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Food Consumption Patterns and Nutrition

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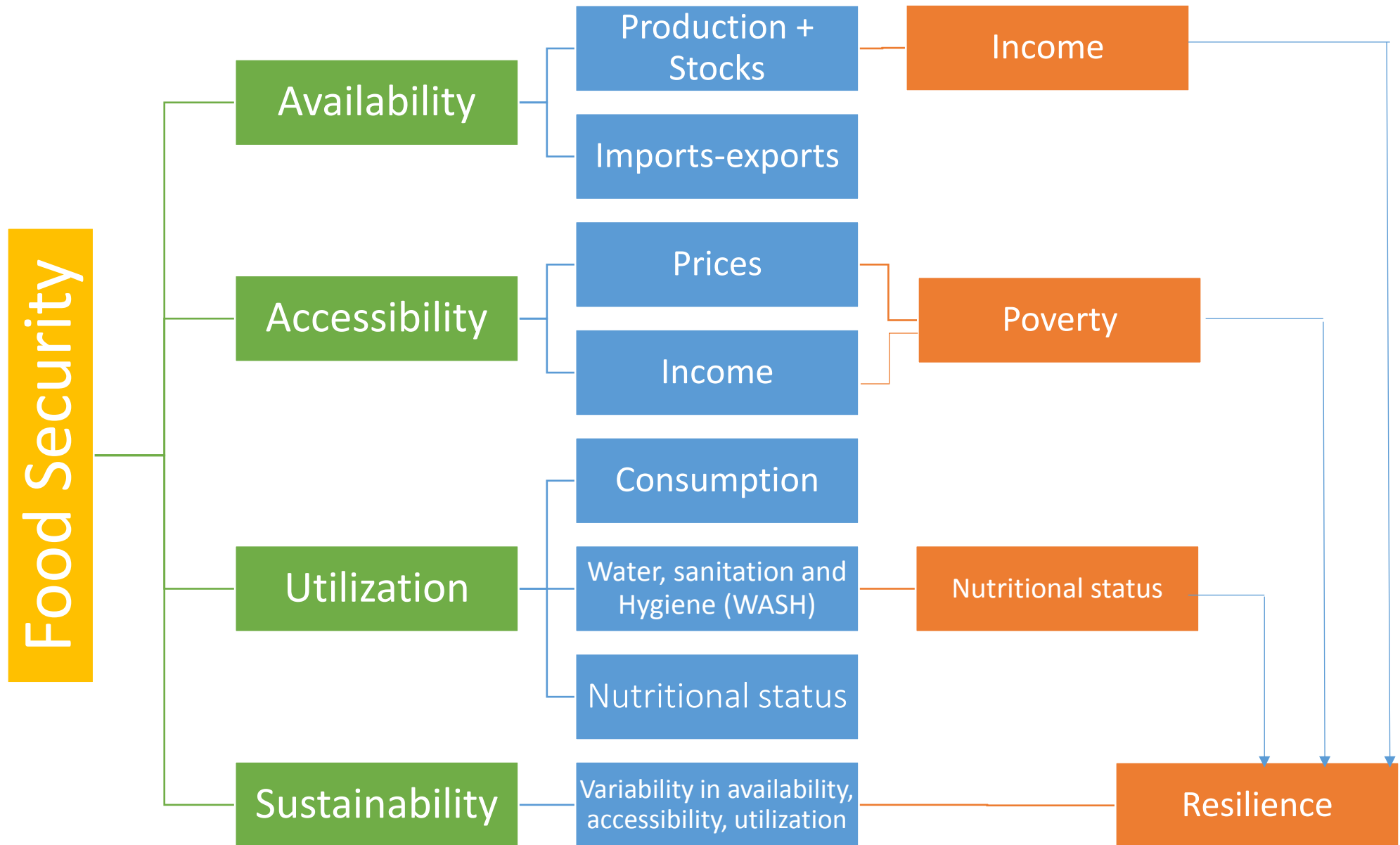
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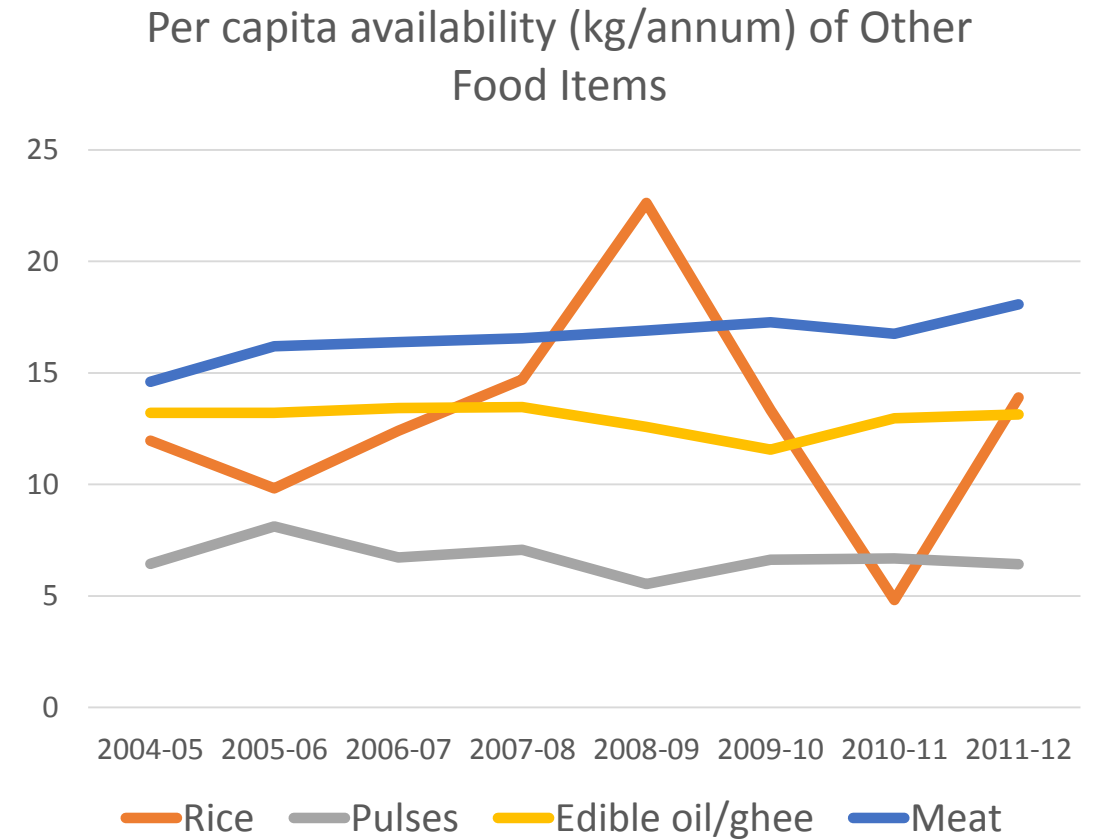
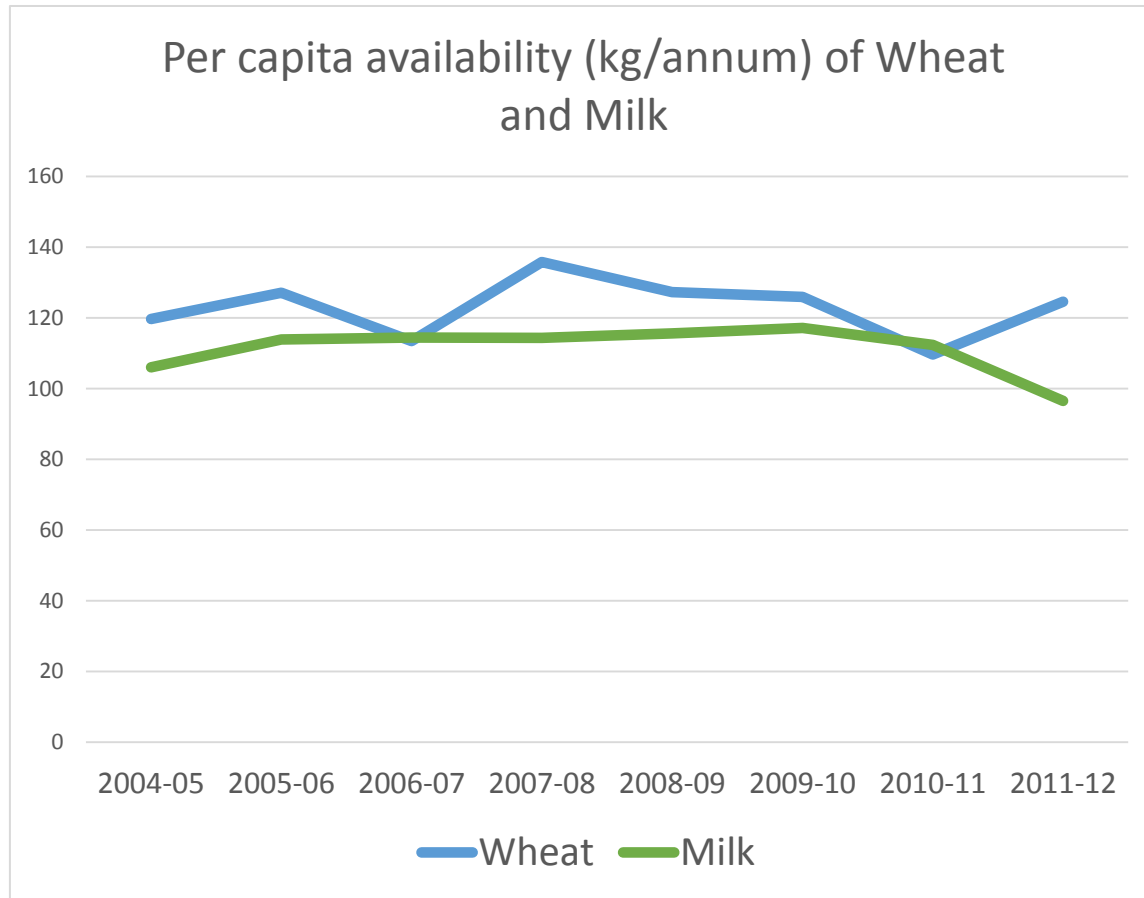
Plan of Presentation

- Food security and Consumption Patterns
- Food prices and cost of calories
- Nutritional status and hidden hunger
 - women
 - children
- Determinants of malnutrition in Children
- Policy implications and Recommendation

