

Wealth and Food Insecurity in India

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Abstract

Household wealth is a key determinant of food security; in particular, its impact is heterogeneous due to differences in entitlements, consumption smoothing, and the conversion of food into nutrition. This study develops a pathway framework that links asset stocks and income flows to the four FAO pillars, which include availability, access, utilization, and stability. The condition of India's urban and rural setting would also be treated as evidence for analysis by adopting measurement approaches that are reviewed, including experience-based scales (HFIAS/FIES), coping indicators, dietary diversity indices, and anthropometric outcomes. The results indicate that wealth gradients in access-oriented indicators are generally steeper than those observed for long-term utilization outcomes. Weak asset buffers amplified the effects of income and price shocks, as demonstrated during the COVID-19 lockdown. While India has ample cereal supplies, the relative scarcity and high prices of nutritious foods limit the ability of poor households to upgrade their diets despite income growth. The policy recommendations include transforming social supply and demand dynamics, investing in distribution and transportation within the supply chain, and increasing infrastructure investment in livelihoods. Complementary interventions to strengthen health, water and sanitation, and nutritional knowledge may increase the efficiency of wealth in improving dietary quality.

Keywords

India, food insecurity, economic access to food

1. Introduction

Food security entails access to sufficient, safe and nutritious food that meets people's dietary needs and food preferences to lead an active and healthy life (FAO, 2023). The global food output is adequate for the world population, and actual regional differences force 2.3 billion people to achieve food security (Kc et al., 2018, FAO, 2025). Theoretically, the dimension of access, which depends on purchasing power, prices, and institutional arrangements that translate resources into entitlements, is the binding constraint for most vulnerable households (Leroy et al., 2015, IFAD, 2015). Therefore, familial wealth, as evaluated by income and asset stocks, determines the risk level of food insecurity.

India has offered a researchable case in which the national poverty rate has declined and agricultural output continues to increase in combination with a wide range of food insecurity and high undernutrition rates in children (Deaton and Drèze, 2009). Urbanization and dietary transition have not delivered balanced diets to low- and middle-income households, and the affordability of nutrimental food is difficult (Kc et al., 2018, Rautela et al., 2020). Moreover, among wealthier quintiles, underweight and stunting are far from negligible, indicating that income is fundamental for food security but not sufficient when environmental disease burdens, intrahousehold allocation, and diet quality matters remain unresolved (Maitra et al., 2019, Rekha et al., 2023).

This article presents three arguments. First, it lays out a pathway framework showing how wealth affects each dimension of food security in India. Second, it synthesizes the measurement literature to clarify how different indicators capture facets of access and utilization and why wealth gradients are steeper in measurements than others are. Third, it draws on India-focused evidence to represent the partial elimination of food insecurity by wealth and policies.

2. 2. Dimensions of Food Security

2.1 Availability as a Fundamental Condition

Wealth's effect on access presumes that food is indeed available, which is an enforcement of supply. India's experience shows that public investments in research, irrigation, procurement, and infrastructure can maintain adequate cereal availability and restrain price volatility. Conversely, periods of disinvestment heighten vulnerability (Deaton and Drèze, 2009, Swaminathan and Bhavani, 2013). Thus, converting availability into access is crucial because even rising incomes would not balance diets because of systematically underproduced nutritional foods or failure in distribution. (Kc et al., 2018, Swaminathan and Bhavani, 2013).

2.2 Wealth and Access

Since Sen's entitlement approach, the food security literature has emphasized that hunger often arises from a failure of access, which is the effectiveness of trade transfer and allocations, rather than a lack of aggregate supply, which has two implications for wealth (Barrett, 2010, FAO, 2023). First, income flows and asset stocks expand the feasible entitlements by improving the capacity to purchase, store, and transport food. Next, insurance capacity, which is the ability to smooth consumption during adverse shocks, depends on assets and savings. Households with greater economic wealth are better able to cope with temporary income losses, price spikes, or mobility restrictions without sacrificing dietary quantity and quality (Barrett, 2010, IFAD, 2015).

2.3 Utilization and Nutrition

Utilization captures the biological use of food, which requires adequate health, sanitation, hygiene, and knowledge for safe preparation and effective absorption (FAO, 2003). Wealth facilitates spending on healthcare, water and sanitation services, and education, thereby improving the conversion of food into nutrition and increasing nutritional returns to income (Deaton and Drèze, 2009, IFAD, 2015).

2.4 Stability of Consumption Across Shocks

Stability emphasizes the capacity to maintain food security over time. Assets and savings provide buffers with diversified income sources and programmatic transfers, such as the public distribution system, which reduces the amplitude and duration of consumption shortfalls (Barrett, 2010, IFAD, 2015). The COVID-19 lockdown starkly illustrated that households with thin buffers were more likely to reduce their diet quality and quantity (Kaicker et al., 2022).

