.

Concerns have been raised regarding the potential impact of such formulations containing high sugar content on consumer health, especially when marketed towards children. This led to removal of products like Bournvita from the "health drinks"

category on all e-commerce platforms by the Government of India, once this issue gained regulatory attention in April 2024. (TOI News Desk, 2024)

Even still, the contrast between promotional messaging and actual ingredient profiling exemplifies social washing, where health benefits are exaggerated despite limited supporting evidence and the presence of harmful additives being obscured by regulatory loopholes.

Case 2 : The Coca Cola Company

Claims / Marketing

Coco Cola promotes itself as a sustainability-driven company through initiatives such as "World Without Waste", with the aim to recycle a bottle or can for every one sold by 2030. It emphasizes its commitments to recycling, circular packaging and environmentally responsible operations.

Reality:

A major plastic polluter globally

Despite its sustainability commitments such as "World Without Waste initiative", Coca Cola has been identified as one of the largest plastic polluters globally, ranking first as Top Global Plastic polluter in Break Free From Plastic's annual audits for multiple consecutive years.

Critics argue that such commitments lack enforceable mechanisms and do not sufficiently address the scale of plastic waste generated. Furthermore, global recycling rates remain low, with only a small percentage of plastic waste actually being recycled, raising concerns over the effectiveness of such initiatives. (2023 Global Brand Audit: The Coca-Cola Company Is Once Again the Top Global Plastic Polluter, 2024)

Variations in product composition, coloring dyes and sugar level

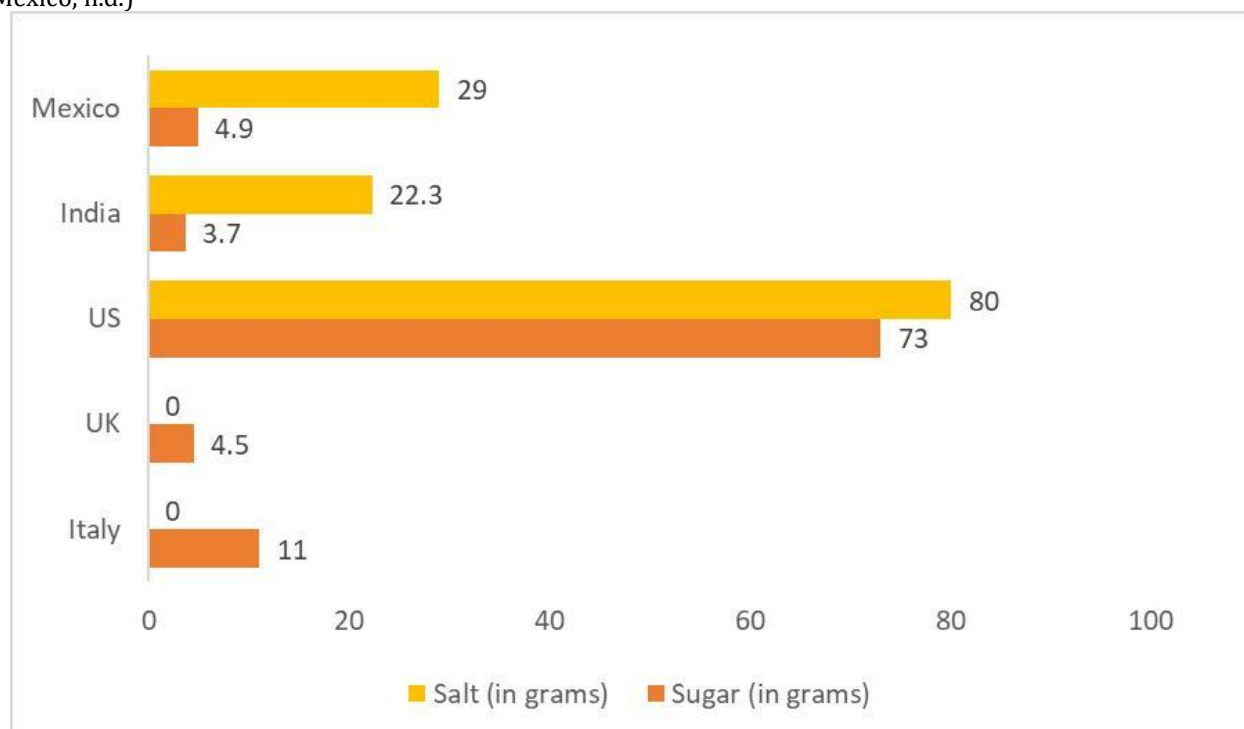
The original Fanta from Italy has a fainter orange-yellow appearance as compared to the rest of the world which knows it for its distinct bright orange colour. This is due to the presence of natural ingredients including 12% real orange juice and no coloring additives, even containing less sugar. (Tipi Di Fanta: Zero, All'arancia, Al Limone | Coca-Cola IT, n.d.)

