

Food Expenditure Projections

This section presents projected per capita effects of individual and combined demographic and income changes on weekly food expenditures per person as well as national effects.

Age Distribution Changes

The projections assume that all demographic factors (except age distribution), relative prices, and income remain constant at 1997-98 levels. As noted before, another way to interpret the projections is to imagine how expenditures in 1997-98 would have changed if the projected age distributions for 2000-20 had already been in place in 1997-98.

All food categories, except for food away from home, show slight increases in food expenditures due to the changing age distribution of the population (table 17). Total food expenditures would be expected to increase just 0.8 percent from 2000 to 2020. Over this time,

food-at-home expenditures would be expected to increase 2.2 percent, while food-away-from-home expenditures would decline 1.3 percent.

In the major food categories, expenditures are projected to increase 3.7 percent for fruits and 3.6 percent for vegetables. Fats and oils expenditures would increase 2.9 percent due to changing age distribution while sugars and sweeteners expenditures would increase 2.4 percent. Expenditures on meat, poultry, fish, and eggs would increase 2.5 percent between 2000 and 2020. Within this category, both pork and fish would increase 3.1 percent over the 20-year period. Miscellaneous prepared food would increase the least—just 1.1 percent—due to the changing age distribution.

Regional Distribution Changes

The projections assume that all other factors influencing consumer demand remain constant at 1997-98 levels and that the new residents of a region will assume the expenditure patterns of the present population. Given this assumption, food expenditures would be basically

Table 17—Projected per capita effects of changing age distribution on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
		<i>Percent</i>			
Total food	100.0	100.3	100.5	100.8	100.8
Food away from home	100.0	99.6	99.2	99.0	98.7
Food at home	100.0	100.7	101.4	102.0	102.2
Cereals and bakery products	100.0	100.5	101.0	101.5	102.0
Meats, poultry, fish, and eggs	100.0	100.9	101.6	102.2	102.5
Beef	100.0	101.1	101.6	102.1	102.1
Pork	100.0	100.8	102.3	103.1	103.1
Poultry	100.0	100.0	100.0	100.8	100.8
Fish	100.0	101.0	102.1	102.1	103.1
Dairy	100.0	100.3	100.7	101.0	101.3
Fruits	100.0	101.2	102.0	102.8	103.7
Vegetables	100.0	101.0	102.1	103.1	103.6
Sugars and sweeteners	100.0	100.8	100.8	101.6	102.4
Nonalcoholic beverages	100.0	100.5	100.9	100.9	100.5
Fats and oils	100.0	101.4	101.4	102.9	102.9
Miscellaneous prepared food	100.0	100.3	100.5	100.8	101.1

Source: Economic Research Service, USDA.

unchanged from the base year (table 18). The three main aggregates, total food, food at home, and food away from home, are unchanged over the 20-year period. In fact, expenditures only change for miscellaneous prepared foods and meats, poultry, fish (up 0.5 percent), and eggs (up 0.1 percent) over the 20-year period.

Racial Distribution Changes

Changes in the racial mix of the population, all other variables held constant, are also expected to have minor effects on food spending (table 19). Total food and food at home spending would be expected to decline about 0.1 percent from 2000 to 2020. Expenditures on food away from home would decline 0.2 percent over the same period. Both dairy and miscellaneous prepared food would have the largest spending declines: just 0.3 percent between 2000 and 2020. More significant shifts in spending might be seen by looking at a more disaggregated racial breakdown or by looking at food quantities rather than food expenditures. For an alternative approach using quantities, see Lin, 2003.

Diet-health Knowledge Changes

The diet-health knowledge equation is a function of many variables, including region, income, household type, age distribution, and educational attainment. In this simulation, all variables in this equation were held at mean 1997-98 levels, except for educational attainment. Using the projected level of educational attainment, we derived a value for diet-health knowledge. This value was then inserted into the Tobit expenditure equations, with all other variables set at mean levels.

Changes in diet-health knowledge are projected to have little effect on food expenditures (table 20). Total food expenditures would increase just 0.3 percent over 20 years, with food away from home rising 0.3 percent and food at home rising 0.4 percent. Among individual at-home categories, fruits would have the largest increase in expenditures, 0.8 percent, while expenditures for meats, poultry, fish, and eggs would decline 0.1 percent. In this category, pork expenditures would decline 0.7 percent while beef expenditures would decline 0.5 percent. Expenditures on fish would increase 1 percent over the 20-year period. Spending on sugars and sweet-

Table 18—Projected per capita effects of changing regional population distribution on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
			<i>Percent</i>		
Total food	100.0	100.0	100.0	100.0	100.0
Food away from home	100.0	100.0	100.0	100.0	100.0
Food at home	100.0	100.0	100.0	100.0	100.0
Cereals and bakery products	100.0	100.0	100.0	100.0	100.0
Meats, poultry, fish, and eggs	100.0	100.0	100.1	100.1	100.1
Beef	100.0	100.0	100.0	100.0	100.0
Pork	100.0	100.0	100.0	100.0	100.0
Poultry	100.0	100.0	100.0	100.0	100.0
Fish	100.0	100.0	100.0	100.0	100.0
Dairy	100.0	100.0	100.0	100.0	100.0
Fruits	100.0	100.0	100.0	100.0	100.0
Vegetables	100.0	100.0	100.0	100.0	100.0
Sugars and sweeteners	100.0	100.0	100.0	100.0	100.0
Nonalcoholic beverages	100.0	100.0	100.0	100.0	100.0
Fats and oils	100.0	100.0	100.0	100.0	100.0
Miscellaneous prepared food	100.0	100.3	100.3	100.3	100.5

Source: Economic Research Service, USDA.

