Appendix 1:
Methodology for Constructing Basic Needs Budgets

Food

The U.S. Department of Agriculture (USDA) provides monthly estimates of the average cost of four different food plans: Thrifty, Low-Cost, Moderate-cost and Liberal. Because studies have shown it is almost impossible for low-income families to follow the Thrifty Food Plan, we have chosen to use the Low-Cost monthly estimates in calculating a budget that reflects basic family needs.[6]

USDA bases its budget assessments upon specific family types with children of specified ages, so we have followed USDA guidelines in adjusting for age and family size differentials. For family size adjustments we have again followed USDA guidelines. For example, the food costs for a family of two are increased by 10 percent per capita above the per capita cost of a four-person family in order to account for the decreased economies of scale. In all cases, we have averaged the male/female values. Although restaurant meals have become increasingly common in family budgets and diets, we do not include this additional cost, as it would violate our no-frills criteria. In choosing the Low-Cost Food Plan over the Thrifty one, we exercised some consideration of the modern family lifestyle and the occasional consumption of prepared foods.

We used the June 2013 estimate, following the USDA practice by which the June costs of each year are used to represent the annual average.[7]

Housing and Utilities

The U.S. Department of Housing and Urban Development (HUD) Fair Market Rent (FMR) survey is the most widely accepted standard for the cost of basic needs housing.[8] According to HUD guidelines, the FMR is the amount needed to rent privately owned, decent, safe, and sanitary rental housing of a modest (non-luxury) nature with suitable amenities. FMRs are figured at the 40th percentile of rent. That is, 40 percent of units rent for less than this amount, 60 percent for more. This cost includes utilities paid by the tenant, including electricity, natural gas, home heating oil, water and sewer, and trash removal, but it does not include telephone service, which we calculated from the Consumer Expenditure Survey and include in a separate budget line item.

Budget estimates are adjusted for differences in family size. We assume a studio apartment for a single person, a one-bedroom apartment for a couple, two bedrooms for a family with one child, three for a family with two children, and four for a larger family.

The survey provides fair market rents for each county. We used the data for fiscal year 2013-14. The statewide average is an average of the rents across 99 counties, with each county weighted by 2012 population.

Health Care

Health care costs include both the family share of insurance premiums and out-of-pocket expenses. We do not construct a budget for a family that is uninsured; health insurance is considered a basic need that should be part of every budget. For those families that receive health insurance through their employers, insurance premium costs are equal to the employee contribution. For those families that do not receive health care benefits through work, insurance must be purchased on the individual market.

The budget for a family that includes a wage earner with insurance through work is very different from the budget for a family that must purchase insurance on the private market, and from one receiving public insurance (Medicaid or SCHIP). About 60 percent of Iowans with incomes around our household basic needs level (i.e., with incomes between 1.5 and 2.5 times the poverty level) had employer-sponsored insurance (ESI) in the 2008-2010 period. The other 40 percent were either uninsured, purchased insurance privately, or were covered by Medicaid and/or HAWK-I.

In previous editions, we constructed only one basic needs budget for a given family type, and the health care component was a weighted average of the typical employee contribution for ESI and the typical private market policy premium, plus out-of-pocket costs. (If they were eligible for public insurance, the public insurance benefits were factored into the calculation of net resources.) In this edition, we construct two budgets for each family type, one assuming the availability of ESI, the second a budget assuming purchase of insurance on the private market.

Families with ESI

The employee share of premiums for ESI was based on data from the 2012 Medical Expenditures Panel Survey (MEPS).[9] The published survey results include data for Iowa showing the average employee contribution for single employee coverage, for employee-plus-one coverage (employee and spouse or child), and for family coverage, as well as the total premium for such coverage. An adjustment was made to bring rates up to 2013 based on the increase in the Consumer Price Index (CPI) for health insurance premiums between 2012 and 2013, which was 4 percent.

