



**LIVING WAGE FOR US, Inc.**

# Principled, accurate, and defensible living wage estimates in the U.S.

## Methodology

The following is a guide to how Living Wage For Us is producing accurate and transparent estimates of costs of living across the U.S.A. for use as living wage benchmarks. We align with the global consensus on what is important in estimating a living wage as described by the International Labor Organization (ILO), inclusive of the definition of living wage created by the ILO.

## Methodology

### Geography

County by County and  
Aggregated for Lowest Cost  
from Counties Supporting  
at Least 2% of Commuting  
Zone Population



#### Challenge:

County by County estimates don't account for where low-wage workers (impacted by living wage efforts) live, but rather where they work. If work is located in a very high cost county, it is common for low-wage workers to live in a less expensive neighboring county. Thus a living wage for a larger area must be taken from where workers actually live.

#### Solution:

Since USDA Economic Research Service commuting zones track where workers live within a given work area, the data on least expensive counties within a commuting zone can be used as a proxy for the area where lower wage workers live. In this way, estimates are completed county by county within a commuting zone around a work site to estimate the proper county to use for the living wage applied for the entire commuting zone.

Within a commuting zone we choose the lowest cost county to be representative of the most affordable location for workers to live within a commuting area to work. Where the lowest cost county is so rural that it cannot support 2% of the population of the total commuting zone, we exclude it as representative and move to the next lowest cost county. In this way, estimates of living wage are conservative, but ensure a decent living within areas where workers already commute. They also clarify that our certification rates should present a floor rather than a ceiling, and that expenses could be even higher in the area where a workplace is located.



LIVING WAGE FOR US, Inc.

# For US Methodology

Estimated by Living Wage For Us

## Family Size

Family Size Set at 4 People –  
2 Adults, 2 Children



### Challenge:

Family size is communicated in many ways as it takes a variety of forms. What is essential is that our family size account for a typical situation and not perpetuate poverty, a state that often limits workers in their family planning choices.

### Solution:

LW4US adopts a 4 person family makeup. This corresponds with the average number of people in a family household with their own children, which is stated as 4.00 by the U.S. Census Bureau. If other family types without their own children are included, the average family size is 3.15 according to the U.S. Census Bureau. Since we are assuming 2 adults per family, and thus the potential of more workers to cover the cost of a decent living for the family, we have aligned with the widely accepted principle of the Anker Methodology for calculating living wages, which recommends using a family size of 4 as the minimum. If we chose to use the figure of 3.15 for the number of family members, we would also need to drop the assumption that there are two adults per family available to contribute wages to our model family. In this case, our living wage estimates would increase considerably, despite the smaller family composition. This is because the impact of fewer people in the family is not as strong (due to economies of scale on aspects like rent that remain the same despite losing 1 child) as the impact of having fewer workers counted per family. This would more accurately represent the situation faced by single parents, for example. But our choice was to align with the model widely accepted globally and presented by the Anker Methodology.

## Workers Per Family

1.75 workers per family  
estimated, following Anker  
Methodology for establishing  
workers per family



### Challenge:

The number of workers per family is not a simple statistic. It requires certain assumptions to accurately estimate for our model family. Such as that at least one worker is employed full-time since we are addressing the needs of working families rather than situations where neither parent is employed.

### Solution:

We assume one full-time worker, and assess the likelihood of a second worker in the family to establish our number of workers per family.

#### U.S. Labor Force Participation Rate:

Average adult LFPR  $\times$  (1 – unemployment rate)  $\times$  (1 – [part-time employment rate $\div$ 2]) = 75

#### U.S. Labor Force Participation Rate (LFPR), Unemployment Rate, and Part-time Employment Rate:

U.S. LFPR for ages 25-54 in January 2025 were 83.5%. Unemployment rate was 3.3%. Part-time employment rate of 12.14%. (BLS)

#### Number of Full-time workers per family:

Number of full-time equivalent workers per family = 1+ proportion of full-time work per working age adult calculated in equation 1 = 1.75

# For US Methodology

Aspects Calculated Independently by the Economic Policy Institute (EPI)

## Food

USDA Low-Cost Diet (nutritionally sound and adjusted regionally), further adjusted for county cost variations.