3. Measurements

3.1 Experience-Based, Behavioural, and Dietary Indicators

Food insecurity is multidimensional, and not a single indicator is sufficient for all contexts. Experience-based scales such as the Household Food Insecurity Access Scale (HFIAS), the Food Insecurity Experience Scale (FIES), and the United States Household Food Security Survey Module directly capture access problems via reported anxieties, compromises in diet, and reductions in intake (Leroy et al., 2015, McKay et al., 2023). Behavioural or coping indicators such as the coping strategies index (CSI) and the reduced coping strategies index track short-term strategies such as skipping meals or reducing portions (Maxwell et al., 2014). Dietary diversity indices such as the household dietary diversity score (HDDS) and the food consumption score are proxies for diet quality and micronutrient sufficiency (Leroy et al., 2015). Anthropometry captures longer-term nutritional and health outcomes, often reflecting utilization constraints (Deaton and Drèze, 2009)).

Indicators partially overlap but remain imperfect substitutes. For example, on the basis of Maxwell's (2014) empirical scales on dietary measures and hunger, each respondent retains a distinct sensitivity to a separate range, which stimulates multidimensional estimation. Reviews of the indicator maps include quantity, quality, safety, and cultural acceptability and offer guidance on instrument choices for policy and programmatical evaluation (Leroy et al., 2015).

3.2 Measurements in India

The Household Food Insecurity Access Scale (HFIAS) is commonly used in Indian settings, but the prevalence of food insecurity varies from single digits to very high shares, depending on context and measurement choices (Rautela et al., 2020). McKay et al. (2023) reported that the prevalence ranges across studies, driven by different instruments, cut-offs, recall periods, and populations, reflecting that food insecurity in India has three situations: mild anxiety and diet compromise, severe intake reduction, and chronic undernutrition.

Deaton and Drèze (2009) reported that asset-based wealth indices constructed in the style of the Demographic and Health Surveys, which use principal components of durable goods, housing quality, and utilities, are used in India. These indices strongly predict food insecurity and child growth outcomes, providing a tractable proxy for entitlements and socioeconomic position (Rekha et al., 2023).

4. Indian Diet Structure

A recurring puzzle in Indian nutrition is the coexistence of economic growth with stagnant or modestly improving dietary quality for many households (Deaton and Drèze, 2009). Kc et al. (2018) reported that at the global level, the food system overproduces grains, sugars, and fats relative to dietary guidelines while underproducing fruits, vegetables, and high-quality proteins. This supply imbalance increases the relative prices of nutritious foods, reducing affordability for low-wealth households, whereas high-calorie households are cheap (Kc et al., 2018). Swaminathan and Bhavani (2013) trace Indian policy iteration, showing that grain-concentrated incentives stimulate availability and stable prices without driving the system toward diversification. In such a context, rising wealth enables households to upgrade their diets, but structural constraints impede their transformation.

5. Mechanism Summarization

Essentially, in India, higher income households have loosened budget constraints and strong purchasing power, enabling them to purchase at normalized retailers who offer high-quality and safe food. Next, wealth provides asset buffers and savings that smooth consumption through shocks, reducing the reliance on harmful coping mechanisms such as meal skipping or distress sales. Additionally, rising wealth supports dietary upgrading, allowing substitution away from simple diets toward diversification. Moreover, wealth areas offer modern facilities, large-scale markets, transportation convenience and welfare, and the diversification of the food supply is satisfactory. Beyond food access, wealth finances Indians to access health care, safe water, sanitation, and education, which generates positive economic externalities to the public. In combination with these correlations, wealth positively affects food security.

6. Evidence on Wealth Gradients in India

6.1 Indian National Conditions

Urban India presents a complex pattern in which markets are dense and diverse and coexist with housing precarity, low-income jobs, and high living costs. In Delhi and Chennai, household food insecurity is strongly concentrated among poorer wealth tertiles, with pronounced associations with education, household composition, and diet quality (Rautela et al., 2020). Furthermore, where caloric sufficiency is not an immediate constraint, the affordability of diverse foods such as fruits, vegetables, and high-quality proteins is the binding margin for lower-wealth households (Rautela et al., 2020). Ganpule's analysis (Ganpule et al., 2023) revealed that food insecurity is correlated with lower dietary diversity and greater consumption of energy-dense but

low-nutritional foods, with mild food insecurity prevalent even in relatively rich households. These studies generally highlight that increasing wealth expands the feasibility of consuming nutritious foods in urban markets.

In rural areas, households are frequently confronted with both income volatility and seasonal market frictions. Using a synthetic panel approach, Bhuyan et al. (2020) showed asset growth associated with transitions into food security and asset losses linked to deterioration. Additionally, controlling for assets, households relying on market purchases and those accessing the public distribution system are less vulnerable. This briefly illustrates that wealth builds baseline resilience and market connectivity and transfers, stabilizing access when shocks strike (IFAD, 2015).

