Food, economics and health

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In his book *Food, economics and health*, Alok Bhargava, a professor of economics at the University of Houston, provides a thoughtful overview of the determinants of food consumption and their implications on health and economic outcomes. Bhargava highlights the need for a multidisciplinary approach to understand the pathways linking the effects of biomedical, environmental, cultural and socioeconomic factors with nutrition and health outcomes. The book is a provocative attempt to build a bridge between scientists from diverse disciplines (nutrition, anthropology, psychology, economics and public health) and decision-makers.

The author reviews a variety of thematic areas, including the effect of nutrition and socioeconomic factors on childhood morbidity and cognitive development, the association between nutrition and labour productivity among adults and an overview of the determinants of obesity. Overall, the book highlights the positive effects of enhanced diet quality (high in micronutrients and protein) on health and economic outcomes such as labour productivity. Likewise, it shows that adequate nutrition early in life, maternal nutrition and various socioeconomic factors predict child development. The text emphasizes the complex association between food intake and socioeconomic conditions, individual preferences, cultural habits and food availability. Studies on the effect of changes in food prices or income on food consumption provide important evidence for policy-makers. For example, policies to deliver nutritious foods are most needed in countries or regions with low-income elasticities for micronutrients and proteins. Similarly, subsidies to promote the consumption of "healthy food" in obesigenic environments may be successful if studies reveal increased consumption of fruits and vegetables when prices are reduced.

A review of studies from various developing countries illustrates how evidence can be used to delineate food policies in settings with constrained resources. Using intuitive examples and adding methodological notes for a more technical reader, the author highlights how econometric techniques allow unbiased estimation of intervention effects and invites economists to challenge common assumptions and to expand their vision by engaging with other disciplines.

Bhargava does not fully develop two issues that deserve deeper discussion. First, although average estimates may reveal the potential impact of interventions, they may not suffice to inform how programmes can be efficiently delivered when their effects are heterogeneous across specific populations.

While it is undeniable that observational studies, and particularly those with longitudinal designs, can provide rich evidence to outline public policies, translating this evidence into effective interventions remains a great challenge. Well designed impact evaluations of interventions could disentangle factors associated with heterogeneous effects in the population. Factors associated with unexpectedly lower effects of interventions, such as violent domestic environments, low adherence among specific groups of the target population and varied quality of health services should be carefully studied.

Second, although the book separately discusses the burden of undernutrition in poor countries and increasing obesity in affluent nations, little is mentioned about the challenges imposed by the coexistence of both conditions within a country, region or even the same household. Such dual burdens are affecting countries entering the nutritional transition where economic development and access to services are unevenly distributed.[1–3]

Policies that concurrently tackle under- and over-nutrition are cumbersome. Both underweight and overweight individuals have low quality diets. Moreover, recent evidence suggests that overweight women and children are likely to have iron deficiency and impaired iron absorption.[4] Enhancing calorie consumption while promoting balanced diets and healthy lifestyles is critical to reduce the dual burden.

While potentially easier to define and implement, fragmented approaches to reducing malnutrition may result in unwanted effects.[1] Incentives such as subsidies may promote consumption of fruits and vegetables among overweight individuals. However, it may not be an optimal policy for underweight children who need higher protein intake or specific combinations of micronutrients. Similarly, distribution of fortified food to reduce micronutrient deficiencies in emaciated children can adversely affect overweight children by augmenting their caloric intake.

Likewise, conditional cash transfers, which are aimed at reducing intergenerational poverty via demand-side incentives, have contributed to improvements in undernutrition and anthropometric outcomes, but may stimulate behaviours that lead to overweight and obesity.[5] Risk of adverse outcomes such as an increase in obesity is likely to be high in areas of limited dietary knowledge or where unhealthy meals are more widely available and more affordable than nutritious food.[6]

The coexistence of under- and overweight individuals within the same household is an even more complex phenomenon than population-level dual burdens of malnutrition. Little is known about how food is distributed within these families, how food expenditures and feeding practices are decided, or how parents' habits, preferences and beliefs determine children's eating behaviours. A better understanding of the determinants of the dual burden within a household is needed to formulate adequate policies.

Food, economics and health presents an interesting approach to nutrition and food policies. The book opens multiple challenges and unsolved questions that require further research. As an economist, I appreciate the effort to convey the benefits of rigorous statistical analysis to readers from different backgrounds and advocate multidisciplinary approaches to analysis and policy designs. ■

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