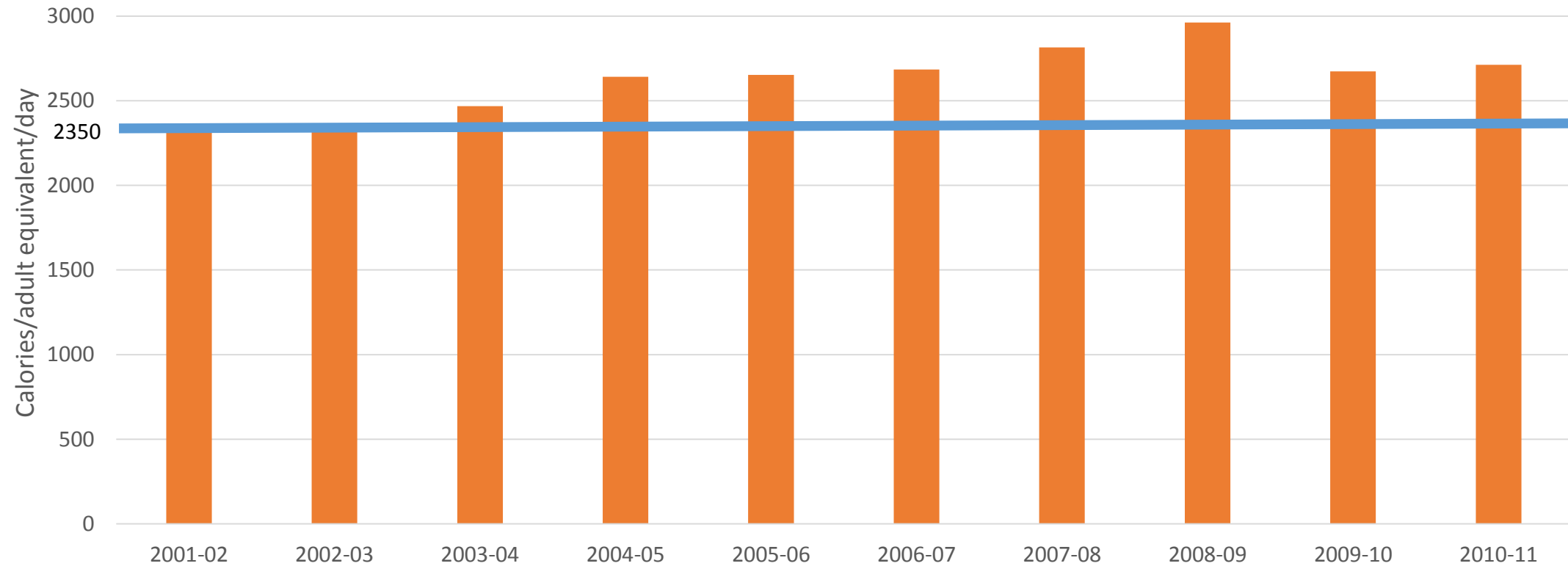
Food Security and Resilience



Per capita availability (kg/annum) declining or stagnant

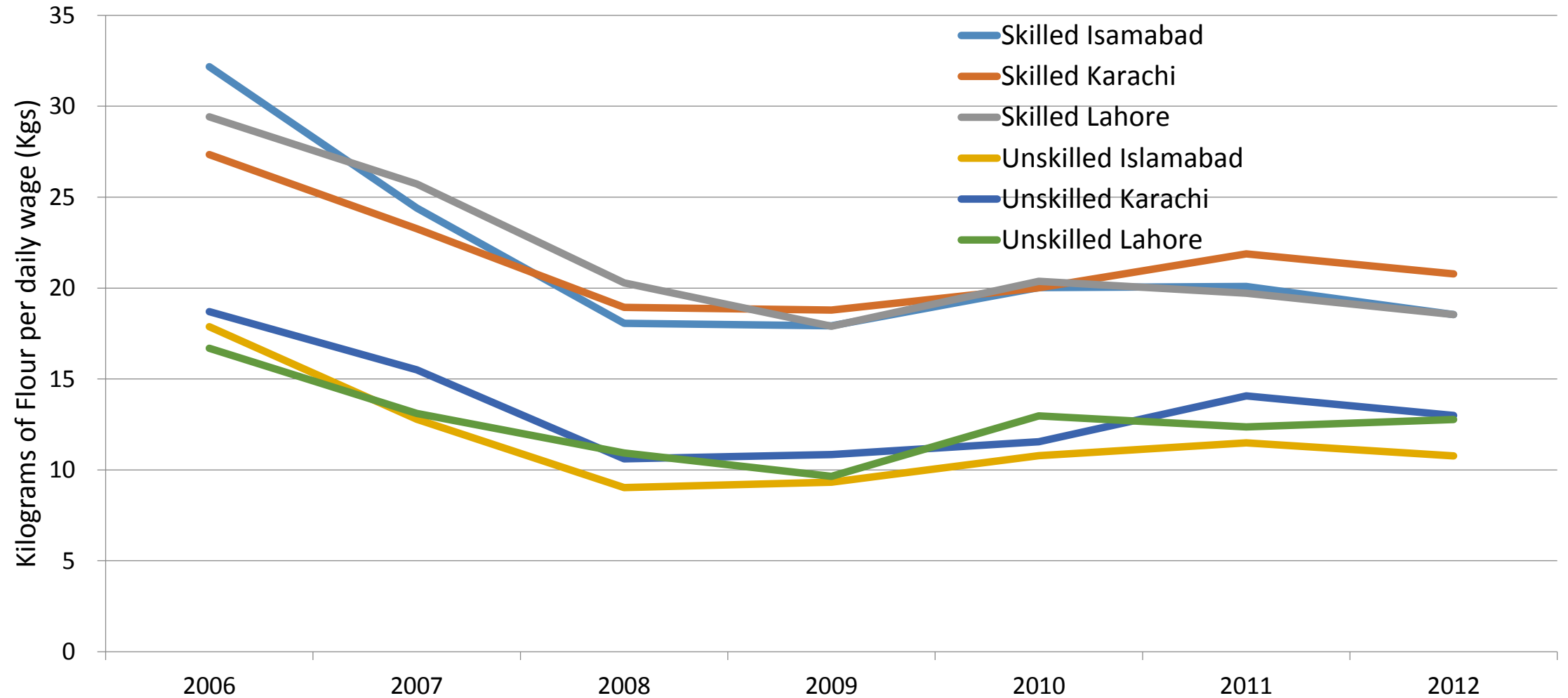


Average Supply of Calories per adult equivalent per day has increased over time and is higher than the recommended allowance of 2350