### Challenge:

Food costs should cover a nutritious diet at a relatively low cost. Costs should also be location specific. But often available data for the cost of this diet doesn't vary beyond region. As such, a second data set must be brought in to accurately estimate food prices at a county by county level.

### EPI's Approach:

"Data for food costs are taken from Official USDA Food Plans: Cost of Food at Home at Four Levels, a report published by the Department of Agriculture's Center for Nutrition Policy and Promotion (USDA 2024). Presented there are the official USDA costs for four types of food plans that serve as national standards for nutritious diets: the "Thrifty Plan," "Low-Cost Plan," "Moderate-Cost Plan," and "Liberal Food Plan." We use the USDA Low-Cost Plan, which assumes that almost all food is bought at a grocery store and then prepared at home. We use June 2024 data, which represents the 2024 average weekly cost (Carlson, Lino, and Fungwe 2007). We provide county-level food costs by adjusting the national cost estimates from the USDA for county-level food cost variance using a multiplier generated from 2023 data from Feeding America's Map the Meal Gap project (Feeding America 2023).

Family food costs are constructed from data for the categories child age 4–5 and child age 6–8 and from averages of male and female data at age 12–13, age 14–18, and age 19–50.

Food cost = [(average [female age 19–50, male age 19–50]) \times 1.05] + [child age 4–5 \times 1.05] + [child age 6–8 \times 1.05]

As the USDA notes, the USDA food plans represent a nutritious diet at four different cost levels. The nutritional foundation of the plans is based on the 1997–2005 Dietary Reference Intakes, 2005 Dietary Guidelines for Americans, and 2005 MyPyramid food intake recommendations. In addition to cost, plans vary in terms of the specific foods and quantities of certain foods that make up the "market baskets" (week's worth of groceries, based on age and gender) in each plan (USDA 2024). According to the USDA, all four food plans are "based on 2001–2002 data and updated to current dollars by using the Consumer Price Index for specific food items" (USDA 2024).

For all U.S. counties and county equivalents, Feeding America's Map the Meal Gap 2023 report provides average cost estimates for a meal consumed by a 19-to-50-year-old male under the USDA's Thrifty Food Plan. These county-level meal cost estimates are derived from data provided by Nielsen PLC that measures the costs of Universal Product Code (UPC) barcoded food items in over 65,000 stores across the country. We generate county-level multipliers to gauge the relative cost of food per county by dividing county-level meal costs by average meal costs. These multipliers are then applied to the USDA estimates of average meal costs to generate food costs that are more reflective of local food price variation." - Economic Policy Institute

This value was independently calculated for our initiative by the Economic Policy Institute using their existing methodology detailed at <https://www.epi.org/publication/family-budget-calculator-documentation/>

# For US Methodology

Aspects Calculated Independently by the Economic Policy Institute (EPI)

## Housing

HUD Fair Market Rents for Decent Housing and Including Proper Number of Rooms for a Family + Utilities (locally accurate with new HUD data)



### Challenge:

Housing cost estimates should be local in nature and cover decent housing that has the proper space for a family of four.

### EPI's Approach:

"Data for rental costs come from the U.S. Department of Housing and Urban Development's fiscal year 2024 fair market rents (FMRs) (HUD 2024). HUD releases estimated fair market rents (FMRs) for every fiscal year to establish cost information for certain federal housing assistance programs. For example, FMRs are used to determine landlord reimbursements for accepting rental housing vouchers in over 600 FMR areas, and thus help ensure a sufficient supply of housing for these programs. HUD calculates FMRs for each FMR area using five-year data from the American Community Survey (ACS) and relies on the Office of Management and Budget for definitions of metropolitan areas. All counties that are not in FMR areas are classified as nonmetro counties. Because FMRs within metro areas are calculated at the metropolitan level, counties within the same metro area all have the same FMRs, and nonmetro counties each have their own FMRs.

