

**ANALYZING THE ECONOMIC IMPACT OF FAST-FOOD
MARKETING ON YOUTH OBESITY RATES.*****¹Dr. Krupa Rao, ²Dr. Rajani Goklani**

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ABSTARCT

Purpose: This study evaluates the causal relationship between commercial activities and long-term public health. It specifically investigates how the fast-food "marketing mix"—characterized by predatory pricing and ubiquitous digital outreach—functions as a structural determinant of the childhood obesity epidemic. The research seeks to quantify the negative economic externalities produced by these corporate strategies.

Design/Methodology/Approach: Using a multidisciplinary econometric approach, the study integrates regional advertising density data with pediatric health metrics from the National Family Health Survey (NFHS) and global databases. Regression modeling is applied to measure the demand elasticity for ultra-processed foods among vulnerable populations exposed to targeted digital marketing.

Findings: Results indicate that marketing saturation is a primary predictor of dietary behavior, transcending household income levels. This "price of persuasion" represents a significant market failure, where short-term corporate gains from low-nutrient products impose a long-term fiscal burden on public healthcare systems through the rising prevalence of early-onset non-communicable diseases (NCDs).

Research Limitations/Implications: While limited by the opacity of private-sector marketing algorithms, the findings offer a data-driven foundation for fiscal policy interventions, including advertising taxes and nutrient-dense food subsidies.

Originality/Value: This research advances the "Commercial Determinants of Health" (CDoH) framework by shifting the focus from individual choice to institutional and economic accountability.

I. INTRODUCTION

The global escalation of childhood obesity is shifting from a narrative of individual willpower to one of Commercial Determinants of Health (CDoH). In India, the transition to ultra-processed foods (UPFs) is fueled by a sophisticated "marketing mix" that exploits price sensitivity and digital ubiquity. This research defines fast-food marketing as a structural social determinant that reshapes the dietary environment. Economically, this creates a negative externality: the retail price of fast food fails to account for the future societal costs of chronic illness.

II. Literature Synthesis

- The Global Syndemic (Swinburn et al., 2019): Interlinks obesity, undernutrition, and climate change as products of commercial interests.
- Corporate Pathogenesis (Moodie et al., 2013): Parallels the UPF industry with big tobacco in its use of health-detrimental strategies.
- Predictive Exposure (Zimmerman & Bell, 2010; Harris et al., 2009): Establishes advertising density—specifically sugar-heavy cereal marketing—as a direct driver of pediatric BMI.
- The Economics of Cheap Calories (Cawley, 2010; Headey & Alderman, 2019): Analyzes how the falling real price of calorie-dense foods leads to overconsumption in developing economies.
- The Revised Sequence (Galbraith, 1958): Argues that corporations do not meet existing consumer needs but actively manufacture them through persuasion.
- The Nutrition Transition (Popkin, 2001; Kelly et al., 2010): Documents the shift toward Western diets facilitated by global supply chains and "advergemes."

III. Identified Research Gaps

1. Algorithmic Persuasion: Most existing literature focuses on legacy media (TV); there is a critical need to study how AI-driven micro-targeting bypasses parental mediation.
2. Longitudinal Fiscal Modeling: Current models often view obesity as a "rational choice" rather than a long-term state fiscal liability for non-communicable diseases (NCDs)

within the Indian healthcare infrastructure.

IV. Research Questions

1. To what degree does digital marketing saturation correlate with the rise in pediatric obesity seen in NFHS-5?
2. How does marketing-induced brand loyalty modulate price elasticity across different socio-economic strata?
3. What is the projected monetary value of externalities (healthcare costs) resulting from current marketing-driven dietary shifts?

V. Methodology & Data Integration

This study utilizes a Multi-Disciplinary Econometric Framework, correlating:

- Health Metrics: NFHS-5 regional data on childhood BMI.
- Media Metrics: BARC Ad Density Indices to quantify regional exposure.
- Market Metrics: Euromonitor data for pricing and market share of leading fast-food chains.

Regional Case Study: Under-5 Overweight Trends

Region / State	NFHS-5 (%)	NFHS-4 (%)	% Change
India (National)	2.7	1.2	+125.0%
Delhi (NCT)	5.8	2.1	+176.2%
Mizoram	10.0	4.2	+138.1%

VI. Analysis & Interpretation

1. The Marketing-Obesity Correlation

Analysis reveals that marketing saturation is a primary predictor of diet, often independent of income. High digital ad penetration corresponds to a measurable shift toward UPFs, directly tracking with the BMI spikes in the NFHS-5 dataset.

2. Bifurcated Price Elasticity

- Low-Income Groups: High price elasticity. They are captured by "value pricing," where fast food offers the highest calorie-per-rupee value.
- High-Income Groups: Lower price elasticity. Marketing creates a "lifestyle halo" that desensitizes consumers to price increases, cementing brand loyalty.

3. Market Failure & Healthcare Externalities

The "Price of Persuasion" functions as an information asymmetry. The Marginal Social Cost (MSC) of a meal—including future diabetes and hypertension treatment—greatly exceeds its Marginal Private Cost (MPC). This gap represents a "hidden tax" on the public health system.

VII. Strategic Implications

- For Marketing: A shift toward Institutional Accountability. Regulation must address the "frictionless" consumption enabled by quick-commerce and influencer gamification.
- For Economics: Implementation of Pigouvian (Fat) Taxes to internalize externalities, with revenues used to subsidize nutrient-dense alternatives.

VIII. Conclusion: The Path to Accountability

The current fast-food marketing mix is not merely a commercial tool; it is a structural barrier to public health. By privatizing short-term profits and socializing long-term medical liabilities, the industry creates a fundamentally unsustainable economic model. Rectifying this Market Failure requires moving beyond the "personal responsibility" narrative toward a framework of fiscal intervention. To protect the nation's metabolic health, policy must ensure that the true price of "unhealthy" food is reflected at the point of purchase.

Strategic Policy Recommendations

To transition from "Individual Responsibility" to "State Accountability," the following evidence-based interventions are proposed:

- Nutritional Labeling 2.0: Implementing mandatory, front-of-pack "Warning Labels" (High in Sugar/Salt/Fat) for all UPFs, modeled after the successful Chilean food labeling laws.
- Digital Advertising Watersheds: Establishing a "Digital Dark Hour" or age-gating algorithms to prevent fast-food micro-targeting of users under the age of 18 on social media and gaming platforms.

Ethical Framework for the Marketing Industry

The research suggests a paradigm shift in the "Social Contract" of marketing:

- De-gamification of Junk Food: A voluntary or regulated ban on the use of "Advergames," brand mascots, and toy premiums that specifically target the neuro-cognitive vulnerabilities of children.
- Transparency in Algorithmic Spend: Requirement for corporations to disclose the percentage of digital marketing spend allocated to demographics in lower socio-economic

tiers.

Directions for Future Research

While this study establishes the correlation between digital density and obesity, further investigation is required in:

1. Neuromarketing Impacts: Using fMRI data to study how high-frequency digital food triggers affect the impulse control centers (prefrontal cortex) of the developing adolescent brain.
2. Quick-Commerce Logistics: Analyzing the impact of "10-minute delivery" on the abandonment of traditional home-cooked meal patterns in urban Indian households.
3. Cross-Sectoral Analysis: Comparing the effectiveness of "Fat Taxes" versus "Healthy Subsidies" in diversifying the dietary basket of the rural poor.

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