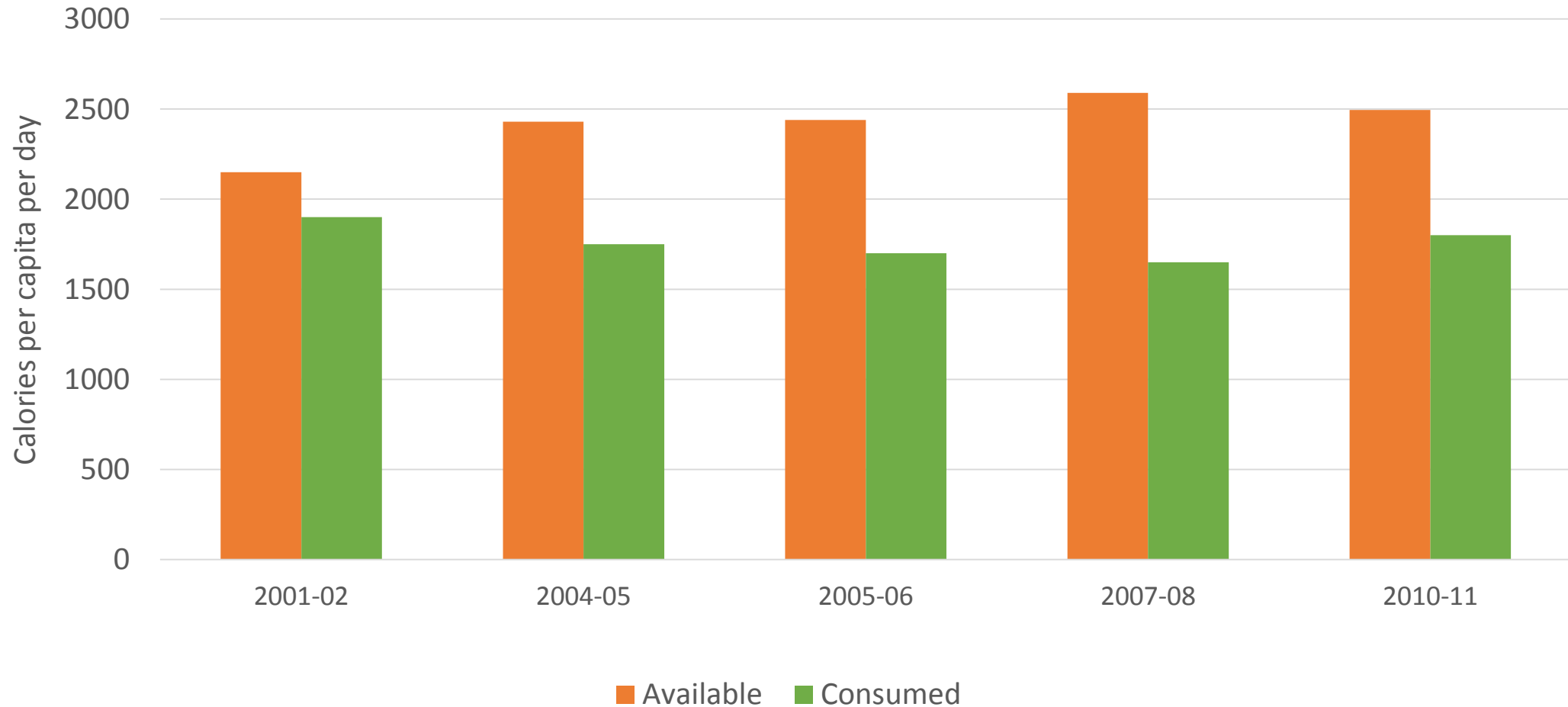


Food Accessibility in Pakistan

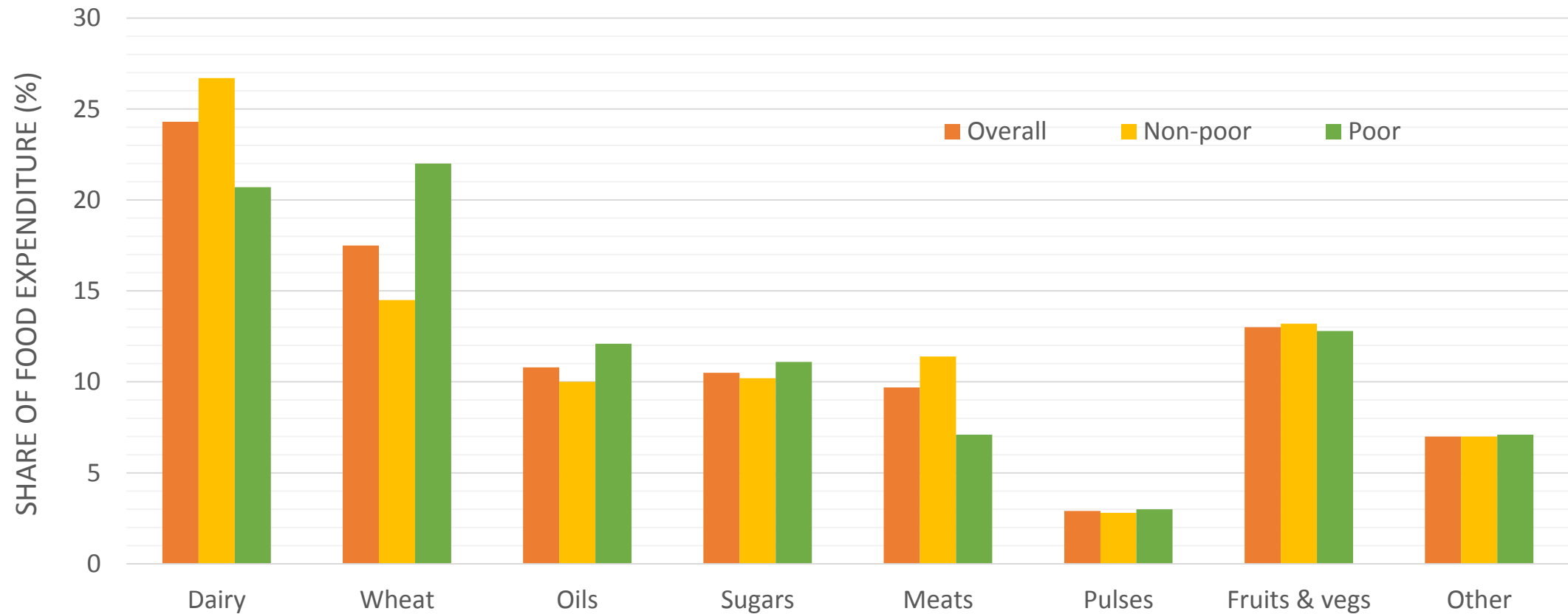
Decreasing ability to access: Kilograms of Wheat Flour that one Day's Wages can Buy declining



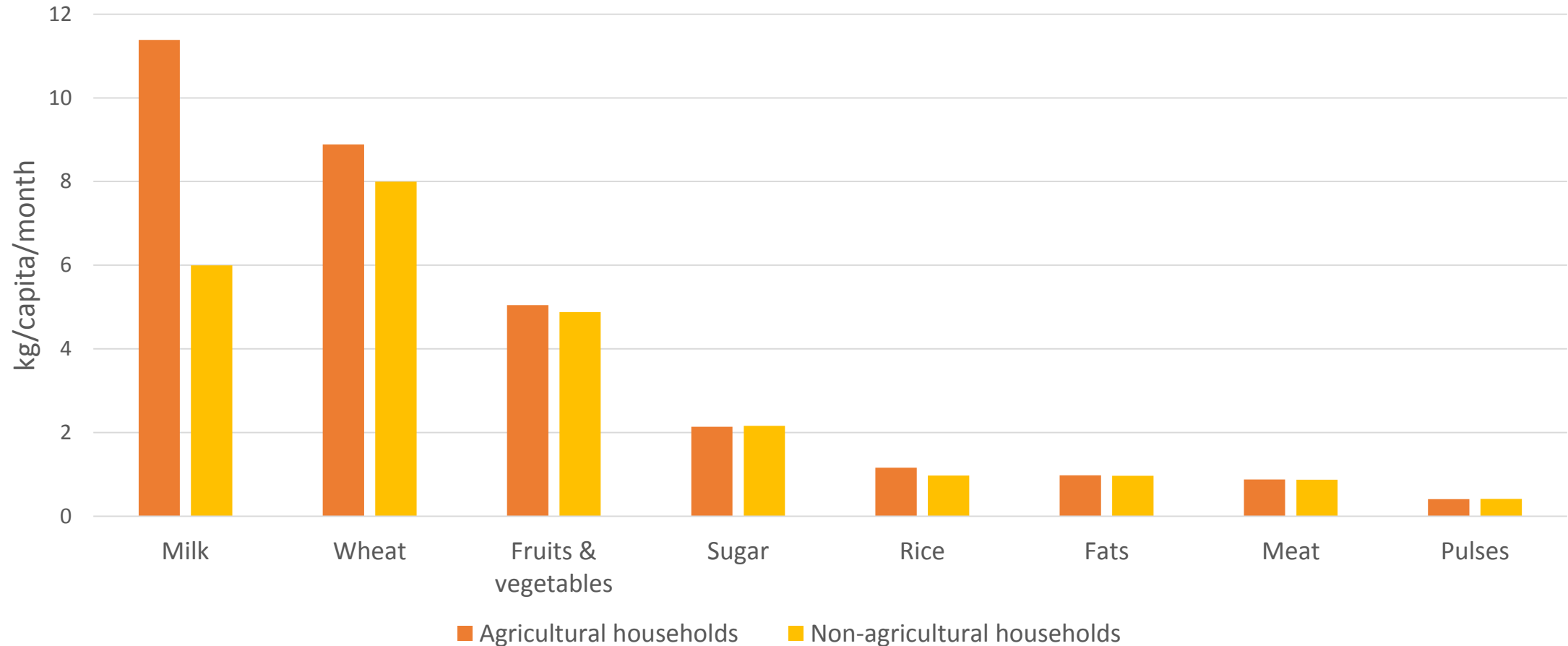
Calorie consumption is lower than calorie supply



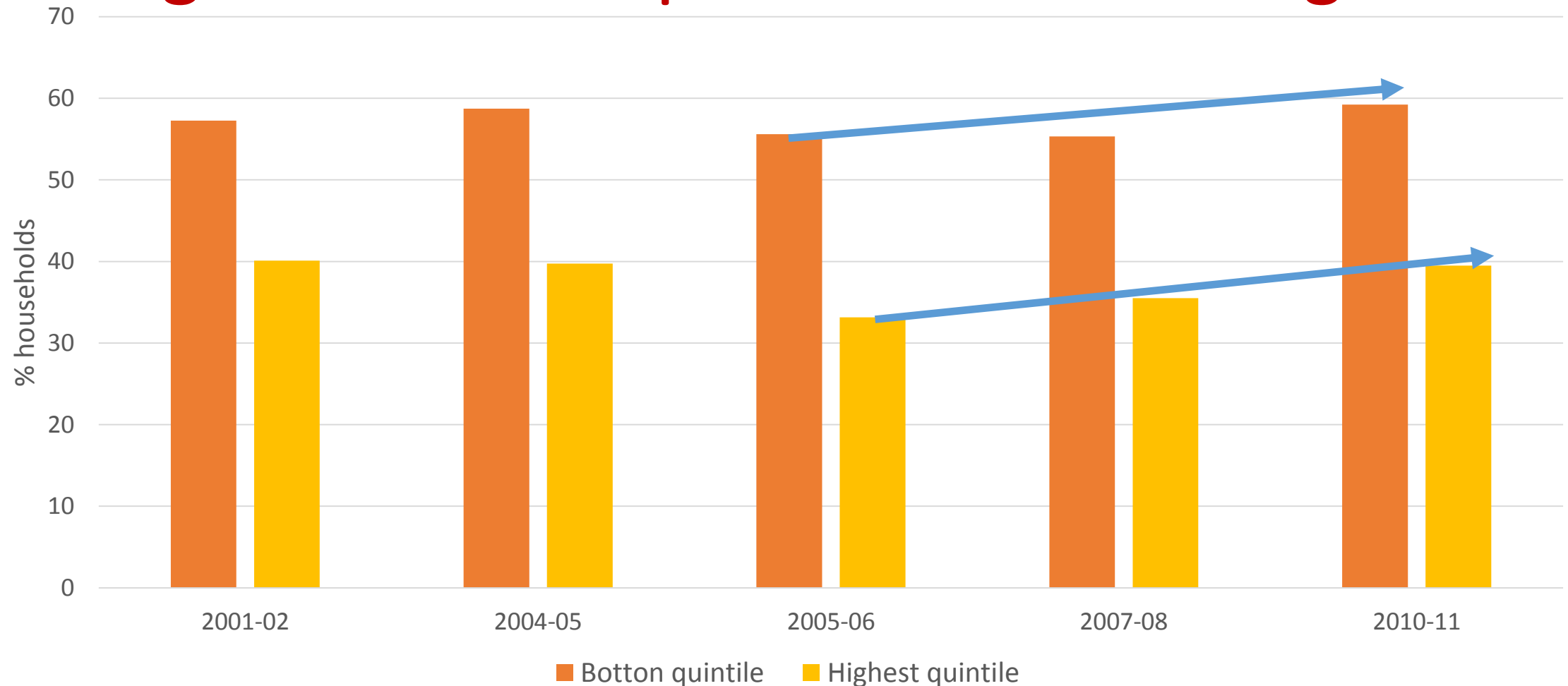
On Average more than 70% of food expenditure is spent on Dairy, Wheat, Fats, Sugars, and Meats (2010-11)



Differences in the Consumption Patterns of Agricultural and Non-agricultural households (Rural Pakistan 2010-11)