Table 19—Projected per capita effects of changing racial distribution on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
			<i>Percent</i>		
Total food	100.0	100.0	100.0	99.9	99.9
Food away from home	100.0	99.9	99.9	99.8	99.8
Food at home	100.0	100.0	100.0	100.0	99.9
Cereals and bakery products	100.0	100.0	100.0	100.0	100.0
Meats, poultry, fish, and eggs	100.0	100.1	100.1	100.1	100.1
Beef	100.0	100.0	100.0	100.0	100.0
Pork	100.0	100.0	100.0	100.0	100.0
Poultry	100.0	100.0	100.0	100.0	100.0
Fish	100.0	100.0	100.0	100.0	100.0
Dairy	100.0	100.0	99.7	99.7	99.7
Fruits	100.0	100.0	100.0	100.0	100.0
Vegetables	100.0	100.0	100.0	100.0	100.0
Sugars and sweeteners	100.0	100.0	100.0	100.0	100.0
Nonalcoholic beverages	100.0	100.0	100.0	100.0	100.0
Fats and oils	100.0	100.0	100.0	100.0	100.0
Miscellaneous prepared food	100.0	100.0	100.0	99.7	99.7

Source: Economic Research Service, USDA.

Table 20—Projected per capita effects of changing diet-health knowledge on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
			<i>Percent</i>		
Total food	100.0	100.1	100.1	100.2	100.3
Food away from home	100.0	100.1	100.2	100.2	100.3
Food at home	100.0	100.1	100.2	100.3	100.4
Cereals and bakery products	100.0	100.2	100.2	100.5	100.5
Meats, poultry, fish, and eggs	100.0	100.0	100.0	100.0	99.9
Beef	100.0	100.0	100.0	100.0	99.5
Pork	100.0	100.0	100.0	99.3	99.3
Poultry	100.0	100.0	100.0	100.0	100.0
Fish	100.0	100.0	100.0	101.0	101.0
Dairy	100.0	100.0	100.3	100.3	100.3
Fruits	100.0	100.0	100.4	100.4	100.8
Vegetables	100.0	100.0	100.0	100.5	100.5
Sugars and sweeteners	100.0	100.0	100.0	100.0	100.0
Nonalcoholic beverages	100.0	100.0	100.0	100.0	100.0
Fats and oils	100.0	100.0	100.0	100.0	100.0
Miscellaneous prepared food	100.0	100.3	100.3	100.3	100.5

Source: Economic Research Service, USDA.

eners, nonalcoholic beverages, and fats and oils would remain the same between 2000 and 2020.

Income Changes

Changes in income are projected to have a relatively large effect on food expenditure patterns, particularly food away from home. Under this scenario, food-away-from-home spending would increase 9.7 percent, while food-at-home expenditures would increase 3.0 percent (table 21). Among individual at-home foods, fruit would have the largest percentage increase in expenditures from 2000 (up 4.2 percent). Expenditures on miscellaneous foods would be expected to increase approximately 3.8 percent, while spending on vegetables would increase about 3.3 percent. Expenditures for cereals and bakery products, dairy, sugars and sweeteners, and non-alcoholic beverages would all increase about 2.5 percent between 2000 and 2020. The smallest spending increase occurs for meats, poultry, fish, and eggs—up just 1.3 percent over the 20-year period. The largest spending increase within this category occurs for fish, up 1.9 percent, while the smallest increase is for beef, up just 0.5 percent, over the same period. These expenditure changes tend to be larger than the corresponding quantity changes because consumers purchase better quality products as income rises, not more of each product.

Combined Demographic and Income Changes

Projected per capita expenditures based on all demographic projections (changing age, regional, diet-health knowledge, and racial distributions) combined with an assumed 1-percent growth in annual income show increases in all food categories (table 22). Total food expenditures are projected to increase 7.1 percent. Food-away-from-home spending is projected to increase 8.1 percent, while food-at-home spending is projected to increase 5.4 percent between 2000 and 2020.

Among major at-home food categories, expenditures increase the most for fruits (up 8.1 percent), vegetables (up 7.2 percent), and miscellaneous prepared food (up 5.3 percent). Expenditures for several categories of food

are expected to grow between 4 and 5 percent over the 20-year period, including cereals and bakery products (up 4.3 percent), fats and oils (also up 4.3 percent), meats, poultry, fish, and eggs (up 4.1 percent), and dairy (up 4.0 percent). Within the meats, poultry, fish, and eggs category, expenditures will increase 6.2 percent for fish and just 2.6 percent for beef.