Fair market rent estimates are provided at the 40th percentile of rental costs—the dollar amount below which 40% of standard-quality rental units are rented.

For each county that crosses into multiple FMR/metro areas, weighted FMR averages are calculated based on the share of the population living in each metro area located in the county's borders.

Finally, since FMRs within metro areas are provided at the metropolitan level only, counties within the same metro area all have the same FMR value. We adjust these numbers to create county-level variation using county-level ACS median gross rent data (Census ACS 2024). We create a metro-level population-weighted average rent, and then apply the ratio of ACS metro rent to ACS county-within-metro rent to each county FMR that is calculated at the metro level.

HUD makes rental rates available for studio apartments and one-bedroom through four-bedroom apartments. The EPI family budgets assume that ... Families with one or two children occupy a two-bedroom unit. Rental costs include shelter plus all tenant-paid utilities, excluding telephone service, cable or satellite service, and Internet service. Those costs are included in "other necessities" within the family budgets." - Economic Policy Institute

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# For US Methodology

Aspects Calculated Independently by the Economic Policy Institute (EPI)

## Childcare

DOL NDCP data and Child Care Aware of America data (State adjusted child care costs without subsidies)



### Challenge:

The U.S. context is one in which childcare is essential for workers to have the availability to work. Women would be disproportionately impacted if childcare costs were not included in the US context. Also, since we assume more than one worker per family, we must account for the cost of childcare to enable participation of both adults in a family in the workforce .

### EPI's Approach:

"For the 2025 update of the Family Budget Calculator, we use three data sources to estimate child care costs in all counties. The majority of the child care data comes from the National Database of Childcare Prices (NDCP) which is an initiative of the Women's Bureau at the Department of Labor (DOL Women's Bureau 2025). However the NDCP does not provide data for some states so we supplement with data from Child Care Aware of America's (CCAoA), Child Care Data Center (CCAoA 2022), and CCAoA's annual "price of care" reports (CCAoA 2023).

#### DOL

The NDCP provides data on the cost of child care at the county level for nearly all states in the US (excluding New Mexico, Indiana, and the majority of counties in Alaska and Missouri). This data is collected from state Market Rate Surveys over a 14-year time period (2008-2022), and updated to 2024 dollars using the consumer price index (CPI) for day care and preschool for all urban consumers (BLS 2025b, DOL Women's Bureau 2020).

#### CCAoA

For the states and counties not covered by the NDCP, we use data from two sources from CCAoA. We turn first to CCAoA's Child Care Data Center, which provides county level data for six states, including Missouri (CCAoA 2022). We take the county level data where it exists from CCDC but not for NDCP, and adjust to 2024 dollars using the CPI for child care and nursery school for all urban consumers (BLS 2025b).

For the remaining missing counties and states not available in either data source we use the CCAoA "price of care" reports, which report data at the state level for all 50 states and DC. Since there is some variation in quality and recency in certain states, we calculate the average reported state level costs from all of the "price of care reports from 2014 to 2023. To adjust child care costs to the county level, we create a ratio of the county-level costs of rent for two-, three-, and four-bedroom apartments to the population-weighted state average of the same costs. We then adjust 50 percent of the child care costs using this ratio to estimate the variation in child care costs by county. We find this method to be theoretically sound because rental costs are a significant portion of the cost of running a child care operation (whether center-based or home-based), and variations in rents are also a reasonable proxy for variations in costs of living in general and therefore of wage differences within the state. If a metro area is in multiple states, we use a metro area population-weighted average of the counties within the metro area to come up with a single number for the metro area. All costs are inflated to 2024 dollars using the consumer price index (CPI) for child care and nursery school for all urban consumers (BLS 2025b)."- Economic Policy Institute

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# For US Methodology

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### EPI's Approach Cont'd:

#### "Center-based care

We use cost estimates for center-based child care for counties that are within metro areas. We use center-based care estimates because center-based care is more regulated than family care and because the costs of center-based care do not fluctuate as much as the costs of family child care.