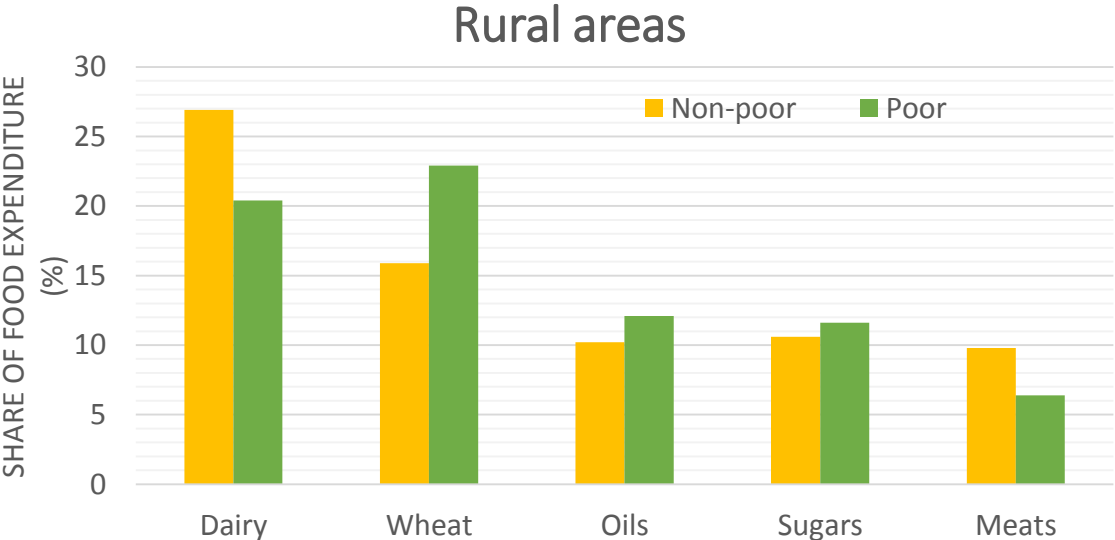
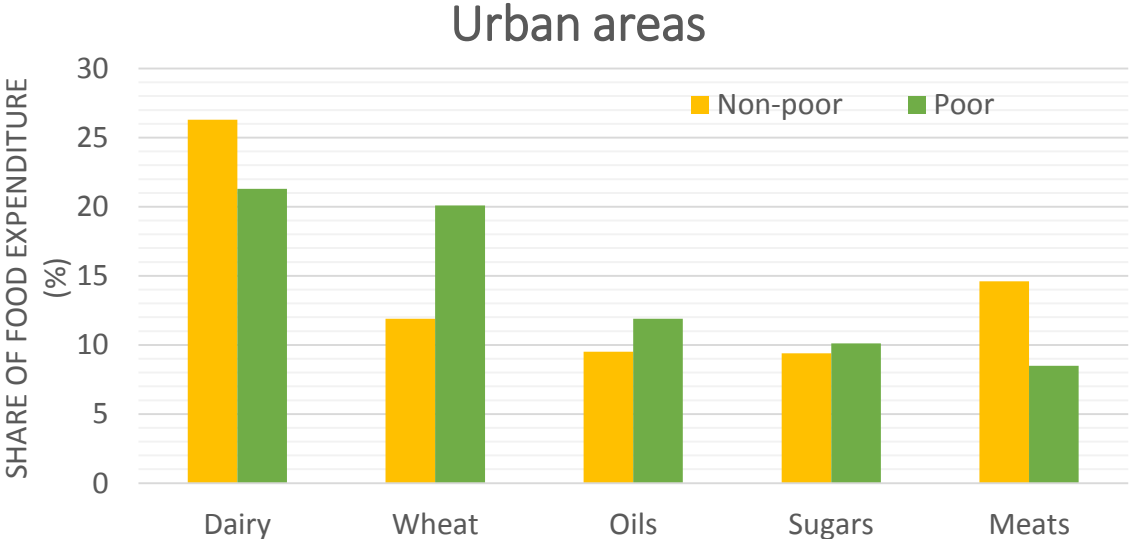
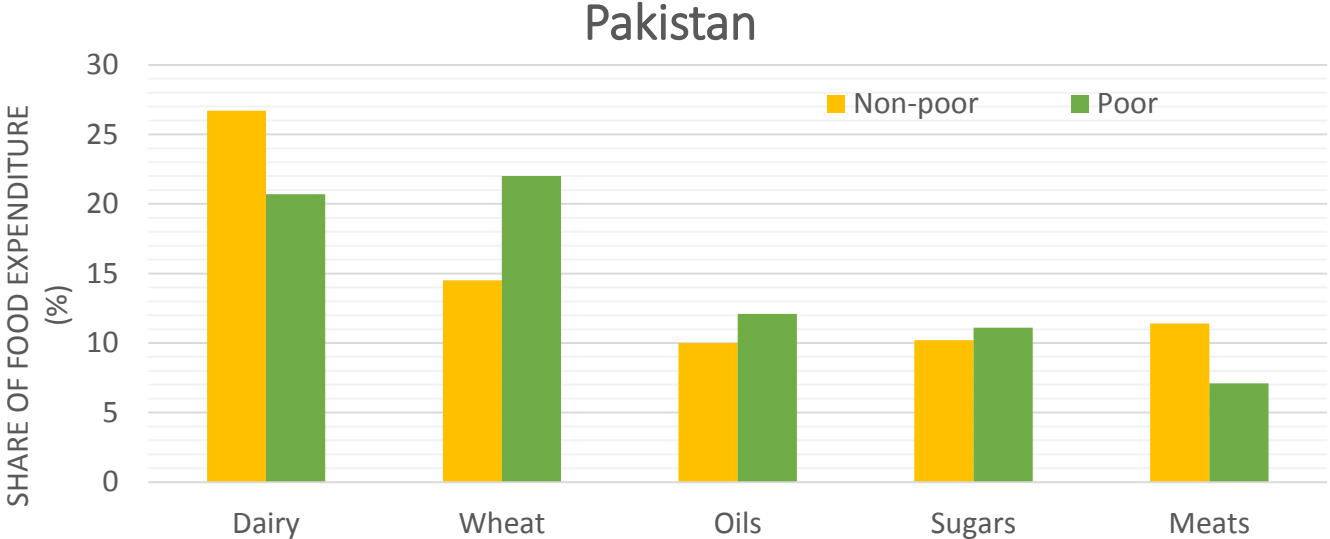
Share of Food expenditure of Poor Households is High and Food Expenditures are Rising



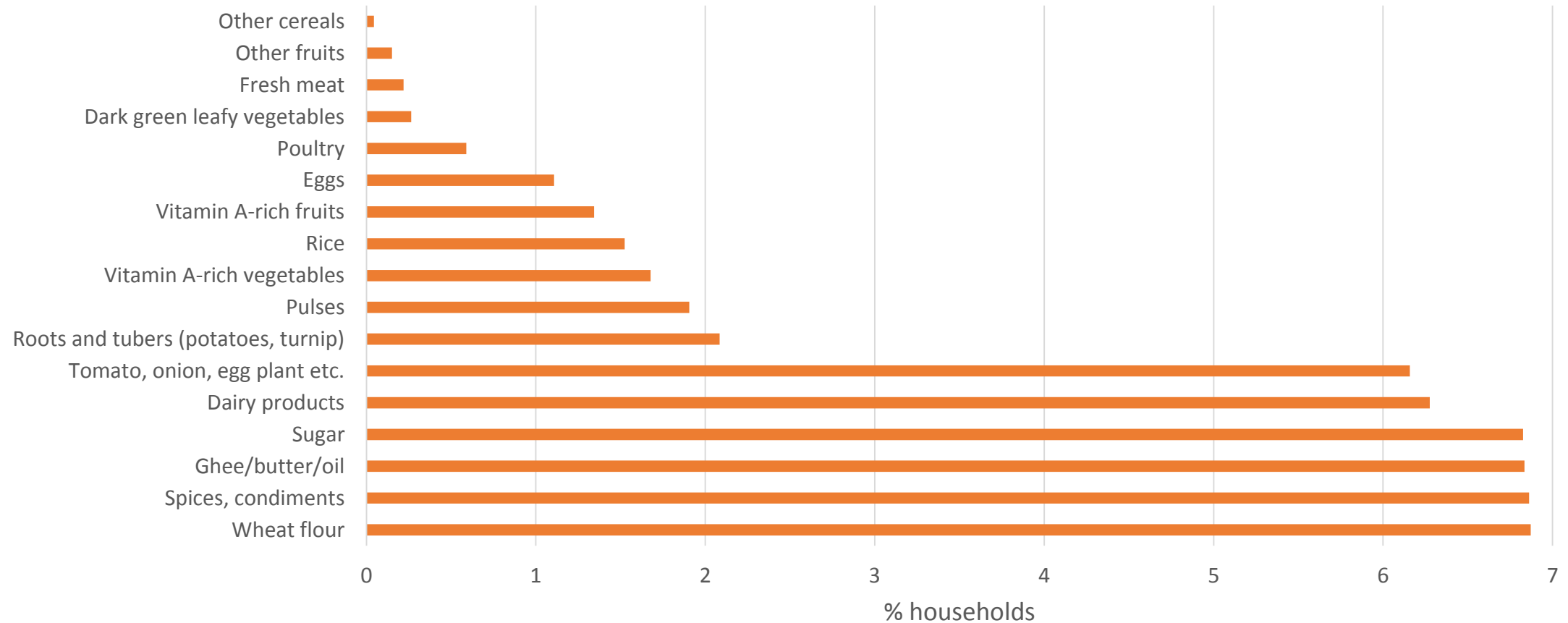
Source: HIES (various issues)

Poor Spend more on wheat and non-poor on Dairy (2010-11)

Source: HIES 2010-11

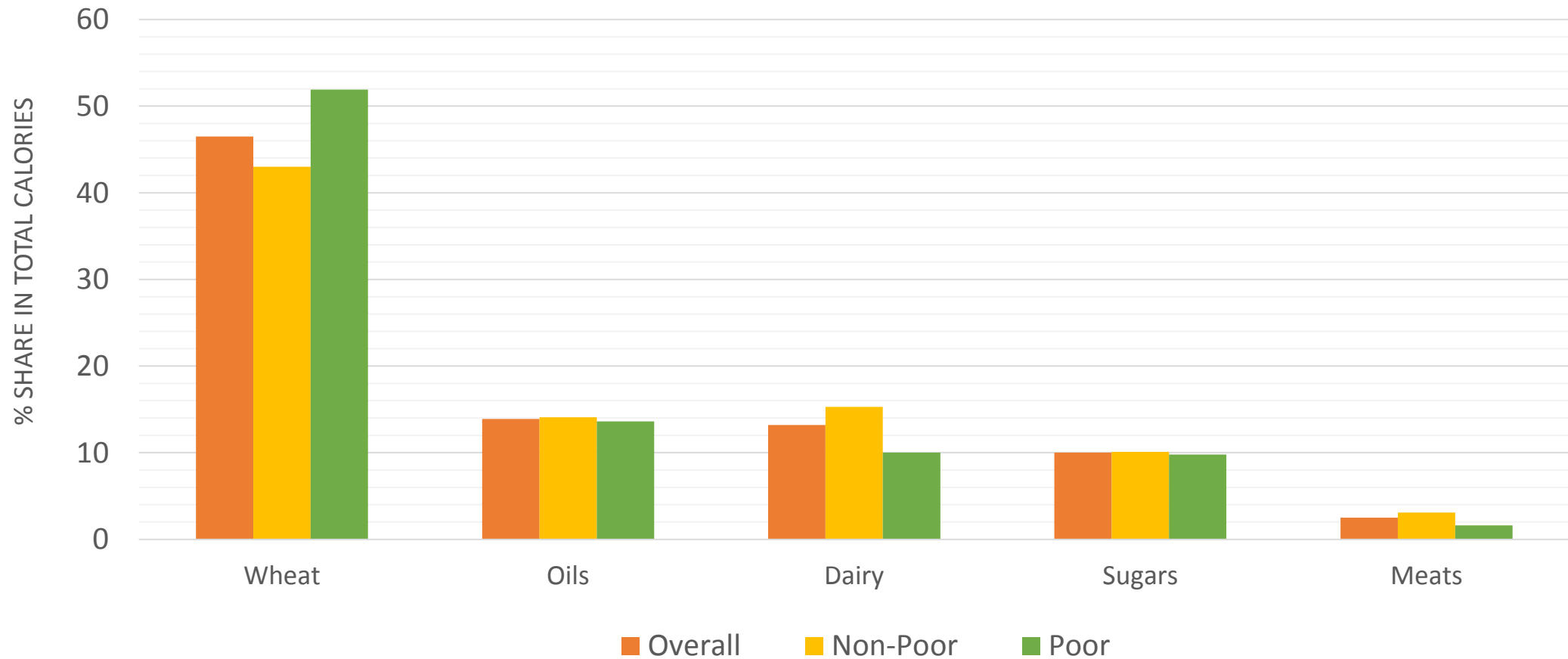


Limited Dietary Diversity in Rural Pakistan: (% households reporting type of food items consumed in last 24 hours – PSSP 2014)