National Effects

To derive the total effect on the Nation's food expenditures of a 1-percent growth rate in income coupled with the effects of age, regional, diet-health knowledge, and racial distributions, we multiplied the total projected per capita expenditure in table 22 by the expected change in the U.S. population. The most important factor driving growth in total food demand between 2000 and 2020 is the expansion of the U.S. population. The census bureau projects a U.S. population increase of nearly 50 million over the 20-year period.

Total food expenditures are projected to increase 26.3 percent (table 23). Food-away-from-home expenditures are projected to increase 27.5 percent, compared with 24.3 percent for food-at-home expenditures. Because the individual food groups represent at-home food expenditures only, these projections understate total food expenditure growth for the individual food groups to the extent that the away-from-home market grows for particular foods. One effect of the slow but steady growth of the population is that the variation of growth levels between food groups is less than that exhibited by the per capita projections. The largest projected increase in expenditures is for fruits, up 27.5 percent, while the smallest is for both beef and nonalcoholic beverages, up 21.1 percent. Expenditures for meats, poultry, fish, and eggs are projected to increase 22.8 percent. Within this category, beef spending will increase 21.1 percent while fish will increase 25.2 percent. Clearly, the biggest boost to food demand in the future will come from population growth.

Table 21—Projected per capita effects of a 1-percent increase in annual income on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
		<i>Percent</i>			
Total food	100.0	101.4	102.9	104.5	106.2
Food away from home	100.0	102.2	104.6	107.0	109.7
Food at home	100.0	100.7	101.4	102.2	103.0
Cereals and bakery products	100.0	100.5	101.0	101.7	102.4
Meats, poultry, fish, and eggs	100.0	100.3	100.6	100.9	101.3
Beef	100.0	100.0	100.0	100.5	100.5
Pork	100.0	100.0	100.0	100.0	100.7
Poultry	100.0	100.8	100.8	101.6	101.6
Fish	100.0	100.0	101.0	101.0	101.9
Dairy	100.0	100.6	101.3	101.9	102.6
Fruits	100.0	100.8	101.9	103.1	104.2
Vegetables	100.0	101.0	101.4	102.4	103.3
Sugars and sweeteners	100.0	100.0	100.8	101.5	102.5
Nonalcoholic beverages	100.0	100.0	101.3	101.7	102.6
Fats and oils	100.0	100.0	101.4	101.4	101.4
Miscellaneous prepared food	100.0	100.8	101.8	102.8	103.8

Source: Economic Research Service, USDA.

Table 22—Projected per capita effects of combined demographic changes and a 1-percent increase in annual income on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
		<i>Percent</i>			
Total food	100.0	101.7	103.5	105.4	107.1
Food away from home	100.0	101.7	103.6	105.8	108.1
Food at home	100.0	101.5	102.9	104.3	105.4
Cereals and bakery products	100.0	101.0	102.0	103.3	104.3
Meats, poultry, fish, and eggs	100.0	101.3	102.4	103.5	104.1
Beef	100.0	101.1	101.6	102.1	102.6
Pork	100.0	101.5	102.3	103.1	103.8
Poultry	100.0	100.8	101.7	102.5	103.4
Fish	100.0	102.1	103.1	105.2	106.2
Dairy	100.0	101.0	102.0	103.0	104.0
Fruits	100.0	102.0	104.0	106.1	108.1
Vegetables	100.0	101.5	103.6	105.7	107.2
Sugars and sweeteners	100.0	100.8	102.4	103.1	104.7
Nonalcoholic beverages	100.0	100.9	101.8	102.3	102.7
Fats and oils	100.0	101.4	102.9	104.3	104.3
Miscellaneous prepared food	100.0	101.3	102.7	104.0	105.3

Source: Economic Research Service, USDA.

Table 23—Projected national effects of combined demographic changes and a 1-percent increase in annual income on weekly food expenditures

Food group	2000 base	Change in expenditures			
		2005	2010	2015	2020
			<i>Percent</i>		
Total food	100.0	106.3	112.7	119.5	126.3
Food away from home	100.0	106.3	112.8	120.0	127.5
Food at home	100.0	106.0	112.0	118.3	124.3
Cereals and bakery products	100.0	105.5	111.1	117.1	123.0
Meats, poultry, fish, and eggs	100.0	105.8	111.5	117.3	122.8
Beef	100.0	105.6	110.6	115.8	121.1
Pork	100.0	106.1	111.4	116.9	122.5
Poultry	100.0	105.4	110.7	116.3	121.9
Fish	100.0	106.6	112.3	119.2	125.2
Dairy	100.0	105.5	111.0	116.8	122.6
Fruits	100.0	106.6	113.3	120.3	127.5
Vegetables	100.0	106.1	112.8	119.8	126.5
Sugars and sweeteners	100.0	105.3	111.5	117.0	123.5
Nonalcoholic beverages	100.0	105.4	110.8	116.0	121.1
Fats and oils	100.0	106.0	112.0	118.3	123.1
Miscellaneous prepared food	100.0	105.9	111.8	117.9	124.2

Source: Economic Research Service, USDA.