The New and Improved Arkansas Family Income Standard: How Much Does It Really Cost to Raise a Family?

Methodology for Computing the Family Income Standard (FIS)
The basic approach used to estimate the family income standard in the 2003 update is similar in most respects to that used in AACF's 1999 study, *Making It Day-to-Day: A New Family Income Standard for Arkansas Families*. The FIS is defined as the amount of money a working Arkansas family with children needs to earn to meet all of its daily living needs without assistance from government or private charities.

The FIS includes the basic living expenses of families with children, such as food, housing and utilities, health care, transportation, child care, taxes, and other necessities including clothing, personal care, and household items. The estimates presented here are as of December 2002.

2003 Update Adds Two New Family Types. FIS estimates were developed for family types who often face the greatest economic challenges or are the focus of much public policy: families with young children. Each family was assumed to have one child (up to one year of age) or two children (a one-year old and a three-year old. FIS estimates were developed for six different family types and sizes:

- One-parent (mother) families with one child (child up to one year of age).
- One-parent (mother) families with two children (one-year old and three-year old).
- Two-parent family (both parents working) with one child (child up to one year of age).
- Two-parent family (both parents working) with two children (one-year old and three-year old).
- Two-parent family (only one parent working) with one child (child up to one year of age).
- Two-parent family (only one parent working) with two children (one-year old and three-year old).

In the 1999 study, it was assumed that both parents in two-parent families are working. For the 2003 update, we also developed separate estimates for two-parent families in which only one parent is working. This was done because of the increasing debate in family development circles about the impacts of both parents working on child development. In turn, some policymakers are advocating the use of state tax policy to encourage one parent in two-parent families to stay home and care for young children. This is a debate that our FIS estimates could not ignore.

Changes in Calculating FIS Costs
In the 2003 update, major improvements were made in the methodologies used to estimate the cost of health care transportation, and "other necessities." Changes in calculating taxes are due primarily to changes in state and federal tax law. Because of the differences in methodology, we consider these estimates to be more accurate than those in our 1999 study.

To calculate the FIS for each family type and size, we estimate the annual costs of each of the components – food, housing, childcare, transportation, health care, and other necessities. Then a tax simulation model is used to estimate how much families would have to pay in various federal and state taxes to have enough income remaining to pay for each of these components. The monthly FIS standard is simply the annual standard divided by 12. The hourly FIS wage was calculated by dividing the monthly standard by 176 (22 work days per month/8 hour work days). This was done for the state and each of the 75 counties for each of the six family types.

County-Level Estimates. FIS estimates were developed for the state and each of its 75 counties. County-specific data were available for three components of the FIS – housing, childcare, and transportation. State level estimates were used for health care and food since county-level estimates were not available. Other FIS expenses vary for each county because their calculation depends on the income one must earn to cover expenses and taxes.

Housing. Housing costs are based on the Department of Housing and Urban Development's Fair Market Rents (FMR) estimates, available for each local area in the state. The FMR is the cost of housing and utilities in each local area at the 40th percentile for privately owned, decent, structurally safe, and sanitary rental housing with suitable amenities. FMR estimates include the costs of utilities such as gas, electric, water and sewer, but does not include the cost of telephone or cable TV service. The cost of telephone service was not considered an essential amenity when HUD originally devised the FMR (note: telephone service is accounted for in the "other necessities" component of the FIS). HUD produces FMR estimates for various unit sizes (i.e., one-bedroom units, two-bedroom units, etc.) The FIS assumes that a two-bedroom unit is sufficient for a family with one or two children. The FMR for a two-bedroom apartment was used in this analysis. FMR estimates are produced annually and are available at www.huduser.org/datasets/frm.html.

Some question whether FMR are adequate to cover the full cost of housing and utilities, especially given the rising importance of technology in the day-to-day living activities of families and the omission of telephone and cable TV service from the FRM estimates. Despite this shortcoming in the FMR estimates, however, most studies (including this one) continue to use FMR because of their widespread acceptance and availability for each local area on an annual basis.

Food. Food costs are based on USDA's "low-cost" food plans. The USDA food plans represent the amount that families need to spend to achieve a nutritionally adequate diet.

The "low-cost" plan is a modified (and more expensive) version of the "thrifty food plan" that was developed over 40 years ago and is the standard for food stamp payments to families. The "thrifty food plan" has been criticized as an inadequate nutritional diet for low-income families. One USDA study found that less than 10 percent of the families who spend at the level of the thrifty food plan achieve a nutritionally adequate diet. For this reason, the FIS uses USDA's more expensive "low-cost" food plan (costing 25 percent more than the thrifty plan). The FIS uses USDA's estimates for children ages one to two and three to five and males and females ages 20-50. USDA's estimates are available on the web at: http://www.usda.gov/cnpp/using3.html.