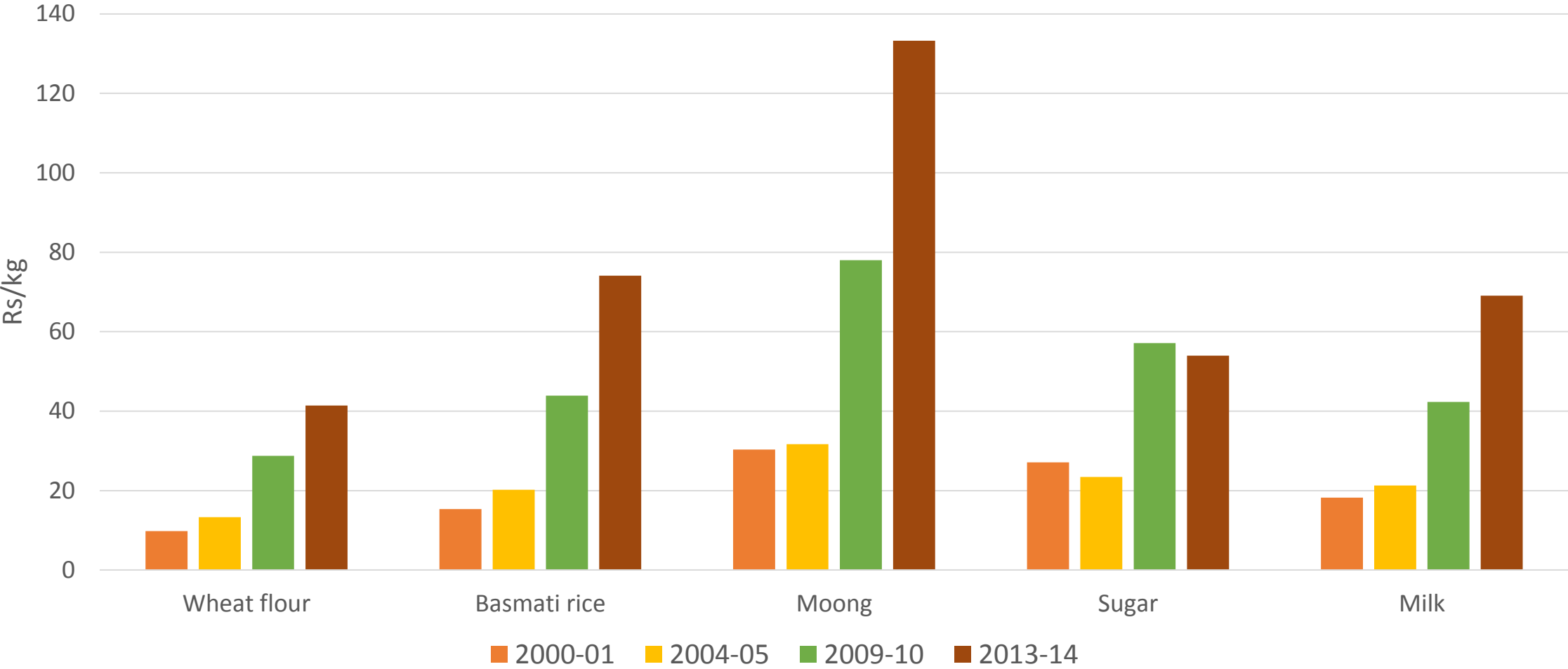


Source: RHPS (2014)

Wheat is the major source of energy

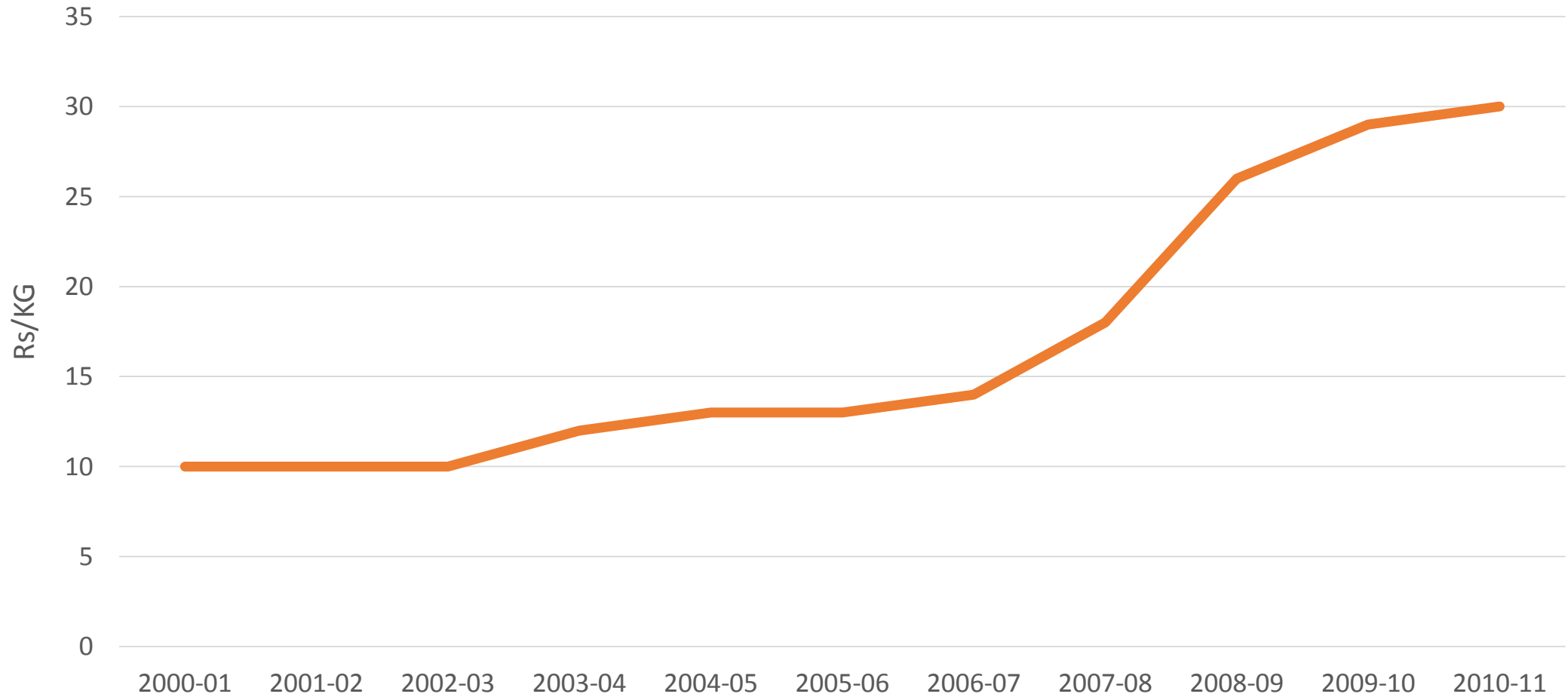


Trends in the Prices of Food Items



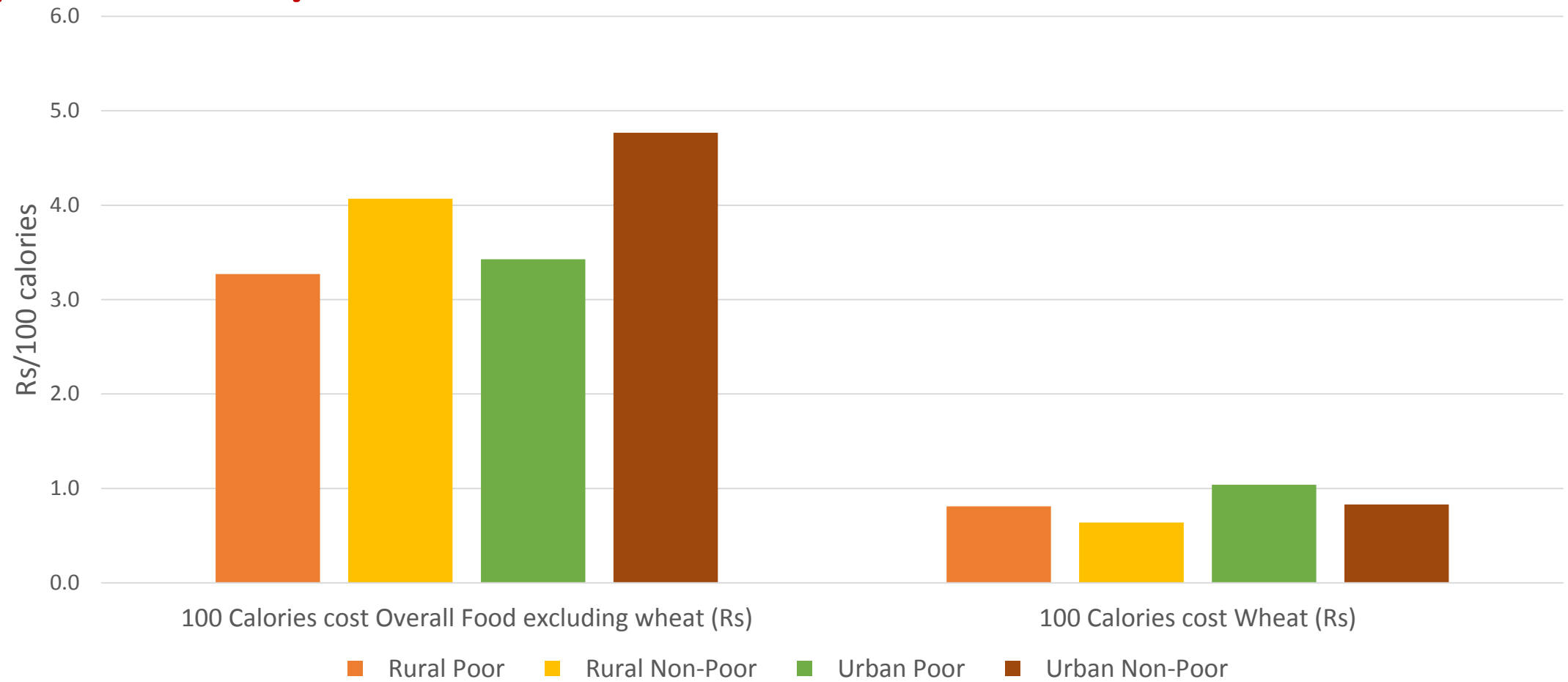
Source: GOP (2014), Economic Survey 2013-14