6.2 Tribal Communities and Wealth-Related Inequalities

Tribal communities (According to Article 366/342 of the constitution of India, Scheduled Tribes are distinctive cultures, geographical isolation, and economic disadvantage) in Jharkhand and Odisha exhibit persistently higher rates of child undernutrition than nonscheduled Tribe groups do, where wealth-related inequality indicators are statistically significant, particularly for stunting and underweight (Rekha et al., 2023). Some gaps have narrowed by the implementation of combinations of wealth-enhancing policies on assets, livelihoods, and social protection with nutritional services related to health, sanitation, hygiene, safe water, and women's empowerment to convert resources into improvements in utilization (Rekha et al., 2023).

6.3 Allocation within the Households

Maitra and colleagues provide microlevel evidence from the Maharashtra area that household food insecurity, measured through the Household Food Insecurity Access Scale, increases the risk of maternal and child underweight, and women's decision-making power mediates these associations (Maitra et al., 2019). Addressing potential endogeneity, they show that empowerment and resource control shape how income translates into nutritional status. This complements the wealth framework by demonstrating that intrahousehold allocation and knowledge are critical for converting access into utilization.

6.4 Macroeconomic Context and Affordability

In addition to household-level correlations, macroeconomic conditions shape affordability. De and Kakar (2021) document that monetary policy and inflation shocks can worsen distributional outcomes via food prices, highlighting that macroeconomic stability matters for equitable access. When inflation injures real incomes, poorer households are forced to substitute for cheaper, less diversified diets, reducing the benefits of nominal income gains. Thus, wealth's protective effects are contingent on macroeconomic policies.

7. Shock of COVID-19 Lockdown

During the COVID-19 lockdown in 2020, income abruptly collapsed, and supply chain disruptions aggravated access problems. Research has indicated that during the pandemic, food prices increased by an average of 6%. For example, potato and tomato prices have increased by 15% and 28%, respectively (De and Kakar, 2021, Narayanan and Saha, 2021). Further reports show that smallholder farmers experienced reduced incomes and heightened food insecurity, with stress responses, including distress sales and compromises in diet quality, as well as thin asset buffers exacerbating these effects (Ceballos et al., 2020). To prevent transitory shocks from causing persistent nutritional consequences, complementary policy analysis argues that the burden falls disproportionately on disadvantaged groups and outlines a menu of countermeasures for stimulating demand, repairing supply chains, and limiting price volatility (Kaicker et al., 2022). In general, the shock case indicates that households with adequate savings, diversified livelihoods, or reliable transfers could smooth consumption, whereas those without adequate savings are more likely to be forced into deleterious situations.

8. Policy of Building Wealth and Converting it into Nutrition

8.1 Income and Employment

Barrett (2002) suggested that in India, the most reliable path for sustainable improvements is creating jobs to achieve income growth for the poor through rural livelihoods, especially in the irrigation, labour-intensive manufacturing and services sectors, as well as the development of modern city sectors combined with social protection. Simultaneously, with investments in safe water, infrastructure and construction, rural areas migrate to urban areas; thus, the agglomeration effect evolves, and all sectors benefit in the long run.

8.2 Affordability and Retails

In the short term and at the micro level, to narrow the affordability gap for nutritious foods, Swaminathan & Bhavani (2013) recommend the implementation of a diversification of agriculture, which aligns agricultural policy with nutritional objectives, shifting from plant cereals to fruits and vegetables to follow dietary guidelines. Moreover, it is important to invest in cold chains, storage and normalized retailers, which have low stock costs (KC et al., 2018).

8.3 Macroeconomic Stabilization and Price Control

Shocks that disproportionately harm poor, monetary and fiscal policies could guard against excessive food price volatility, complemented by transparent buffer-stock operations, predictable procurement, and the development of early warning systems (De and Kakar, 2021, Swaminathan and Bhavani, 2013). The goal is not general price suppression but stability and credible signals that reduce risk premia and hoarding, enabling both producers and consumers to plan.

9. Limitations

First, food insecurity cannot be reduced to a single number, and multidimensional indicators across experience-based, dietary, and anthropometric indicators are essential for diagnosis and evaluation (McKay et al., 2023). Next, wealth indices capture long-run status but may miss liquidity constraints and short-run debt burdens; combining asset indices with measures of income volatility and administrative data on transfer receipt would sharpen vulnerability analysis (Bhuyan et al., 2020).

10. Conclusion

To conclude, wealth reduces food insecurity in India primarily by expanding entitlements and buffering shocks, thereby relaxing the binding access constraint while improving utilization and stability. Across urban slums, rural households, and tribal communities, Indian studies document steep wealth gradients and the protective roles of assets and markets. However, wealth alone cannot guarantee adequate nutrition where structural supply imbalances keep nutritious foods relatively costly. Macroeconomic stability that limits food price volatility further ensures that gains in nominal income translate into real improvements in diet quality, especially for the poor. In short, a policy that combines the creation of wealth and its conversion into nutrition is suggested.

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Conflicts of Interest

The authors declare no conflict of interest.

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