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Farm subsidies and obesity in the United States: National evidence and international comparisons

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ABSTRACT

Many commentators have claimed that farm subsidies have contributed significantly to the "obesity epidemic" by making fattening foods relatively cheap and abundant. But U.S. farm policies have generally small and mixed effects on farm commodity prices, which in turn have even smaller and still mixed effects on the relative prices of more- and less-fattening foods. Other factors have had much more influence on reducing the farm prices of food commodities and the consumer prices of food such that any effects of U.S. farm policies on U.S. obesity patterns must have been negligible. Moreover, while many arguments can be made for changing U.S. farm subsidies, even entirely eliminating the current programs could not be expected to have a significant influence on obesity rates. International evidence reinforces this finding. The countries that support their farmers most strongly tend to have relatively low obesity rates. In these countries the main support for farmers comes through trade barriers and higher consumer prices, which—like U.S. policies for sugar, dairy, orange juice, and beef—discourage consumption and reduce obesity. In contrast with agricultural subsidies, agricultural R&D has had a significant effect in the past on the relative price of food commodities and food, and has the potential to influence obesity patterns in the future, but R&D policy is a very blunt instrument for pursuing public health policy objectives.

Introduction

In this article we examine the links between farm programs and farm commodity prices in the United States, and the implications of farm policy-induced commodity-price changes for food prices, food consumption, and obesity, drawing on both U.S. data and some international comparisons of farm supports, food prices, and obesity rates. We conclude that U.S. farm programs have had negligible effects on the prices paid by consumers for food and thus negligible influence on dietary patterns and obesity, consistent with some previous work by economists on the issue (e.g., Alston et al., 2006; Cutler et al., 2003; Miller and Coble, 2007), but contradicting the mainstream view presented in the media (e.g., Pollan, 2003).

Motivation

Obesity is a big business. The prevalence of overweight and obesity has increased rapidly in the United States—the average American adult added 9–12 pounds during the 1990s (Ruhm, 2007)—and the related health concerns are priority issues for the U.S. government and the medical community (see Fig. 1). This phenomenon is not unique to the United States. The prevalence of overweight and obesity is particularly high in the United States but is growing rapidly throughout much of the world (World Health Organization, 1997; International Obesity Task Force, 2005). Obese and overweight Americans generate large additional direct and indirect health care expenses. In his "Call to Action to Decrease Overweight and Obesity" the U.S. Surgeon General (2001) reported that, in 2000, the total cost of obesity was estimated to be $117 billion ($61 billion direct and $56 billion indirect). Without endorsing these particular estimates, we note that these costs will increase with increases in the U.S. prevalence of obesity, especially severe obesity, which is projected to continue to rise (e.g., see Ruhm, 2007).

The U.S. government has a stated objective of reducing obesity but the appropriate policy is not clear. One option is to implement ever-more-vigorous public education programs. Another option is to revise the food and nutrition programs administered by the USDA to encourage healthier diets of participants.[1]

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[1] These programs include the Food Stamp Program, the Special Supplemental Program for Women, Infants, and Children (the WIC Program), and the School Lunch Program, among others.

