Abstract

U.S. consumption of food commodities is projected to rise through the year 2020, mainly due to an increase in population. But the mix of commodities is expected to shift because of an older and more diverse population, rising income, higher educational attainment, improved diet and health knowledge, and growing popularity of eating out. This study analyzes data from USDA's food consumption survey to project the consumption, through the year 2020, of 25 food groups and 22 commodity groups. Per capita consumption of fish, poultry, eggs, yogurt, fruits, nuts and seeds, lettuce, tomatoes, some other vegetables, grains, and vegetable oils is predicted to rise, whereas consumption of beef, pork, other meat, milk, cheese, potatoes, and sugar is expected to fall. The growth of the at-home and away-from-home markets varies from one commodity to another. Fruit consumption is expected to lead all commodities in growth in the at-home market, and fish consumption is expected to lead in growth in the away-from-home market.

Keywords: Eating out, diet and health knowledge, food-commodity translation database, food consumption projections, commodity consumption projections, and Continuing Survey of Food Intakes by Individuals, 1994-96 and 1998.

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Summary

As the American population becomes older and more racially and ethnically diverse, the volumes and types of foods preferred can be expected to shift. Older folks, for example, tend to eat out less often than younger folks, and, to some extent, prefer different foods. An increasing proportion of elderly in the population, therefore, will have implications for the types of foods demanded. Likewise, different ethnic subpopulations have some distinct food preferences.

This report examines the volumes of individual types of foods eaten by Americans in the years 1994-98, and projects those volumes to the year 2020, taking into account population and demographic change as well as trends in economics and immigration.

A two-step econometric system was specified to model food consumption. The first step was to estimate consumers' eating-out habits and their diet-health knowledge. In the second step, food consumption, both at home and away from home, was related separately to consumers' eating-out habits, knowledge, income, and their social and demographic characteristics. The Tobit procedure was utilized to deal with the fact that many consumers may not consume certain foods during a survey period. Using projected values of economic, social, and demographic factors for 2000-2020, we projected at-home and away-from-home food consumption for the same period. We then developed a food-commodity translation database to convert food consumption to commodity consumption. Twenty-five food groups and 22 commodity groups were analyzed in this study.

This study makes several contributions to the literature on food consumption. To our knowledge, no research has been conducted to model the effects of both eating out and diet-health knowledge on food consumption. Likewise, the at-home and away-from-home separation of food consumption had never been attempted in the literature. We developed a food-commodity translation database to convert food consumption to commodity consumption. This translation database contains the amounts of several hundreds of commodities in each of more than 7,000 food items.

Due to an anticipated population growth of 50 million between 2000 and 2020 in the United States, total consumption of all 22 commodities is predicted to rise, even though per capita consumption of many commodities is predicted to fall. The results suggest that fruits will lead all commodities in terms of growth in both total and per capita consumption. Certain vegetables, such as lettuce and tomatoes, are predicted to grow substantially, while per capita potato consumption (fried and other) is predicted to decline, slowing down the growth in total U.S. potato consumption. Increases in meat, poultry, and fish consumption vary. Per capita fish and poultry consumption is predicted to rise while beef, pork, and other meat per capita consumption is predicted to fall. Per capita consumption of milk and cheese is predicted to fall, while per capita consumption of yogurt and eggs is predicted to rise. The consumption of nuts and seeds and grains is also predicted to rise over the next two decades.

The consumption projections are based on expected shifts in economic, social, and demographic conditions. In addition, the consumption projections are sensitive to two underlying assumptions. First, no prices or expenditures on food consumption were reported in the surveys, so relative prices are assumed to remain constant during the survey period (1994-96 and 1998) and the projection period (2000-

2020). Second, there is an implicit assumption that as an individual moves from one demographic group to another, his/her preferences immediately take on the characteristics of the new group. A sensitivity analysis was conducted to examine the effects of assuming different eating-out habits as adults grow older between 2000 and 2020. The results suggest that the projections of some commodities, such as potatoes, are quite sensitive to the assumption about eating-out habits.