Here's an overview of varying compositions in Fanta across developed countries such as the UK and US as well as emerging economies such as India and Mexico. (Mexico being the world's top consumer of Coca-Cola products and having a per capita consumption exceeding 700 servings annually)

Table 3: Variations in Fanta composition and ingredients

Fanta composition	UK	US	India	Mexico
Sugar Content Per 100ml	4.5g	73g	13.7g	14.9 g
Salt Content Per 100ml	0g	80mg	22.3mg	29 mg
Presence of artificial dyes	No (Use of strictly natural flavorings and sweeteners)	Yes (Less than 2% of citric acid natural flavors; use of artificial flavorings and synthetic dyes such as Yellow 6 and Red 40)	Yes (Limited content of natural & nature-identical flavoring substances and presence of artificial colors)	Yes (Limited content of natural and artificial flavoring substances and presence of artificial dyes such as yellow 6, yellow 5, red 40)

(Created by author, sourced from (Fanta - Fruit Flavours & Ingredients | Coca-Cola GB, n.d.) ; (Coca-Cola Global Home | Brand Fanta, n.d.) ; (Fanta Flavors and Products | Coca-Cola US, n.d.) ; (Sabores De Fanta | Coca-Cola México, n.d.)



Graph 1: Representation of above market asymmetry in the form of a bar graph. (created by author)

It can be observed that the U.K. version gets its color from carrots, pumpkins, and orange fruit, while the U.S., India and Mexico versions rely on synthetic coloring dyes such as yellow 6 and red 40. These artificial food colors, if handled improperly, flow into the environment during production, processing, packaging, transportation, and storage leading to environmental pollution. (View of Photochemical and

Thermal Stability of Carmoisine, Sunset Yellow and Tartrazine Food-Coloring Dyes in Commercial Beverages, n.d.)

In addition, the U.S. version of Fanta product has a surprising 73g of added sugars and 80g of salt, making it unhealthy for consumption (Leasca, 2023). Italy and UK both have controlled amounts of sugar,

thanks to the sugar taxes adopted by the countries in order to curb obesity. (Arthur, 2025) Unlike their European counterparts, Mexican and Indian versions also contain substantially high amounts, confirming the pattern that weaker legal regulations on processed sugars allow brands to change their beverage contents.

Case 3: Kellogg's Claims/ Marketing:

Kellogg's has positioned itself as a healthy, nutritious breakfast option with emphasis on fortification with essential nutrients such as iron and vitamins B1, B2, B3, and C. It markets its products as high-fiber, high protein and low fat, using branding fitness, children's health, and active lifestyles.

Reality:

Ultra processed Cereals

The UK as well as the US food regulatory watchdog's have scrutinised Kellogg's marketing campaigns and imposed bans on any misleading or unsupported claims shown on the packaging or in the form of media advertisements. (Jolly, 2022) Several ads related to Kellogg's special K cereal have been banned or taken down over the years as campaigners use marketing slogans such as "full of goodness" and "nutritious" claims, even though the cereal contains high levels of added sugars and sodium. (Sweney, 2024). While the ASCI (India) has flagged variants of the Kellogg's Special K and other products due to misleading ads in 2015 (TNIE Online Desk, 2024), the ongoing debate over ultra processed and refined breakfast cereals still lacks legal backing.

The ethical and health concern here is also due to the fact that a lot of these commercials that glamorise these products containing ultra-processed ingredients and added sugars, are targeted towards children. Children's developing bodies do not need nor benefit from added sugars, even in permissible quantities. Besides, Kellogg's multigrain Chocos contains 27g of added sugars per 30g, more than the standard 9g of total sugars. Yet, the packaging and website highlight its "no-maida", "high protein & fiber" and "multi-grain" formula and is a "nourishing" cereal perfect for kids to start their day. (Kellogg's® Multigrain Chocos, n.d.). High levels and unproportionate consumption of added sugars not only spike up blood sugar levels, especially when consumed on an empty stomach in the morning, but have also been associated with weight gain and a higher risk of type 2 diabetes and cardiovascular disease. (Harvard Health, 2023) These compounded health costs which show up gradually over the years cannot be directly traced back to any specific brands or food products, making it difficult to detect.

