

The Food and Fiber System Remains an Important Source of Rural Employment Despite Declining Farm Employment

The Food and Fiber System generates significant employment in both metro and nonmetro areas. Nearly every State has an important share of its nonmetro jobs in the system.

The farm portion of the American economy produces grains, livestock and poultry, fruits, vegetables, tobacco, cotton, greenhouse and nursery goods, and other products. It requires myriad inputs such as machinery and parts, fertilizer, pesticides, petroleum, and electrical power. It provides downstream employment for transportation and processing at various levels. The Food and Fiber System (FFS) defines this farm-related segment of the economy. We have used an input-output model to identify the levels of economic activity in the various sectors required to support the final demands of the FFS.

The FFS accounts for a higher share of employment in nonmetro areas than in metro. Of the estimated 23.6 million workers in nonmetro areas, 4.7 million, or 20 percent, worked in the FFS. Only 18 percent, or 17.6 million out of 99.4 million were similarly employed in metro areas. The FFS employed 17.1 percent of the total labor force in the U.S. economy in 1994.

The significance of the Food and Fiber System varies by region and by State. Two-thirds of States which have the largest percentage of nonmetro FFS workers are Southern, Midwestern, and Plains States. Because many States do not fit that pattern, however, we decided to examine nonmetro FFS employment by dividing the States into three categories: those States who have the largest share of FFS nonmetro employment; those in the middle third of the FFS nonmetro employment rankings; and the remainder where the FFS makes up the smallest share of nonmetro employment (see map).

States with a High Share of Nonmetro FFS Employment

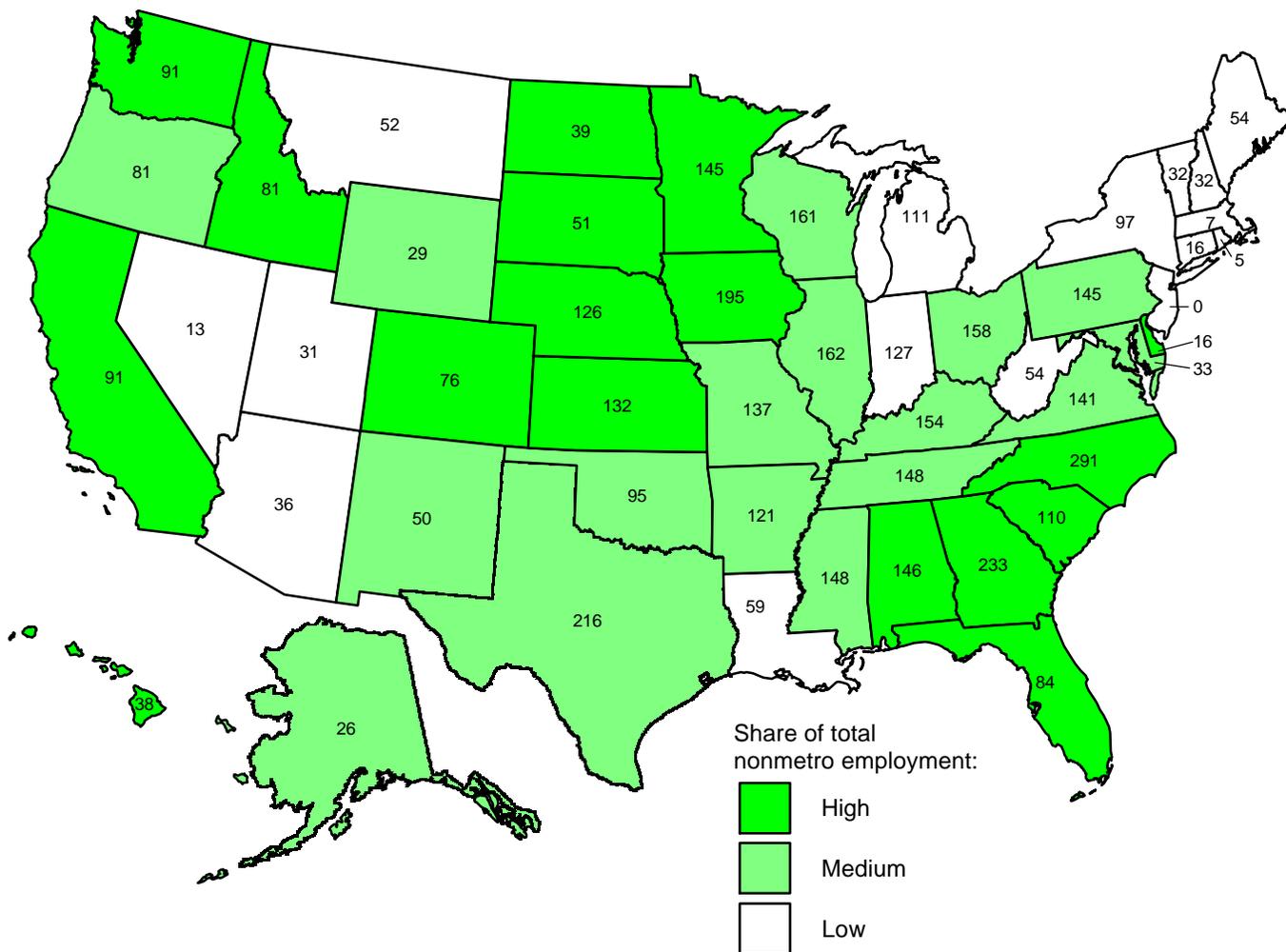
Almost all States in this division show the growth of service industries in recent decades by the relatively large percentage of nonmetro workers in the FFS who are employed in eating and drinking establishments and other wholesale and retail trade jobs. Most of these States, however, have at least one other prominent FFS industry. Overall, these States have 21-31 percent of their nonmetro employment in FFS. Nebraska, with 31 percent, has the largest share of nonmetro FFS employment. North Carolina has the largest number of nonmetro FFS employees with 291,000, followed by Georgia, and Iowa.