#### Family child care

Family child care (also sometimes called "home-based care") is defined by CCAoA as "child care offered in a caregiver's own home"; family child care providers "may be licensed or exempt from licensing," "depending on the state's licensing regulations" (CCAoA 2020).

We use cost estimates for family child care for the nonmetro counties, operating under the assumption that family child care is more accessible than center-based care for those located in rural areas."

#### "Four-year-old care

Four-year-old care is full-time, year-round care. To approximate the costs of care in metro areas and nonmetro areas, we use center-based and family child care estimates, respectively, for all 4-year-olds.

#### School-age child care

In our calculations, we assume that school-age child care for an 8-year-old includes nine months of before- and after-school care and two months of full-time summer care. We assume that school-age child care for a 12-year-old includes only the two months of full-time summer care. For the 16-year-old, we assume child care is not necessary.

The State Child Care Resource and Referral Network survey for school-age care specifically represents the cost of nine months of before- and after-school care; it does not represent full-time care, nor does it include weekend care or full-day summer care. Both the full-time and part-time summer care data in the CCAoA "price of care" data contain many missing values. In order to include summer care costs in the "school-age child care costs" that we use for the 8-year-old child, we impute our own summer care costs by assuming that the cost of full-time summer care for a month is twice the cost of before- and after-school care for one month, and we assume 8-year-olds need two months of full-day summer care. To the extent that parents need their children to be in care for additional time in the summer, we are underestimating the total cost of care."- Economic Policy Institute

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# For US Methodology

Aspects Calculated Independently by the Economic Policy Institute (EPI)

## Transportation

Center for Neighborhood Technology (CNT) county level transportation data derived from CNT's Housing and Transportation Affordability Index .



### Challenge:

Transportation data should account for actual experiences by county. This means that in some locations, public transport significantly reduces the need for owning an automobile and overall cost of transportation. This must be included in accurate transportation estimates.

### EPI's Approach:

We use data provided by the Center for Neighborhood Technology (CNT) and derived from CNT's Housing and Transportation Affordability Index (CNT 2023). Transportation costs in the H+T index are estimated by adding up three major components of transportation costs: auto ownership, auto use, and transit use. These components were estimated by CNT using data from the Consumer Expenditure Survey, the 2019 National Transit Database, CNT's AllTransit database, and the Illinois Department of Natural Resources (CNT 2023).

In the data provided to EPI, CNT modified these costs to account for the different family sizes in the Family Budget Calculator, as well as to account for assumptions made about trip purpose. Adults in all family types are assumed to be working and, for the purposes of CNT's cost model, are assumed to be commuters. At our request, CNT adjusted the miles traveled component of their equation to only include work and nonsocial trips for the first adult in a household, and only work trips for the second adult (in two-adult households). Using national data from the 2022 National Highway Transportation Survey, this comes to 75% of average total vehicle miles traveled for the first adult, and 42% of average total vehicle miles traveled for the second adult, if applicable.

This 2025 update inflates the transportation data to 2024 dollars using the regional transportation CPI (BLS 2025c).

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# For US Methodology

Aspects Calculated Independently by the Economic Policy Institute (EPI)

## Healthcare

We calculate out-of-pocket costs using three-year averages from the restricted-use geocoded version of the MEPS "Household Component."



### Challenge:

Out of Pocket Healthcare Costs are variable across insured and uninsured populations. Since we include the cost of health insurance in our living wage estimations, we approach out of pocket health care costs by looking at the typical costs among those with health insurance.