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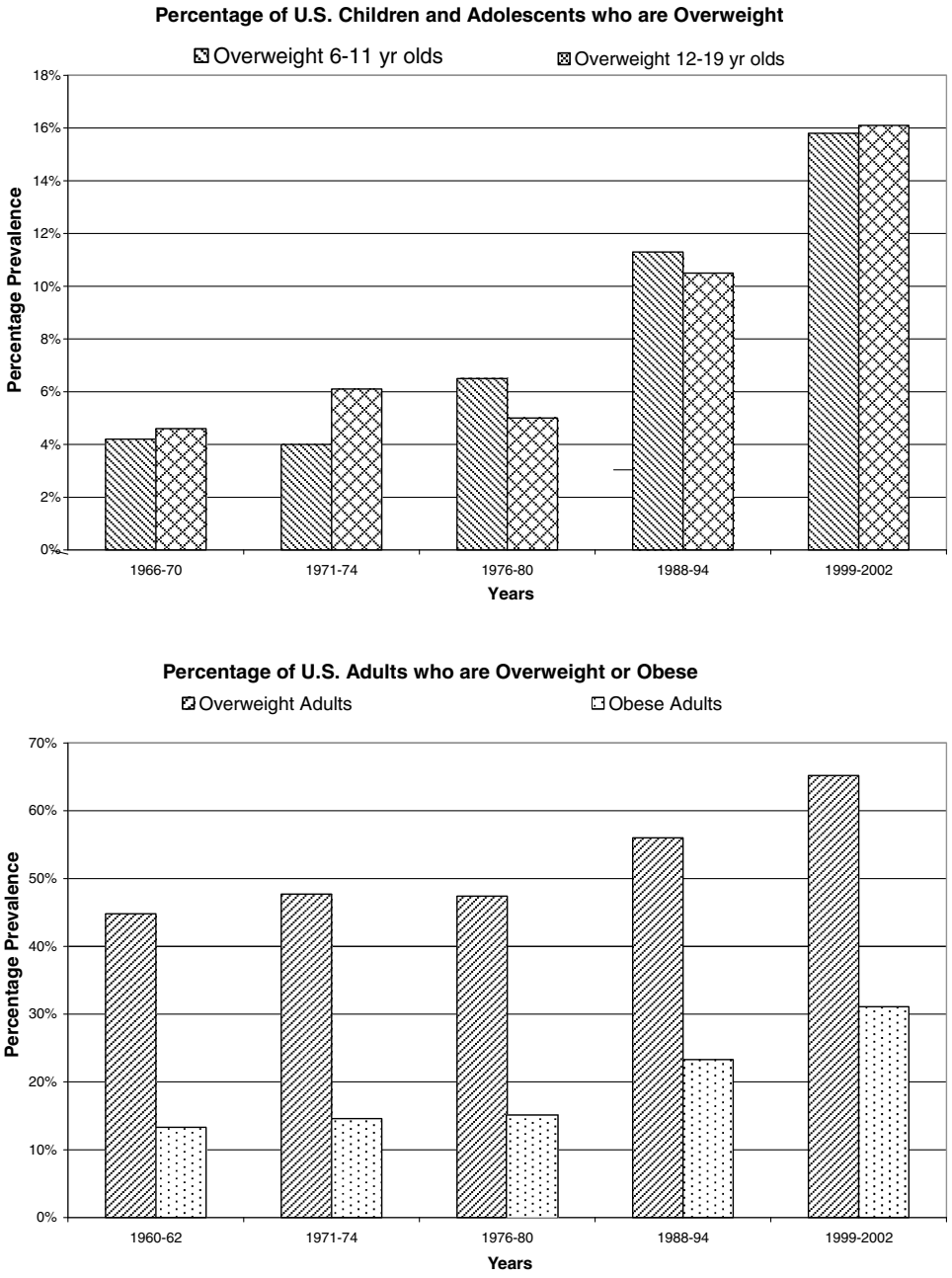

Fig. 1. Percentages of U.S. adults and children who are overweight or obese. Source: http://www.cdc.gov/nchs/about/major/nhanes/datatblelink.htm.

Various proposals have been raised and some have been subjected to analysis by economists.[2] Further options include regulatory or fiscal instruments that attempt to discourage less-healthy and encourage more-healthy consumption choices. For instance, some writers have speculated about banning certain types of advertising, taxing foods with high fat or high sugar content, or subsidizing healthier foods such as fresh fruit and vegetables, and economists have analyzed some of these possibilities.[3]

To make a socially beneficial choice among these instruments requires understanding the likely effects of each instrument on food consumption (and other) choices by different types of consumers, the implications of those choices for patterns of obesity, and the consequences for social and private costs. In every instance it is difficult to make clear inferences because the empirical relationships are complicated and hard to quantify with confidence based on available information. Even so, some commentators have been able to take strong positions on the issue.

[2] For instance, proposals for a more-healthy Food Stamp Program have been analyzed by Mullally et al. (2008) and Guthrie et al. (2007). The Food Stamp Program may have contributed to an increase in obesity among participants, though the evidence is mixed with differential results between men and women, and the effects found are generally small (e.g., see Baum 2007; Chen et al., 2005; Gibson, 2003, 2006; Kaushal, 2007; Ver Ploeg et al., 2006, 2007). Even if the current program has not caused obesity, a revised program may contribute to reducing obesity, but the analysis to date has generally not been favorable to the idea.

[3] For instance, Jacobson and Brownell (2000), Fields (2004), Kuchler et al. (2004a,b), Cash et al. (2005), Chouinard et al. (2007), Miljkovic et al. (2008), and Schroeter et al. (2008).