Alabama and North and South Carolina have large farm sectors, but the textile industry is the largest nonmetro FFS employer in these States, engaging 30 to 40 percent of the FFS nonmetro workers. California and Florida are largely metro States, but the FFS is strong within their nonmetro areas. In the Dakotas, the farm sector employs as much as 40 percent of all nonmetro FFS workers. Broiler raising and processing both tend to be located in nonmetro areas. Three major broiler producing States—Georgia, Alabama, and Delaware—appear in this group. In similar fashion, beef processors have usually built new plants in nonmetro areas near the supply of finished cattle rather than as earlier in central markets such as Chicago. Moreover, since the cattle industry has moved toward finishing stock in large commercial feedlots located in drier climates, this combination of economic forces has put Nebraska, Kansas, Colorado, and Idaho in this group.

Iowa and Minnesota are both prominent in farming and food processing, which makes FFS employment important in their nonmetro areas. Colorado and Washington have a somewhat similar employment pattern where FFS employment is important in nonmetro areas.

Nonmetro food and fiber employment, 1994

Georgia and North Carolina each have over a quarter million nonmetro food and fiber jobs; they and other States rely on the sector for a high share of their total nonmetro employment



Notes: Food and fiber employment shown in thousands.
 New Jersey and the District of Columbia have no nonmetro areas.
 Source: Estimated by ERS.

Moderate-Share States

In various States in the moderate group, the FFS share of all nonmetro employees ranges from 17 to 21 percent. Of this group, Texas, Wisconsin, and Illinois have the largest numbers of nonmetro employees in the FFS—Texas, with over 216,000 and the others with about 160,000 each. Only in Texas does the farm sector rank as the largest nonmetro FFS employer, the other States having more FFS jobs in the service industries sectors. The growth of the service industries is again shown in this category. In 2 of the 17 States, employment in either eating and drinking establishments or in other wholesale and retail trades ranks first. The farm sector is first in Texas and Oklahoma while the textile sector leads in Virginia, Mississippi, and Tennessee. The farm sector is tied with eating and drinking in Illinois, reflecting the importance of the Corn Belt. In Mississippi, traditionally thought of as a strong agricultural State, the post-World War II revolution in farming has left that sector in fourth place as a nonmetro FFS employer. Oregon, Kentucky, and New Mexico all have relatively large nonmetro farm sectors, but even the mining and forestry sector (included in “All other” in the table) contributes by providing between 1 and 5 percent of all FFS nonmetro employment in these States. Twenty-two percent of all nonmetro FFS jobs in Alaska are in the mining and forestry sector, the second largest category behind transportation, trade, and retailing.

Low-Share States

This group has the greatest diversity in the percentage of nonmetro employees engaged in the FFS, ranging from 16 percent in Montana, Utah, Maine, Indiana, Arizona, and Vermont to none in New Jersey and the District of Columbia, which have no nonmetro areas to count.