For the family with ESI, that is the end of the story, as far as health costs are concerned. They are not eligible for Medicaid or SCHIP. We also assume that the employer policy meets the standards of the Affordable Care Act (ACA) so that the family is not eligible for premium subsidies or cost-sharing under that act.

Families without ESI

For insurance purchased on the private market, we obtained the premiums for the least-expensive silver plan – CoOportunity Choice UI Health Alliance Silver – offered by CoOportunity Health, which offers insurance, both through the federal exchange and directly from the company, in all 99 counties in Iowa. The premiums are the same either way. The silver plan is the lowest level plan that qualifies for cost-sharing as well as premium subsidies under the Affordable Care Act. The premiums were obtained from the CoOportunity web site in December 2013 and January 2014, for coverage beginning in January or February 2014. We obtained rates for all of the family types in our study. We assumed adults were 30 or 35 years of age (depending on the ages of the children) and non-smokers; for single persons, the rates for males and females were averaged; for single parent families, the parent was female.

Estimates of the out-of-pocket costs were based on actuarial assumptions. A Silver plan is designed to cover, actuarially on average, 70 percent of health care costs. The remaining 30 percent are paid by the patient through co-pays, co-insurance, deductibles, and non-covered services. We also know that ACA requires employers to pay out in benefits at least 80 percent of the premiums they receive. We assume that insurance companies will hit this target. Therefore, if plan benefits are 80 percent of premiums, and plan benefits are also 70 percent of total health costs, then total health costs are 1.143 times premiums (again actuarially on average).[10] We then use this estimate of total health costs based on the silver plan premium paid for that family type in each county, to estimate total out-of-pocket costs, which is simply the premium paid plus the 30 percent of total health costs not covered.

Transportation

As public transportation is available only in Iowa's metropolitan areas, and even there is used by a minority of commuters, our transportation figures are derived from the basic costs of owning and operating a car. We assumed two cars for a household with two adults who work, one car otherwise.

For both state and county-level transportation figures, we used 2009-2011 ACS data on commuting times for each Public Use Microdata Area (PUMA) in Iowa. We multiplied that figure by the average speed of commute, which varies by the population density in each PUMA.[11] That produces an estimate of commute miles, which is converted to annual commute miles, using a work year of 50 weeks and a work week of 5 days. We doubled that figure to reflect non-commute miles in accordance with data showing commuting mileage to be about half of total miles driven on average,[12] and multiplied that last figure by the IRS business travel allowance for 2013 (56.5 cents). The travel allowance accounts for the total cost of owning and operating a car. For households with more than one working adult, we added commute miles for each additional adult, but not non-commute miles.

Child Care

The Iowa Child Care Resource and Referral (CCRR) system consists of five regional offices that maintain extensive, county-by-county data on child care providers drawn from a survey of all child care centers and all in-home child care facilities in the state. Home care by relatives is not included. Each report must specify the rates charged, whether full- or part-time, and the number as well as the ages of all clients served. From these reports, the regional CCRR office then compiles a series of average child care rates for each county in its region. The CCRR data provides separate rates by the child's age.[13]

For families with one or two children under six years old, we defined a one-child family as including a toddler of two years, and a two-child family as including a toddler of two years and a child of four years. Since daycare facilities often charge on a monthly basis, we calculated the weekly rates for full 52 weeks. We used the average tuition charged by registered in-home facilities, as it was cheaper than the tuition charged by licensed child care centers. For the four-year-old preschoolers, we deducted the state's ten weekly hours of paid preschool tuition. Children age 6 to 18 were assumed to require child care during the summer months and to be enrolled in a before-after school program during the school year. It should be noted that all the two-parent families reported in the tables in this report were assumed to have one child under 6 and one age 6 to 18. (Additional family types were constructed and were used in estimating the proportions of the population with income below basic needs.)

In all two-parent families with only one full-time worker, we assumed that the non-working parent provides all child care services. The same calculations were performed for the statewide analysis as well as for the county-level analysis. We used the latest data, which was from the July 2013 reports for each county and for the state as a whole.

