

Does market access override the effect of farm categories on nutritional composition of farmer diets?

Insights from a Bangladesh dataset

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Does market access override the effect of farm categories on nutritional composition of farmer diets?

Rationale/Background

High rates of malnutrition in Bangladesh:

- 600,000 children have severe acute malnutrition (Choudhury et al., 2014).
- 43% of 6–59-month-olds are anemic (World Bank, 2019).
- 28% of <5 year olds are stunted (USAID, 2020).
- 10% of <5 year olds are wasted (icddr-b, 2023).
- 23% of <5 year olds are underweight (icddr-b, 2023).

Malnutrition disproportionately affects women and children:

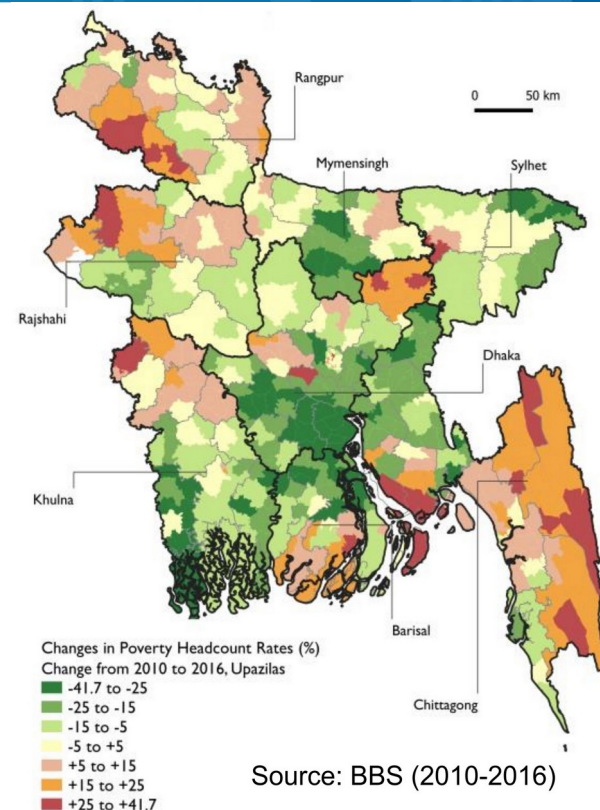
- 33% of married women are underweight (Khanam et al., 2021).
- ~50% women have anemia, mostly nutritional (Stevens et al., 2022).

Malnutrition has a significant economic impact on Bangladesh:

- Malnutrition costs Bangladesh over US\$1bn annually in lost productivity (WFP, 2016)