Indian consumers remain largely unaware of the potential health threats of an unbalanced daily diet;

the latter being further amplified by brands promoting unhealthy and low fiber breakfast options.

Interestingly enough, Kellogg's India continues to boast its sustainability and social initiatives, even uploading a pledge to on the Fssai website to "effectively Manage Plastic waste and Reduce Plastic footprint towards achieving a Plastic-Waste free F&B sector." (KELLOGG INDIA PVT. LTD. & Anand, 2019). The pledge uses vague terms to mask the ground reality of gaps in the recycling infrastructure in India, green wash their slow progress and use the Fssai halo effect to dismiss the fact that plastic waste management falls under the control of Central pollution control board (CPCB) and Ministry of Environment for monitoring.

Case 4: Nestlé Claims/ Marketing:

Nestlé positions itself as a global leader in nutrition, health and wellness, promoting its products as safe, scientifically developed and supportive of consumer well-being, while also emphasizing commitments towards sustainability, plastic neutrality and environmentally responsible packaging.

Reality:

Infant formula and Baby Food controversies

Nestlé has faced multiple food safety controversies linked to infant nutrition which have caused severe, often fatal illnesses in infants from low-income or emerging economies, giving it the infamous "baby killer" tag. Nestlé exploited the lack of awareness and low literacy rates particularly in countries such as Africa, post World War 2, despite being aware of the fact that many families lacked access to clean water, sterilization methods or sufficient income to safely prepare the formula. Even if it was carefully prepared, taking all precautions and hygiene measures, baby formula still contains added sugars and lacks the appropriate nutrients and antibodies that are only found in breastmilk, which are essential for a child's overall development. (Andrei, 2023) Findings have revealed that Nestlé's entry into low-income markets have caused approximately 212,000 infant deaths per year, between 1960 and 2015. (Anttila- Hughes et al., 2023)

Another example of Nestlé products being linked to low-level contamination in certain emerging markets is that of the 2008 Chinese milk scandal. (Taiwan government found that their dairy products were contaminated with toxic melamine, a substance sometimes illegally added to food products to increase their apparent protein content, which lead to the deaths of six infants and illness in hundreds of thousands. Two people were executed and several life prison sentences were issued, with the World Health Organization (WHO) referring to the incident as one of the largest food safety events it has had to deal with in recent years. (Andrei, 2023)

Despite decades of controversies, Nestlé continues to hold a dominant position globally, under infant nutrition products and yet, there have been no substantial improvements in its precautionary food safety measures, till date. Recently, towards the end of 2025, authorities found traces of cereulide, a toxin associated with *Bacillus cereus*, in certain batches of its infant formula products, leading to a recall of these products in more than 60 mostly European countries. UK Agencies are currently investigating 60 sick babies linked with this contamination. Nestlé shifted the blame by stating that this contamination was caused by a third-party supplier of arachidonic acid (ARA), but the IBFAN points out that it is Nestlé who is responsible for all microbiological safety checking of both the ingredients as well as the final product. (IBFAN, 2026)

Even today, Cerelac and Nido, two of the best-selling baby-food brands marketed by Nestlé in low- and middle-income countries contain high levels of added sugar. Sales in this category exceeded \$2.5 billion in 2022. Nestlé promotes these brands as being fortified with minerals, vitamins and micronutrients essential for growth and development needs of babies and young children, with the aim of helping them “live healthier lives”. They often used marketing tactics, paid influencers and “experts” in white lab coats to convince consumers. On the contrary, these same products are sugar free in its home country, Switzerland. France, Germany and the UK also contain no added sugars. These are the key findings of an investigation by The Public Eye and the International Baby Food Action Network (IBFAN). This harmful double standard contributes to the rise of obesity, hyperactivity, Type 2 diabetes and other health conditions linked to the intake of high levels of refined sugar in children, in addition to developing a life-long preference for sugary products.

The WHO has strongly criticized this double standard of Nestlé, early exposure to sugar in babies, as well as the Codex Alimentarius, which forms the basis for national legislations of countries, with the latter allowing up to 20% of added sugars in infant cereals and this goes against WHO guidelines. (Gaberell et al., 2024)

While all food brands face such cases of unprecedented contamination of food products, Nestlé stands out in the fact that their actions have large scale consequences.