Sharp Increase in the Price of Wheat since 2007-08



Source: GOP (2014), Economic Survey 2013-14

Calories consumed and the cost of calories (2010-11)

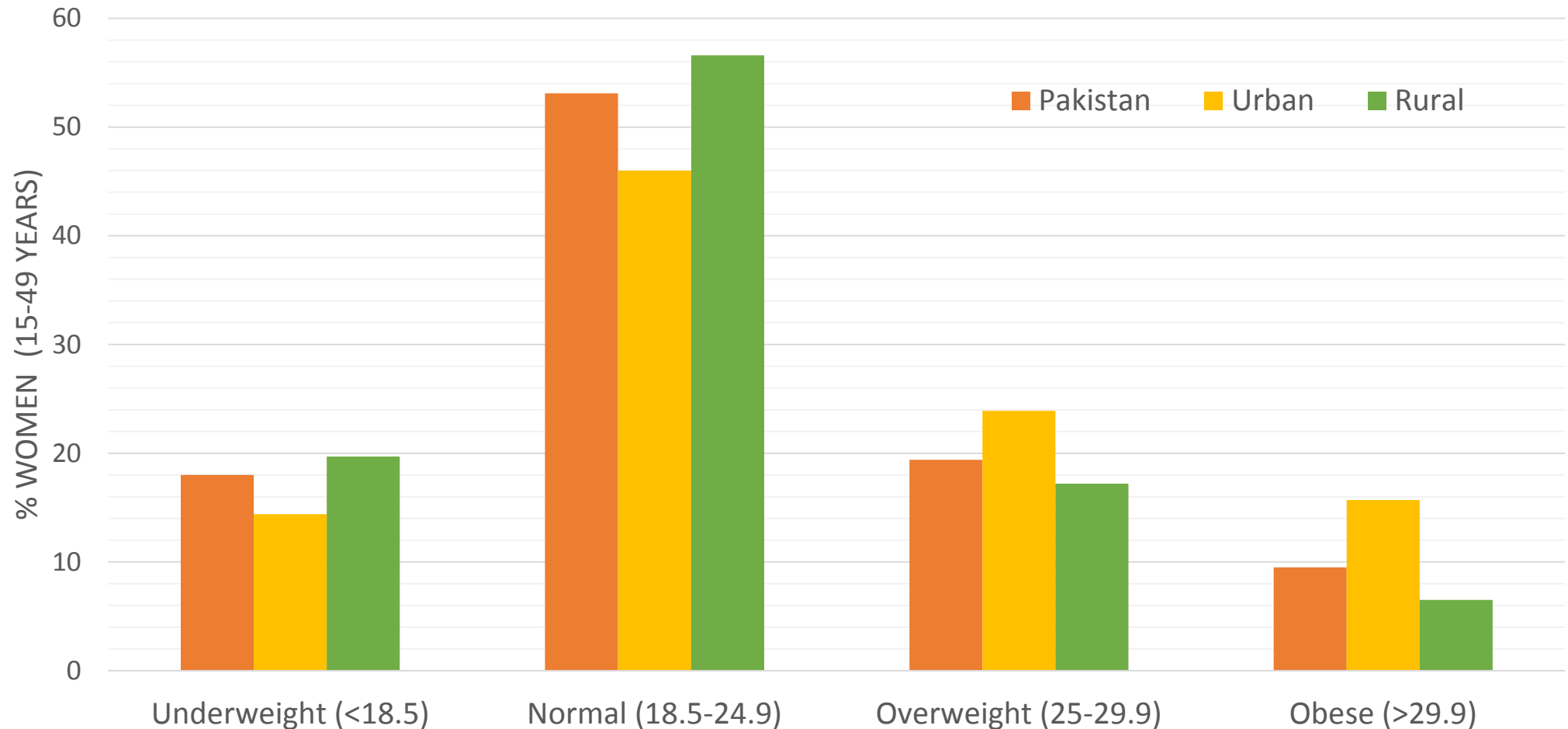


Econometric Estimates indicate that Increase in Wheat Price has possible adverse implications for other essential Human Development Indicators

- An increase in the price of wheat **may not result in substitution with other food items** (low own and cross price elasticity)
substitution with non-food items is possible
- **A substitution with health and education may worsen the already low human development indicators**
adverse effect on already high levels of poverty in the country
- Serious implications especially for current **nutritional status** and productivity of future generation
- A further reduction in the purchasing power of the wage earners can aggravate this situation further

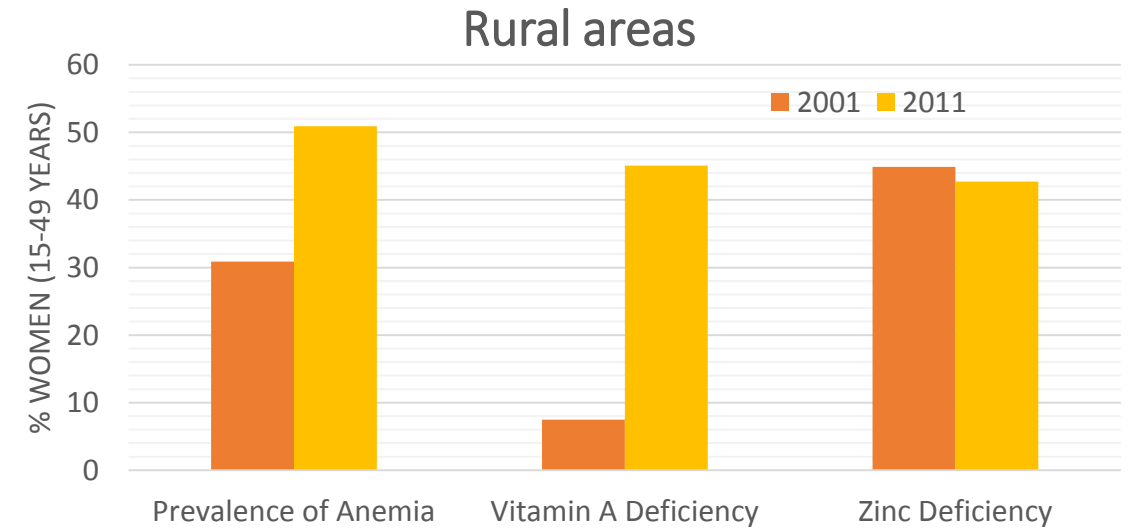
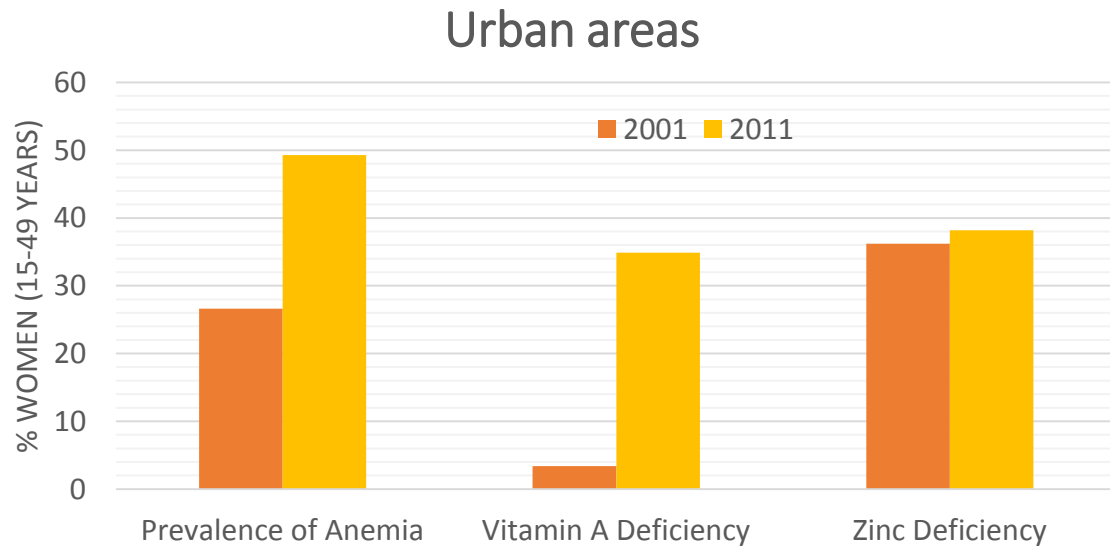
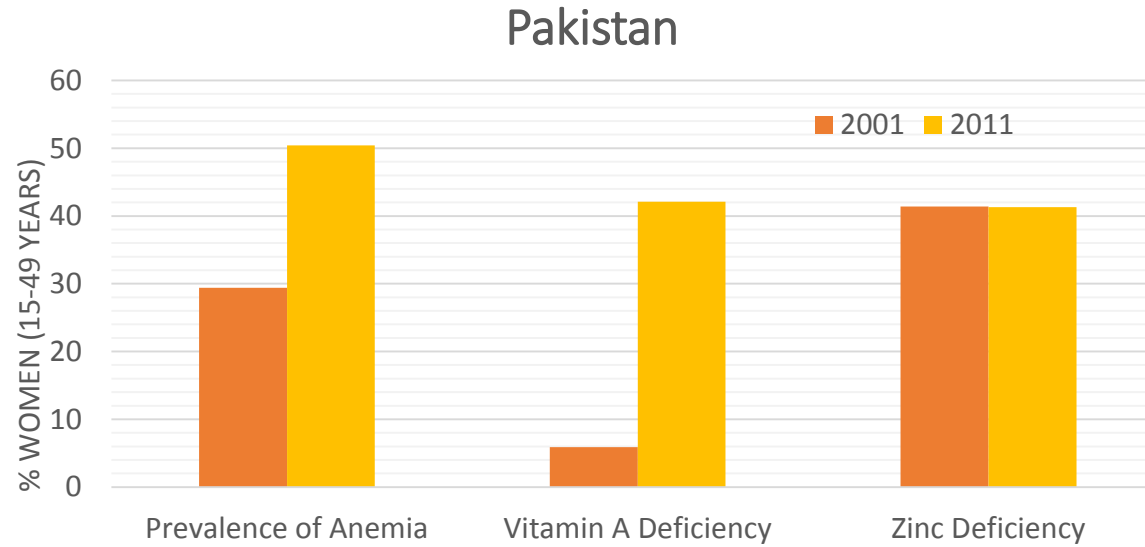
**Dietary patterns impact on
nutritional status**