## EPI's Approach to Out of Pocket Healthcare Costs:

### "Out-of-pocket costs"

The method for calculating out-of-pocket costs for the current Family Budget Calculator follows the 2018 methodology and both differ slightly from the prior editions of the calculator because those relied on data from HHS's Medical Expenditure Panel Survey (MEPS), specifically the geocoded restricted-use MEPS files, which are not publicly available after the 2012 data year file. For the current Family Budget Calculator, we calculate out-of-pocket costs using three-year averages from the restricted-use geocoded version of the MEPS "Household Component (Full year Consolidated Files)" for 2019, 2020 and 2021, adjusted to 2021 dollars (U.S. Dept. HHS 2021). The new data were provided by request, according to the specifications listed below, by the Agency for Healthcare Research and Quality onsite data center (AHRQ 2023).

We assume that everyone has private health insurance (defined by the variable PRIV12 in the public-use files). Out-of-pocket medical expenditures are calculated for adults and children separately by region and are differentiated between MSAs and non-MSAs for those covered by private insurance (U.S. Dept. HHS 2021). Costs are estimated as follows:

We use the regional breakdown of costs for both adults and children (with the regions defined as Northeast, Midwest, South, and West).

The data are further divided within each region into MSA data and non-MSA data. For out-of-pocket costs, we use metro area data for counties in metro areas and we use nonmetro data for nonmetro counties (see the above section titled "Definition of areas" for more detail on the distinction).

We classify a child (regardless of family size) as age 17 and under, and an adult as age 18–64 (using the variable AGE12X). We do not break down data for children into smaller age groups or by gender because the resulting sample sizes are too small.

Adult out-of-pocket costs are the average costs (variable TOTSLF12) for adults ages 18–64 with private insurance in the region where the family resides (Northeast, Midwest, South, or West) and for the metropolitan classification of their location within that region.

Child out-of-pocket costs are the mean costs for children ages 0–17 with private insurance for the region and for the metropolitan classification within that region.

We compute total out-of-pocket costs (OOP) in the following way:

$$[(\text{number of adults}) \times (\text{adult OOP})] + [(\text{number of children}) \times (\text{child OOP})]$$

The total out-of-pocket costs are adjusted for inflation to 2024 dollars using the regional breakdowns of the Consumer Price Index-All Urban Consumers for Medical Care (CPI-U-MC) from the Bureau of Labor Statistics (BLS 2025d).

When computing the mean, we use a population weight (variable PERWT12F)." - Economic Policy Institute

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# For US Methodology

Adjustments Made by LW4US

## Healthcare

Data pulled on cost of silver level plan through the Kaiser Family Foundation (medical coverage only), and inclusive of estimated subsidies for a family earning a living wage in each county. BLS data on out of pocket expenditures regionally are then added.



### Challenge:

Due to the complex nature of the U.S. healthcare system, health insurance becomes an element of healthcare cost that must be carefully analyzed. The cost of healthcare on the open market varies based on income. As such, this value must be run with tax calculations over and over until the accurate living wage and tax implications are assessed so that potential government subsidies for healthcare can also maintain accuracy.

### EPI's Approach to Healthcare Premium Costs:

"Premium costs are obtained through the Henry J. Kaiser Family Foundation's 2024 Health Insurance Marketplace Calculator (KFF 2024), compiled from the U.S. Department of Health and Human Services (U.S. Dept. HHS 2024). Premiums are based on the lowest-cost bronze plan in the rating area, adjusted for family size, age of user, and tobacco surcharge (KFF 2024). The family budgets assume all adults are 40-year-old nonsmokers."