All of the New England States along with New York and New Jersey form a solid block in this division. Indiana and Louisiana, often seen as agricultural, may seem as anomalies here, but each has become strongly metro in terms of workplace. Most of these States have very small rural areas and those areas tend to be close to large metro areas. Production agriculture is not important in most of these States (the exceptions being New York, Indiana, and Louisiana). Nonmetro FFS employment is largely in the wholesale and retail trades, eating and drinking places, and other services sectors. Taken as a whole, the FFS is still an important provider of jobs and employment even in the few nonmetro areas of the largely urbanized Northeastern States that dominate this bottom one-third.

Conclusion

All things, particularly in a developed economy, are interrelated. The estimation procedure for the Food and Fiber System recognizes these interrelationships and presents an estimate of the role of agriculture in a rural area's economy. The challenge is achieving this simple expression from a complicated web of interrelationships.

Our estimates show how important the Food and Fiber System continues to be for rural areas as well as for the national economy. While the percentage employed by the food and fiber system has declined somewhat since 1982, the numbers employed in the system have remained stable. Decreasing farm employment has been made up by increases in other sectors. Similarly, the value added by the food and fiber system has kept up with inflation, even though it has slipped as a percentage of the domestic economy. In nonmetro areas, FFS employment remains important in nearly every State, however much the sources of that employment vary from State to State. [William Edmondson, 202-219-0777, wedmonds@econ.ag.gov; Lowell K. Dyson, 202-219-0786, lkdyson@econ.ag.gov; Chinkook Lee, 202-501-8340, chinlee@econ.ag.gov]

The Food and Fiber System and the domestic economy, 1985-94

Nonfarm-sector employment increases as farm employment falls

Item	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Millions of jobs										
Employment:										
Total food and fiber	22.5	22.3	22.3	23.0	23.4	23.3	22.8	22.0	22.1	22.4
Percentage										
Share of domestic labor force	19.1	18.9	18.6	18.9	18.9	18.7	18.2	17.3	17.3	17.1
Millions of jobs										
Farm sector	2.0	1.9	1.9	2.2	2.0	1.9	1.9	1.6	1.7	1.7
Nonfarm sectors	20.1	20.4	20.4	20.9	21.3	21.4	20.9	20.4	20.4	20.7
Food processing	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.4	1.4
Manufacturing	2.9	2.9	2.7	2.8	2.9	2.8	2.8	2.7	2.6	2.6
Transportation, trade and retailing	6.6	6.7	6.7	6.8	7.0	7.0	6.8	6.7	6.7	6.8
Eating	6.0	6.1	6.4	6.6	6.7	6.8	6.6	6.5	6.6	6.7
All other	2.9	3.0	3.0	3.1	3.2	3.2	3.1	3.1	3.0	3.0
Total domestic economy	115.5	117.8	119.9	121.7	123.9	124.8	125.3	127.0	128.0	131.1
Billion dollars										
Value added by activity:										
Total food and fiber	654.7	679.4	708.7	759.0	800.7	839.3	850.4	877.7	893.9	939.2
Percentage										
Share of domestic economy	16.2	15.9	15.6	15.5	15.2	15.1	14.9	14.6	14.1	13.9
Billion dollars										
Farm sector	49.0	48.0	52.2	54.4	62.7	65.1	61.1	65.0	59.3	63.7
Nonfarm sectors	605.6	631.3	656.5	704.6	738.0	774.3	789.3	812.7	834.6	875.5
Food processing	87.8	93.3	91.7	98.1	102.2	106.1	108.0	108.5	110.3	114.7
Manufacturing	117.1	121.5	119.9	125.3	133.5	134.5	135.8	139.3	138.9	145.5
Transportation, trade and retailing	200.7	204.7	214.3	228.7	237.1	248.0	251.0	256.5	262.0	275.1
Eating	81.7	83.6	92.2	99.2	101.7	109.0	110.5	112.5	117.0	124.4
All other	118.2	128.3	138.4	153.3	163.5	176.7	183.9	196.0	206.4	215.8
Total domestic economy	4,038.7	4,268.6	4,539.9	4,900.4	5,250.8	5,546.1	5,724.8	6,020.2	6,343.3	6,738.4

Source: Calculated by ERS from supporting ERS economic models using data from the Bureau of Economic Analysis, Bureau of Labor Statistics, Bureau of the Census, and USDA.