Malnutrition among Women (BMI) – Over 47 % are Malnourished 2010-2011



Hidden Hunger: Micronutrient Deficiency among Women (2001-2011)

Source: NNS (2001; 2010-11)



Undernourished Females – Implications for Future Generation

- A malnourished woman is at higher risk of giving birth to an anemic or an underweight child (less than 2.5 kg)
 - such children have five times the risk of death in the first year and
 - high risk of growth failure during childhood
- Low birth weight may result in greater chronic diseases as an adult
- Severe iron deficiency anemia causes deaths during pregnancy and childbirth
- Iodine deficiency in pregnancy causes the birth of mentally impaired children
- Human and economic potential can be at risk due to malnutrition

Pakistan: Child malnutrition Results in

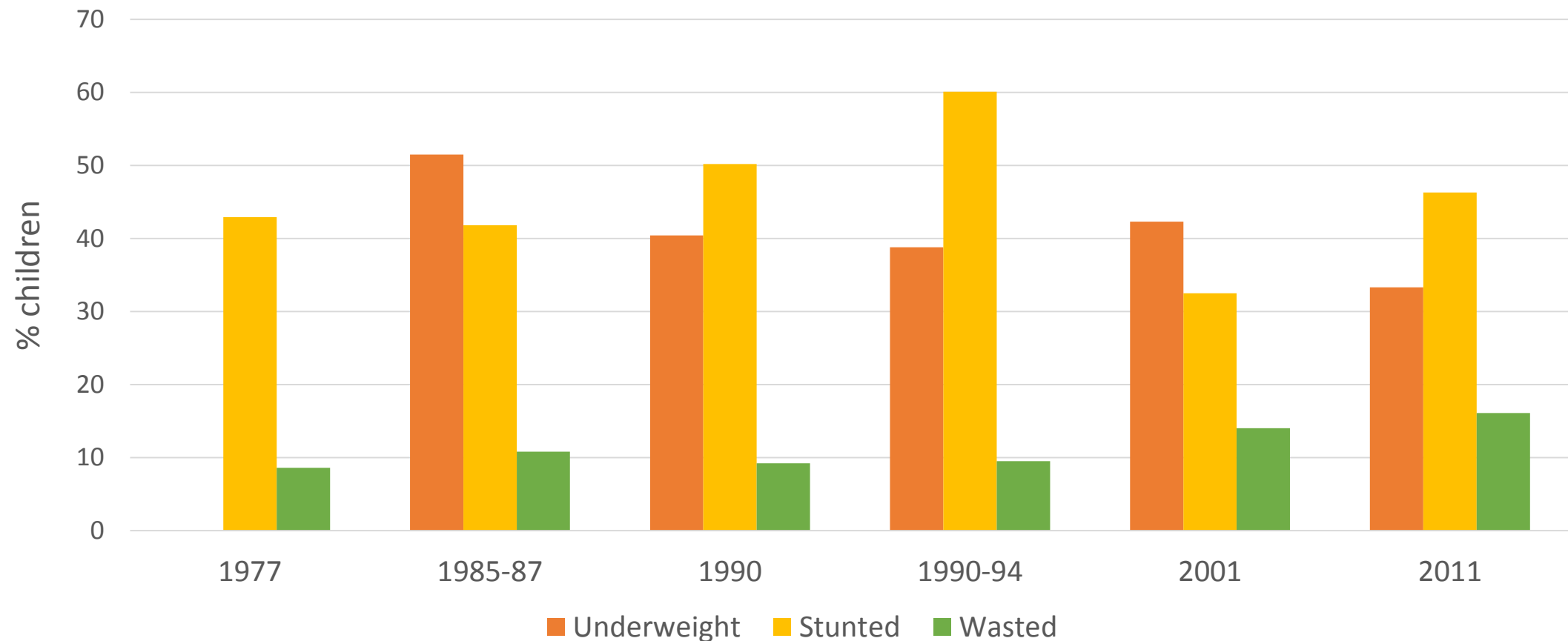
- Child mortality
 - Low birth-weight babies (31.6% of live births in 2007) rank 3rd highest in 183 countries
 - Under five mortality rate (86 per 1000 live births, 2008-2012) ranks 26 out of 194 countries
 - Infant mortality rate (74 per 1000 live births, 2008-2012)
 - Neonatal mortality rate (55 per 1000 live births, 2008-2012)
- Disability
 - About 2.65 % population was disabled in 2012 (based on the projections on 1998 Census), 2.54% was in 1998
 - Of these, 43% are children (1-15 years)
 - Of total disabled, 8.2% are blind, 7.5% deaf, 14% mentally retarded, 8.3% have multiple disabilities
- Probability of falling sick, loss in work days and income

Source: PDHS 2012-13

Source: UNICEF, State of the World's Children, Childinfo, and Demographic and Health Surveys by ICF International

Source: Helping Hands for Relief and Development (2012). Persons with Disabilities (PWDs) Statistics in Pakistan 2012

Malnutrition (PEM) among Children 2010-11 (under 5 years of age)



How reliable are the data?

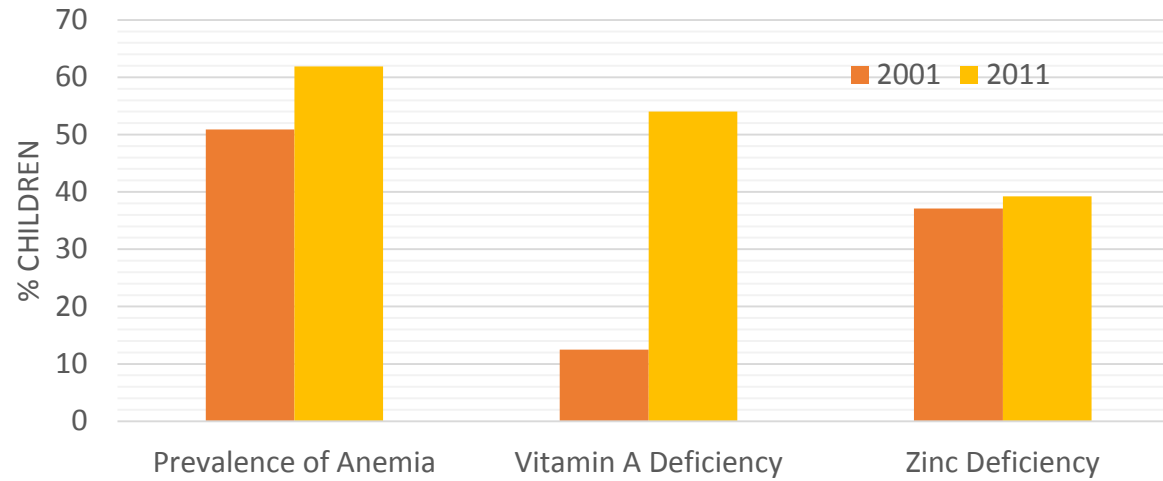
Variations in the estimated malnutrition indicators based on different national surveys for the same year 2001



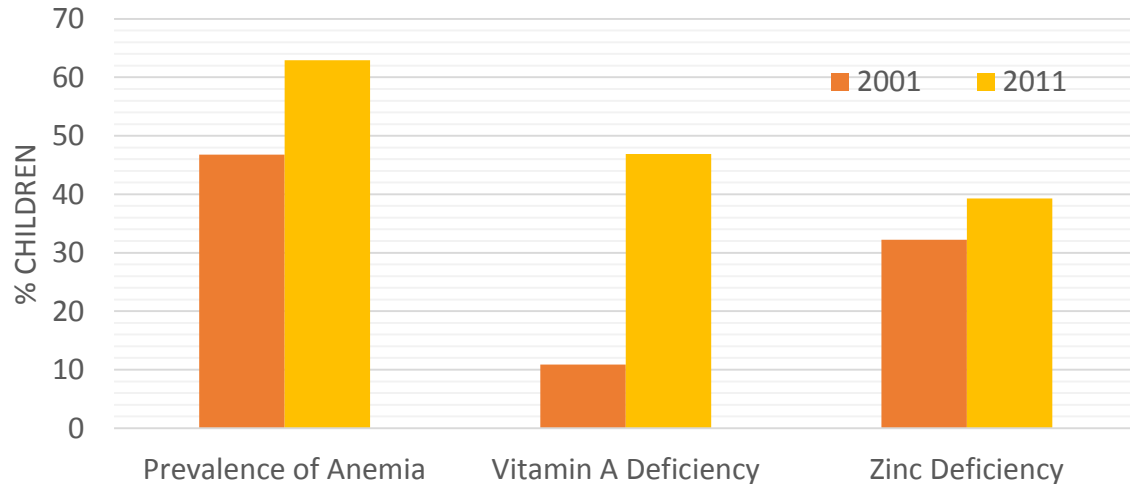
Hidden Hunger: Micronutrient Deficiency among Children (2001-2011)

Source: NNS (2001; 2010-11)