"EPI's family budgets do not take into consideration the two types of health insurance subsidies available through the state and federal health insurance exchanges: the premium tax credit and the cost-sharing subsidy. Therefore, the health care budget may be overestimated for some families." - Economic Policy Institute

### LW4US Adjustments to Healthcare Premium Costs:

Since we need to understand the actual market cost of health insurance premiums for those families with a living wage level of income, we have to take into account the available subsidies for purchasing health insurance on the open market via the ACA marketplace. To do this, we use the same data sources as EPI, but we run custom designed software that pulls data directly from the Henry J. Kaiser Family Foundation's 2024 Health Insurance Marketplace Calculator (KFF 2024) component that accounts for available subsidies at different income levels and for different family types. We first estimate the gross living wage using all of our calculations and those of our partner EPI as explained in this document. We use EPI's initial health insurance premium estimates according to their methodology without subsidies as a starting point for the gross living wage and combine that with real time tax calculations via Taxsim (explained on page 11 of this document).

We then run our program that adjusts based on data feedback until our estimated costs and gross living wage figures are accurately aligned with actual tax and premium insurance costs. We assume 2 adults, 48 and 42 years of age, and 2 children, 8 and 4 years of age, by county for ACA plan estimates. Employer provided health insurance plans may then be credited toward the living wage according to the amount they reduce the workers' payment of premiums.

# For US Methodology

Aspects Calculated Independently by the Economic Policy Institute (EPI)  
and adjustments made by LW4US

## Miscellaneous

Using BLS household expenditure data, we slightly adapt the Anker Methodology by using a ratio of other costs to food and housing rather than just food.



### Challenge:

Calculating each cost in a basket for miscellaneous would require a large number of value judgements regarding how much is decent for a worker to have for each category. As such, we adhere to the Anker Methodology formula for calculating this category which relies on typical expenditures for all other items among American families in a living wage earning range. This formula is as follows:

"NFNH (other) = (NFNH (other)/Food ratio from secondary data × living wage model diet cost)"

## EPI's Approach to Miscellaneous Costs:

"Our calculation of "other necessities" is derived from Bureau of Labor Statistics (BLS) Consumer Expenditure Survey (CEX) data (BLS 2024a). We define "other necessities" as items that do not fall into the aforementioned categories but that are necessary for a modest yet adequate standard of living. We include the following expenditures from the CEX in our "other necessities" calculation: apparel, personal care, household supplies (including furnishings and equipment, household operations, housekeeping supplies, and telephone services), reading materials, and school supplies. In editions of the Family Budget Calculator prior to the 2018 update, we also included the CEX expenditures "entertainment" and "other miscellaneous items" in our total for "other necessities," but for now we leave these two categories out of our calculations so that we can more narrowly assess what is the bare minimum income required to get by.

We use the CEX data for families in the second fifth from the bottom of the overall income distribution (those in the 20th- to 40th-percentile range). Using the 2023 CEX expenditure table "Quintiles of income before taxes," we sum the values of the categories mentioned above to create an "other necessities" aggregate number, and then divide this by CEX food and housing costs. In the 2023 data, we determine this proportion to be 33.6%. Therefore, we estimate the cost of other necessities by applying this percent to each respective family budget's food and housing costs.

We also needed to further subdivide specific categories within the Miscellaneous group in order to assess value of in-kind benefits. Savings, for example, were estimated using the same methodology, but specifically for that category." - Economic Policy Institute

## LW4US Adjustments to Miscellaneous Costs:

Our calculations are identical to those created by EPI in terms of data use, but include additional categories of cost that were excluded from the EPI calculations to align with global best practice. For example, "entertainment" and "other miscellaneous items" are included in our ratio to food + housing. This allows workers to engage in some social participation through a living wage. This increases our ratio from to approximately 38% from EPI's 33.6%.

# For US Methodology

## EPI's Approach to Taxes

### Statutory Deductions from Pay

#### EPI's Approach:

"The family budget components, without taxes, sum to the family's post-tax income. To calculate the family budget tax component, a pre-tax income level must be estimated using a tax rate and the post-tax income.