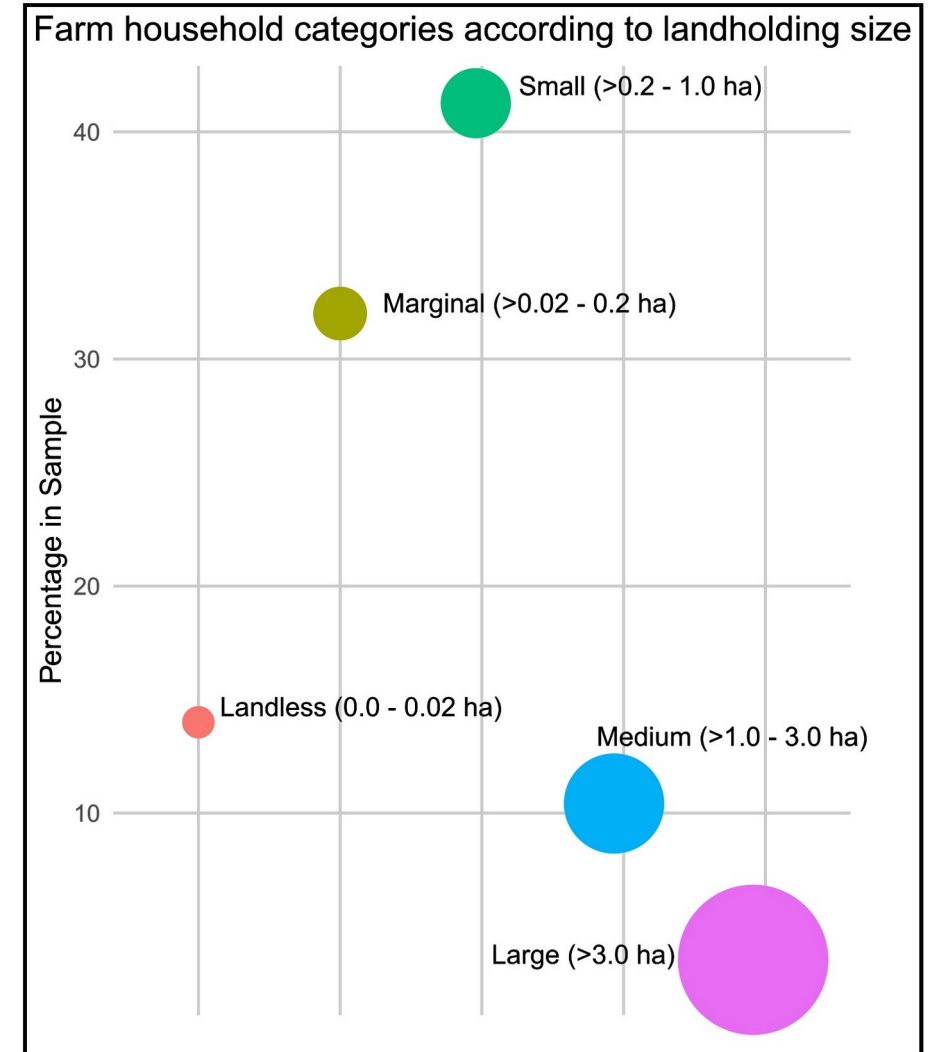
Farm production for HH nutrition may be underutilized

- Farm production may secure food for rural HHs but not always nutritional needs.



Objectives

- To quantify the nutrient intake of farm household categories in rural Bangladesh based on food items consumed.
- To compute the nutrient adequacy of different categories of farm households in rural Bangladesh.
- To identify the nutritional needs of different farm household categories in rural Bangladesh.