USDA's food plan estimates are updated monthly. This study used estimates from December of 2002. USDA's estimates are available for the nation as a whole, but are not available for individual states or localities. This assumes, of course, that the cost of buying food in Arkansas is similar to other states. It also assumes that the cost of buying food is the same everywhere within Arkansas, i.e., that the cost of buying food in Phillips County is the same as the cost in Little Rock or Springdale. In fact, this may not be the case. In areas that lack store competition, such as in inner cities or more isolated rural areas, families may pay more than families in nearby counties. Similarly, in areas that have a discount grocery store chain, families may be able to take advantage of lower prices by buying in bulk-quantities. Unfortunately, county and state-level data on food costs is not publicly available. Such estimates would require costly market basket surveys for each local area or region in the state and would have to be updated regularly.

Childcare. Childcare expenses are the costs of center-based care in each local area. FIS childcare costs were calculated using Arkansas' 2001 local market rate survey (results from the 2003 survey were unavailable at press time). The survey is conducted every two years by the Division of Child Care and Early Childhood Education, the Arkansas Department of Human Services. The survey produces county-by-county estimates for type of care based on the age of the child, such as infant-based care, toddler, care, pre-school age care, school age care, etc. The survey estimates the cost of purchasing care at the 75 percentile in each county, a level that would exclude all but the most expensive 25 percent of local providers – it doesn't specify if these are "quality" programs. For one-child families, the FIS uses market rate survey estimates of the cost of infant care to represent child care costs. For two-child families, the cost of pre-school age care is added to the cost of infant care. Because of differences in staffing ratios and other standards, infant care is more expensive for families to purchase ($4,268 annually for infants and $3,768 for pre-school age).

While the market rate survey is adequate for measuring the cost of care provided to families, it does not necessarily reflect whether families are able to purchase "quality" care at the 75 percentile of providers in their local area. While all center-based care has to be licensed by the Division of Child Care and Early Childhood Education, all centers do not provide quality care or even the same level of care. Families in different counties that spend the same amount on childcare may not receive the same quality of care. According to a model developed by the Division, the cost of quality care in Arkansas (defined to include age-appropriate quality early childhood education) is estimated at

about $5,000 annually. However, there is no guarantee that centers that charge rates at or above this level provide quality care. Less than 20 percent of the state's child care centers have achieved a higher "quality" rating as determined by NAEYC standards (National Association for the Education of Young Children) or the state quality approval process. Many quality-approved centers are either Head Start centers or Arkansas Better Chance programs. Both programs are publicly subsidized programs designed to provide a high level of quality early childhood education. Consequently, these programs receive a higher reimbursement rate than that received by other publicly subsidized programs (such as those federally funded by the Child Care Development Fund) or that is typically charged by centers that accept only private pay families. In some counties family incomes are so low they could not afford to pay for "quality" even if it was available in their community. Consequently, many providers are unable to charge the rates needed to provide quality care. Finally, in some cases, programs may actually be providing quality care but for one reason or another have not gone through the quality accreditation process.

Transportation. Transportation costs for the FIS represent the cost of owning and operating a car. A different methodology was used to compute transportation costs than used in the 1999 FIS study. After much examination, we decided that our 1999 study significantly underestimated transportation costs, especially for families in rural areas and two-parent families. In the 1999 study, each family was assumed to drive only 10,000 miles annually.

In this study, transportation costs were derived using a variation of a methodology developed by the Economic Policy Institute.[1] The costs are based on the annual miles driven and the costs per mile of owning and operating the car. The average miles driven per person come from the National Personal Transportation Survey (this data is available on the web at: www-cta.ornl.gov/npts/1995/Doc/index.shtml). Although state and county-specific data are not available from the survey, it does provide estimates that vary depending on whether a county is part of a metropolitan statistical area (MSA) and the size of the MSA. Counties that are not part of a MSA are assumed to be rural and people drive more miles on an annual basis. Based on national averages, the average miles driven per person for Arkansas counties varied from 12,826 (counties in MSAs with populations less than 250,000) to 14,614 for rural counties (counties not in an MSA).

For one-parent families (and two-parent families in which only one parent works or there is only one car), the miles driven include only those miles for non-social trips (work, school, church, and errands) per one adult. According to the 1995 Personal Transportation Survey, this was assumed to be 69 percent of all miles driven per person. For two-parent families in which both parents work and drive a car, only the non-social trips for the first parent are included (69 percent of all miles driven) and the work-only miles driven by the second parent are included (28% of all miles driven).

The costs per mile are from the IRS cost-per-mile rate and include the cost of insurance, gas, vehicle registration, maintenance and depreciation. The 2001 IRS cost-per-mile rate was 36.5 cents.

Health Care. The calculation of health care costs was the most complicated component of the FIS. In the 1999 FIS study, health care costs were calculated based on the assumption that all families had access to employer provided health insurance in which employers paid nearly two-thirds (64 percent) of the insurance premium. The family's cost of insurance was limited to the remaining share of the premium (36 percent) and average out-of-pocket medical expenses such as co-pays, deductibles, etc.