Clothing and Household Expenses

This category includes telephone, clothing, home furnishings & appliances, housekeeping supplies, personal care products and services, and "other household expenses," which includes repairs and other services. Data are from the Consumer Expenditure Survey (CEX) for 2011-12, tables showing expenses by income class and household size, adjusted for the Midwest region (because spending on these categories was only about 90.7 percent of the national level) and for age of the household head (because spending for households in the 25 to 44 age group was 5.3 percent higher than for households of all ages). For personal care products and services, and for other household expenses, we included only 50 percent of the amount reported on the CEX to make sure that we were including only necessities.

We estimated, for each household type, the amount spent on these categories by the average household with income of 1.5 times the federal poverty threshold. While the income level required to achieve the basic family budgets ends up being around twice the poverty level, we adjusted spending down to the level achieved by the average household that was just 50 percent above the poverty level to ensure that no unnecessary expenditures are included. Entertainment, alcohol and tobacco, education, reading materials and personal insurance were all left out completely, in accordance with our basic-needs approach. The 2011-12 figures were inflated to 2013 using the increase in the CPI in these five expenditure categories, which was just 0.2 percent.

Taxes and Tax Credits

There are two kinds of taxes: those imposed on things that we buy or own – property and sales taxes — and those that depend on our income — federal payroll taxes (Social Security and Medicare) and federal and state income taxes. Property and sales taxes in this report are treated as part of the basic family budget because the amount of housing required determines the value on which property taxes must be paid, and the amount one needs to spend on taxable items determines the sales tax one will pay. Property taxes are paid out of rental income and therefore are included in the cost of housing in our family budgets; similarly, expenditures for goods and services include any sales tax on those items. The basic family budget thus reflects total needs and is the same for a family of a given composition in a given part of the state regardless of that family's income.

We then compare the cost of living with after-tax income. We work backwards to determine the before-tax wage and salary income required to leave a family with net income after taxes just sufficient to cover the basic family budget. The taxes included are the employee portion of payroll taxes (Social Security and Medicare) and federal and state income taxes, including local school district surtaxes (based on weighted average rates for the school districts in each county or region). Taxes were calculated based on 2013 tax law — that is, the rules for 2013 income tax returns filed in 2014.

We assume that the family receives only wage and salary income; this is a reasonable assumption for families in the income ranges we are considering, where non-work income (rent, interest, dividends, capital gains) accounts for a very small share of total income. We also assume that the families rent rather than own a home, which means that the standard deduction will be more beneficial than itemizing (since the taxpayer will have neither property taxes nor mortgage interest to deduct, while charitable donations, state income taxes and other deductions are unlikely to exceed the allowed standard deduction). In the income range we are considering, the majority of families do in fact use the standard deduction.

The tax calculation also includes several very important tax credits. For Federal taxes, these are (1) the child and dependent care credit, for a portion of day care costs (non-refundable), (2) the child tax credit (non-refundable), (3) the Earned Income Tax Credit, or EITC (refundable), and (4) the additional child tax credit (refundable). For state taxes, the credits are the child and dependent care credit and the state EITC, both refundable, as well as the new Iowa Taxpayers Trust Fund Tax Credit. The state return includes the personal exemption credits, the deduction for federal taxes, and the deduction for health insurance premiums. The tax calculations were made by creating a spreadsheet version of federal and state tax returns, with accompanying schedules.

Weighting Methodology: Converting County Level Data to Metropolitan, Regional and Statewide Averages

To construct a budget for a multi-county region, a weighted average was constructed from the component county data, with the county level data weighted by each county's share of the total population of the region. The same process was used to calculate the statewide values using the data from all 99 counties, with the exception of child care, where the state average cost from Iowa Child Care Resource and Referral was used. Since there was no data available below the state level for food costs or the costs of clothing, telephone and other household expenses, these two expense categories are identical throughout the state.