Methodology

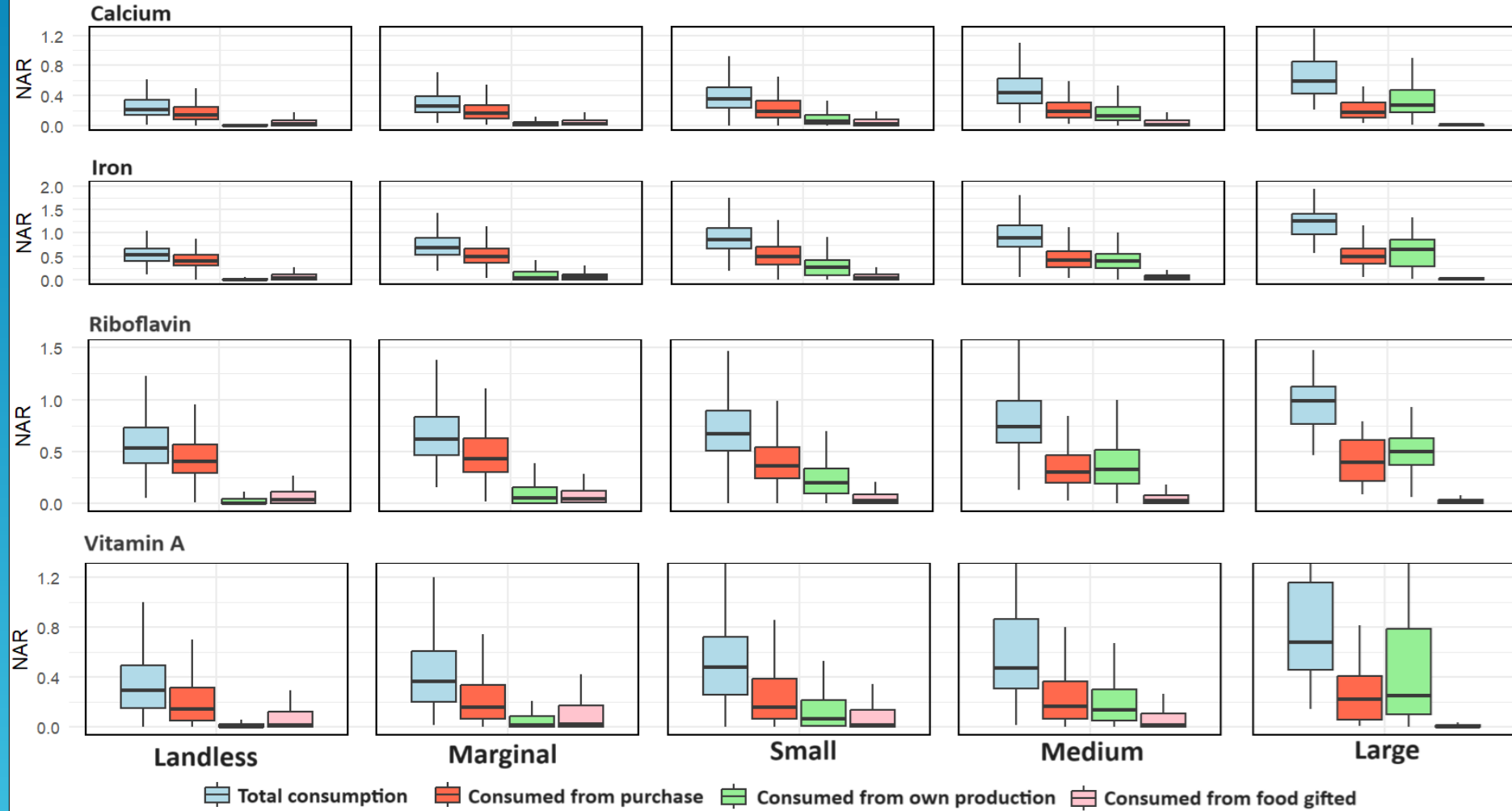
Data and Sampling

- Extends an Innovation Lab for Nutrition (INL) dataset to include production and consumption data from 3,000 farm households in Bangladesh.
- Production data from male respondents and consumption data from female respondents.
- Consumption details extracted from 7-day recall data (January-April 2016).
- Dataset encompasses details of female caregivers (15-49 years) and children (<5 years).

Methodology

- Converted food items into nutrients based on the Food Composition Table for Bangladesh.
- Used recommended dietary allowances (RDAs) to compute nutrient adequacy ratios.
- Examined 274 food items for adequacy in 17 nutrients (macronutrients, minerals, and vitamins).
- Utilized the Nutrient Adequacy Ratio (NAR) for all 17 nutrients.

Results



Results

- Nutrient consumption is primarily met through market purchases rather than own farm production across all farm household categories.
- Landless HHs consume 44% less iron compared to large farm HHs, meeting only 55% of the requirement.
- Marginal HHs exhibit a deficit, consuming only 59% and 48% of the required iron and calcium, respectively, compared to large HHs.
- Calcium consumption falls short across all farm HH categories, with large HHs consuming only 66% of the required amount.
- Landless HHs lag in Vitamin A consumption, reaching only 44% of the intake of large HHs, who fulfill 89% of the daily requirement.
- For folate and Riboflavin, landless HHs achieve 70% and 59% of the consumption levels of large HHs.
- Large HHs meet 77% and 100% of the daily requirement for folate and Riboflavin.
- Landless HHs exhibit a 10% energy deficit and a 7% recommended daily allowances.

Policy suggestions and concluding remarks

- Prioritize nutritional interventions in Bangladesh, specifically targeting landless and marginal farmers.
- Focus on addressing deficiencies in energy, calcium, iron, folate, Vitamin A, and riboflavin among these farmer categories.
- Emphasize promoting lentil production and consumption for increased folate intake.
- Highlight the importance of milk and eggs in addressing calcium deficiency.
- Consider fortification of rice as a viable strategy to address iron deficiency, given the significance of rice and condiments in the diet.
- Acknowledge the limited availability and access to fresh milk, noting its role as the primary source of riboflavin among large farmers.
- Explore interventions to enhance the consumption of small fish, drumstick leaves and implement fortification programs to address Vitamin A deficiency.

Thanking you

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