The methodology for calculating health care costs in the 2003 update takes into account the fact that Arkansans get their health care through different avenues, including employer based coverage, private pay for non-group insurance, government sponsored health care (Medicaid, Medicare, and military insurance). According to unpublished 2001 data from the U.S. Census Bureau, 61.1 percent of Arkansans ages 18-64 have employer-based coverage, 30.7 percent are uninsured or purchase their coverage privately through a non-group plan, and 8.3 percent have government-sponsored care.

The FIS premium cost for health care insurance is the weighted average of the employee share of employer-provided (for those who have employer-based care), the full cost of purchasing a non-group plan (for those who are uninsured or purchase their coverage privately through a non-group plan, and the premium cost of government-sponsored health care (assumed to be zero).[2] The total FIS health care insurance cost is the sum of the average premium costs and average out-of-pocket costs.

The cost of employer-based coverage in Arkansas is from State Health Facts Online of the Henry J. Kaiser Family Foundation (http://www.statehealthfacts.kff.org). The average annual cost of employer-based family coverage is $6,354, with the employer's share at $1,772.

We obtained estimates of the premium costs for purchasing care through non-group insurance ($500 deductible and $20 co-pay) by searching http://www.ehealthinsurance.com, an internet search engine that provides quotes for health insurance from multiple providers. Quotes can be developed using any set of criteria, including ages of family members, geographic location (zip codes), and type of coverage. We assumed a typical policy had a $500 deductible and $20 co-pay. The quotes we obtained did not vary appreciably by zip code in the state. Based on our search, the typical family policy for a one-parent family costs $2676 (including coverage for the children), while the typical quote for a two-parent family was $3408.

Estimates of out-of-pocket health care expenditures were developed using data from "Hidden from View: The Growing Burden of Health Care Costs," conducted in 1998 by the Consumer's Union. Data were updated to end-of-2001 levels using the CPI Medical Services index. The Consumer's Union study contained estimates of average out-of-pocket payments by various income levels. We chose estimates for families earning between 150% and 200% of the federal poverty levels.

Other necessities. The categories described above do not include the cost of other necessities such as clothing, telephone service, personal care items such as toothpaste, household supplies such as laundry detergent, school supplies, toys, etc. In the 1999 FIS study, expenses for other necessities were calculated as a fixed 10 percent of the costs of other FIS components (food, housing, health care, transportation, and taxes). A recent study by the Economic Policy Institute, which we think is more accurate, found that the cost of other necessities equals 31 percent of the cost of food and housing.[3] This approach was used in this study.

Taxes. Taxes must be included in the FIS because they represent a daily living cost for families. The money spent on taxes reduces the amount of money that families would have available to spend on other basic daily living needs such as food, housing, clothing, etc. Taxes add to the total cost of the money that families must earn to meet their basic needs, while tax credits reduce tax liability and the amount of money that families need to earn. Taxes in the FIS include federal social security payroll and Medicare taxes (equal to 7.65% of pretax income), federal personal income taxes, and state personal income taxes. State sales taxes and local property taxes are not calculated as part of taxes because the sales taxes are included in the costs of other FIS items and property taxes are included in the rents charged for housing.

The calculation of federal personal income taxes included various tax offsets such as the earned income tax credit, the child tax credit, the child care and dependent tax credit, standard deductions, and exemptions. Similarly, the Arkansas personal income tax was calculated using various credits that offset tax liability, such as the Working Taxpayer Credit, the child care tax credit, and the usual state deductions/credits. A complex model using a series of simultaneous equations was used to estimate tax liability for various income levels. The model can be used to estimate tax liability given changes in any number of variables, including the number of children, different levels of child care expenditures, etc. In addition to estimating each family's tax liability, the model estimates the amount of pre-tax income (the income earned prior to taxes) needed to generate sufficient income so that enough income is leftover to pay for other FIS items, such as child care, food, etc.[4]

State and federal taxes were calculated based on tax law in effect as of January 2002, and thus do not include any changes adopted by the U.S. Congress or the Arkansas General Assembly during their 2003 sessions.

Notes

1. See for example, Jared Bernstein, Chauna Brocht, and Maggie Spade-Aguilar, *How Much is Enough: Basic Family Budgets for Working Families*, Washington, D.C., Economic Policy Institute, 2000, pp. 29-30. Also see Heather Boushey, Chauna Brocht, Bethney Gunderson, Jared Bernstein, *Hardships in America: The Real Story of Working Families*, Washington D.C., Economic Policy Institute, 2001, p.53.

2. This methodology is a slight variation of that used by Bernstein et al, in *How Much is Enough*, pp. 25-28, and Boushey et al. in *Hardships in America*, pp. 53-54.

3. See Berstein et al., *How Much is Enough*, pp. 34-36, and Boushey et al., *Hardships in America*, p. 54.

4. We used a variation of a tax simulation model originally developed by the California Budget Project. The model was revised to reflect Arkansas tax law and changes in federal tax law adopted in 2001.