Public Health Risk

In July 2009, the FDA and the Centers for Disease Control and Prevention (CDC) found that the prepackaged Nestlé Toll House refrigerated cookie dough was contaminated with a dangerous strain of *E. coli*. This food borne outbreak affected more than 50 people in 30 states, half of whom required hospitalization and one woman ended up having a fatal infection, before the batch was reclaimed.

The company released a statement showing remorse over this incident and assuring stricter regulations

henceforth, but critics question adequacy of pre-existing quality control. (Andrei, 2023).

Despite this, Nestlé's Cookie Dough batches were recalled time and time again for various contaminations over the years [such as, for potential contamination by rubber pieces (2019), plastic fragments (2022) and wood chips (2023)].

Unhealthy Ingredients Risk

In India, the Maggi noodles controversy further highlighted concerns over food safety, as samples were found containing unsafe levels of lead (exceeding 2.5 ppm) and undeclared MSG (monosodium glutamate), which led to a nationwide ban in June 2015.

Nonetheless, Maggi returned to shelves in November 2015 after passing tests in court-ordered labs and the slight dip in consumer trust was once again regained, because of Indian consumer's emotional trust attached with the brand over more than three decades. (Shaikh & Parikh, 2020)

Even today the Indian classic Maggi 2-minute noodles contains significantly large proportions of sodium, up to 750g per serve (75g), (Maggi® 2 Minute Noodles | Maggi®) as compared to its UK version having 2.17g for the same serving size. (Maggi® 2 Minute Masala Spicy Noodles | Maggi®) This disparity in ingredients extends beyond regulatory differences alone and must be taken seriously, because regular intake of high sodium levels negatively affects the kidneys, blood pressure, immune system and heart health. (Merschel, 2021). Such incidents and ingredient disparity underscore the recurring issues where Nestlé has displayed repeated negligence in product safety, regulatory compliance and quality assurance across nations.

Green washing seen in plastic bottled water controversies and failure to meet plastic reduction goals

Nestlé's bottled water division is known for producing brands such as Pure Life, Perrier, San Pellegrino, Acqua Panna and so on, However, its water extraction operations have attracted significant criticism for its negative environmental impact, illegal water extraction and treatment practices, unregulated ground water depletion in drought-stricken areas and public health issues, especially in North America, Brazil, developing Countries, well as in indigenous communities.

In 2018, Nestlé released a statement saying that it is committed to reducing plastic pollution with the aim to achieve 100% recyclable or reusable packaging by 2025. However, environmental groups such as Greenpeace International pointed out that the company did not release clear targets, a timeline to accompany its ambitions or additional efforts to help facilitate recycling by consumers. In Break Free From Plastic's 2020 annual report, Nestlé, along with Coca-Cola and PepsiCo, were named the world's top plastic

polluters for the third year in a row. (Robinson, 2024) Critics, including NGOs, argue that despite setting sustainability targets, many of Nestlé's voluntary commitments have failed to meaningfully reduce their plastic footprint.

Conclusion

The comparative analysis across these four case studies reveals a pattern among the above global consumer brands: (1) Governments and agencies of developed countries impose stricter regulations on all food articles, irrespective of whether they are unhealthy or commercialized, as compared to those of the US and emerging economies like India and Africa. The latter countries face a rising prevalence of preventable diet-related chronic diseases such as cardiovascular disease, type 2 diabetes, hyperthyroidism, obesity and mental health disorders. (Ma et al., 2025) One of the main reasons for this, being that traditional diets are often replaced by processed foods high in sugar, sodium, unhealthy fats, refined carbohydrates and artificial additives, which increase cravings and lack the essential nutrients our bodies actually need; (2) Regulatory gaps in emerging markets, when contrasted with those of Europe and Australia, enable market asymmetry. Companies profit from loopholes in poorly regulated and price-sensitive markets, to shape the consumers' perception in a positive way, which finally influences their buying decisions and trust; (3) Lastly, there is a need to monitor a company's actions beyond sustainability reports published on the website, CSR and other humanitarian activities undertaken and ambiguous pledges or statements made by the Board. International harmonization of food safety laws (through agencies such as Codex Alimentarius) as well as adopting EU level strict regulations across emerging economies, is critical to enhancing trade efficiency, consumer protection, and public health. Ultimately, companies need to have a more holistic approach when considering the stakeholders involved, ranging from transparency in product composition, labelling and ethical marketing to following realistic, time-bound and targeted sustainability goals backed by ESG reporting.

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