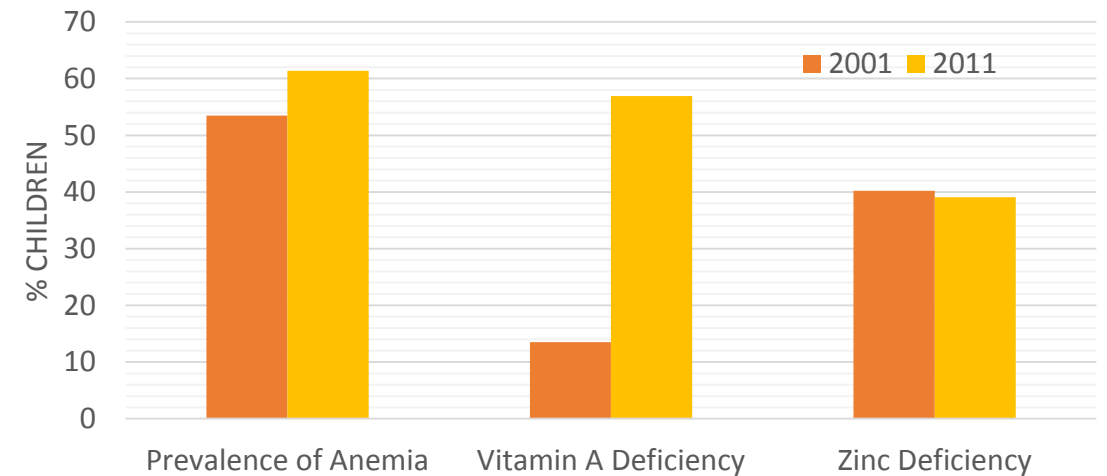
Pakistan



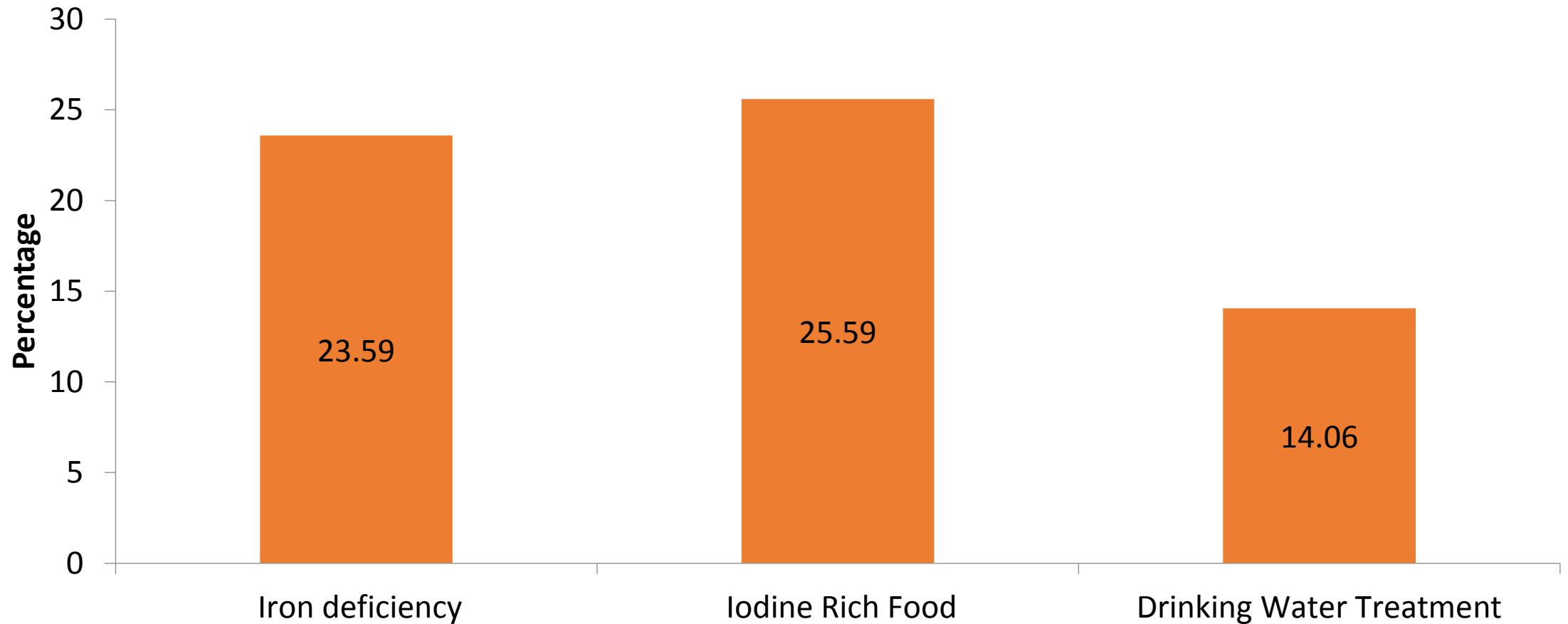
Urban areas



Rural areas

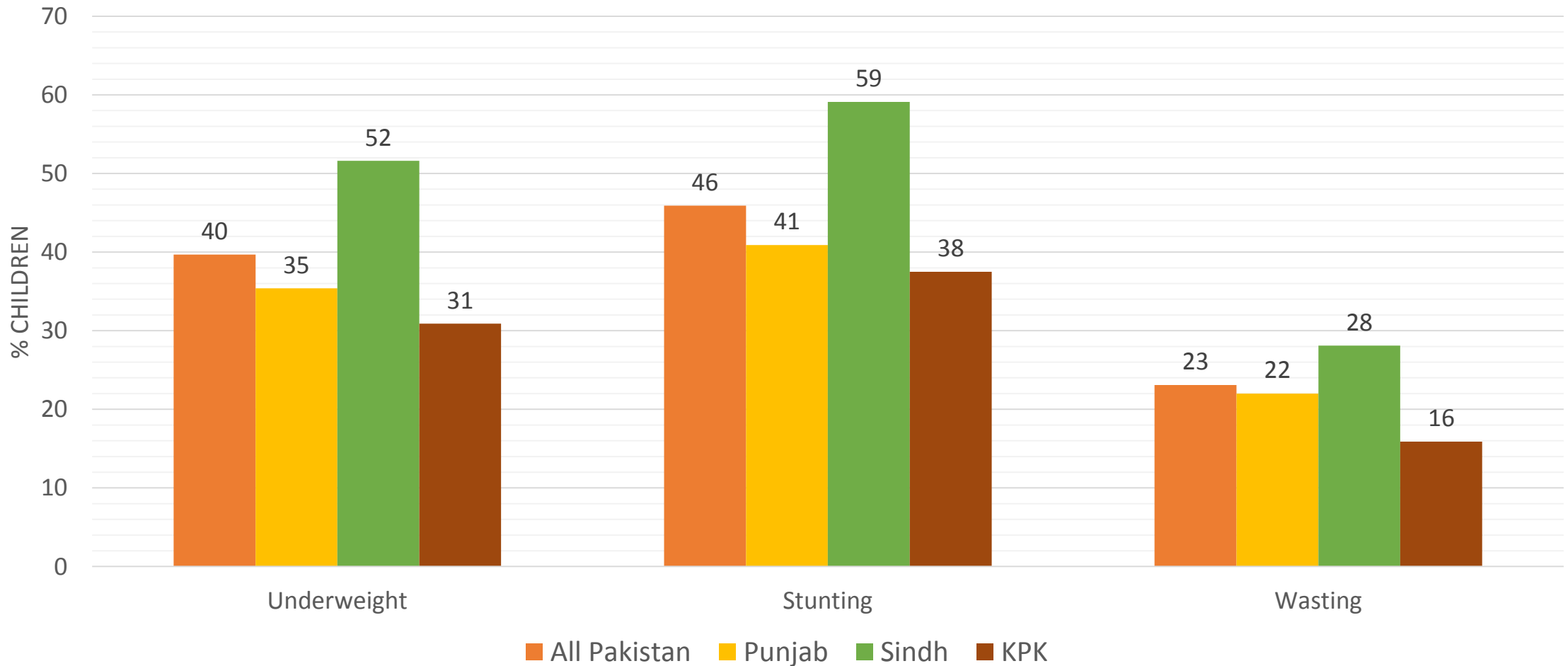


Low Levels of Mothers' Knowledge about Child Nutrition



Source: RHPS (2012)

High and Variable Prevalence of Malnutrition (<-2SD) by Province and Rural Pakistan (2013)



Source: Authors' estimates using RHPS, Round 2 (2013)

Determinants of Malnutrition: Results of Logistic Regression

- Mother's education improves the general state of nutrition among children under five
- Improving hygienic conditions appear important to reduce long term malnutrition (toilet facility and safe drinking water)
- Access to health care services plays a significant role in reducing the short-term nutrition (LHW)
- Incidence of malnutrition among children under five is highest in Sindh
- The prevalence of malnutrition is high across all income groups
- Poverty and malnutrition are determined by the same variables
- Nutritional status is a more direct measure of household welfare

Summing up

- **High prevalence of malnutrition in the country:**
 - **Poverty** - Lack of resources at the household level to maintain the minimum daily allowance of essential nutrients;
 - **limited diversification** because cost of non wheat calories significantly higher
 - **Lack of awareness** about balanced diet and maintaining good health
- Focus of previous research on estimating numbers only
- **Food Security not fully understood or integrated into policies**
 - Little work on understanding the linkages between food security, consumption behavior and nutritional outcomes and variations across socio-economic groups and regions
- **Need re-prioritization and evaluation of any previous policies and programs**

Summing up

- **The consumption of micronutrient rich foods is very low** (vegetables and fruits)
- **Average calorie consumption is lower than the recommended level of 2350** and unbalanced in terms of micro-nutrients
- **Wheat is the main source of calories, carbohydrate and fiber**
- **Food policy to date focused on availability of wheat tonnage** through production and import. Little diversification away from four major crops.
- **Lesser focus on accessibility, sustainability and safety.**
- **Wheat consumption is price inelastic** (implications for dietary diversity and household expenditures on education, health care, etc.)

Results Indicate the Need for:

- Massive nutrition awareness campaigns and education
- Provision of safe drinking water
- Improvement in sanitation facilities
- Expansion in health care coverage (e.g., lady health workers)
- Promotion of kitchen gardens
- Food fortification and bio-fortification
- Special attention to the mother's nutritional status through proper medical care, adequate food, and iron, folic acid, and multivitamin supplementation

Recent Global Initiatives to address Malnutrition

- Global Alliance for Improved Nutrition (GAIN) (2002)
- United Nation's Millennium Development Goals
 - First goal "eradicate extreme poverty and hunger." Undernourishment and malnutrition are amongst the indicators for this goal
- United Nation's Sustainable Development Goals (2012)
 - Replacement of MDGs
- United Nation's zero hunger challenge (2012)
 - Elimination of stunting is the first goal
- United Nation's Scaling up nutrition (SUN) movement (2009)
- The First 1000 Days Initiative
- The Copenhagen Consensus 2012

Recent Nutrition Initiatives in Pakistan

- National Zero Hunger Program, launched in 2012
- Pakistan's draft Agriculture and Food Security Policy 2013 aims to address the food and nutrition insecurities
- Pakistan Integrated Nutrition Strategy (PINS), launched in 2013, aims to address the underlying causes of malnutrition (food diversification, WASH, school feeding, etc.)
- Scaling Up Nutrition (SUN) program, launched in 2013, aims to identify the hurdles in access to food and address the issue of malnutrition

Needed Steps

- Improve identification of malnourished population based on scientific method
- Sustained political commitment and government ownership
- Institutional and sectoral coordination and collaboration
- Sufficient resource allocation to strengthen implementation
 - Massive awareness campaigns
 - Enhancing zero hunger program, PINS, SUN
 - Ensuring synergies - no overlaps
- Monitoring and evaluation system to improve real-time program implementation and effectiveness

Thank you so much