We use the National Bureau of Economic Research's TAXSIM, a microsimulation model of the U.S. federal and state income tax systems accessed online. We use Version 35 to calculate these tax rates (NBER 2022). The TAXSIM model accepts 32 input variables, including state, marital status, dependent exemptions, wage income, other incomes, rent paid, child care expenses, and capital gains and losses (Feenberg and Coutts 1993). We run the TAXSIM model for each family type across all county and metro areas.

Our input variables are (variables not listed are input as zero):

State

Marital status ("single" for one-adult families, "married" for two-adult families)

Dependent exemptions (one for each child)

Wage and salary income of taxpayer (entire post-tax family budget for one-adult families)

Wage and salary income of spouse (for two-adult families, the post-tax family budget was split evenly between the two adults)

Rent paid (the annual cost of rent for each family budget, which is used to calculate state property tax rebates in certain states)

Child care expenses (the annual cost of child care for each family budget)

Number of dependents under age 17 (one for each child)

The TAXSIM model takes these inputs and calculates three outputs: federal tax liability, state tax liability, and Federal Insurance Contributions Act (FICA) tax liability (for Social Security and Medicare taxes). Additionally, the TAXSIM model calculates FICA liability as the full 15.3 percent tax from both the employer and employee side; we cut this in half to more accurately represent the typical taxpayer's FICA liability. Local taxes, such as county- or city-level income taxes, are not included in this model. Sales taxes are also not included in the "taxes" category (they are instead wrapped into the costs of taxable expenditures in other categories).

Of course, we cannot simply input the post-tax family budgets as the wage incomes and use the TAXSIM output as the tax rates. The tax rate must be based on the pre-tax income levels. To obtain an accurate tax rate and accurately calculate the income tax liability for each family, we first input the post-tax family budgets and obtain the tax rates and establish these as a lower floor for tax rates. (Because the pre-tax incomes will almost always be higher than these post-tax incomes, these tax rates must be lower than the actual tax rate given our assumptions about sources of income and the income ranges we are considering). We then establish an upper bound of tax rates by taking the post-tax family budgets, multiplying by 1.25, and inputting the resulting amounts into the TAXSIM model.

Once we have the lower and upper bounds of tax rates, we calculate an accurate average of these tax rates using a weighting procedure, described below:

Multiply the lower bound (post-tax family budget) and upper bound (post-tax family budget  $\times$  1.25) inputs by  $(1 - \text{calculated tax rate})$

Calculate the difference between the actual post-tax family budget and the lower bound calculated in step 1:  $[\text{post-tax family budget} - \text{lower bound}]$

Calculate the difference between the upper bound and the actual post-tax family budget calculated in step 1:  $[\text{upper bound} - \text{post-tax family budget}]$

Calculate the difference between the upper bound and the lower bound calculated in step 1:  $[\text{upper bound} - \text{lower bound}]$

Calculate the weight for the lower bound:  $\frac{\text{upper-bound post-tax budget difference}}{\text{upper-bound post-tax budget difference} - \text{lower-bound post-tax budget difference}}$

Calculate the weight for the upper bound, which is equal to  $[1 - \text{weight for lower bound (calculated in step 5)}]$

Multiply the lower-bound tax rate from TAXSIM by the lower-bound weight from step 5:  $\text{lower-bound tax rate} \times \frac{\text{upper-bound post-tax budget difference}}{\text{upper-bound post-tax budget difference} - \text{lower-bound post-tax budget difference}}$

Multiply the upper-bound tax rate from TAXSIM by the upper-bound weight from step 6:  $\text{upper-bound tax rate} \times [1 - \text{lower weight (calculated in step 5)}]$

Add these two weights to get the final, weighted tax rate:  $[\text{step 7} + \text{step 8}]$

The final tax rate calculated in step 9 is then applied to the post-tax family incomes  $[\text{post-tax family budget} \times (1 + \text{final weighted tax rate})]$ , to obtain a pre-tax income. The difference between the pre- and post-tax incomes is the annual tax bill for the family budget unit.

In cases where the post-tax budget exceeds the bounds, we increase the budget multiplier by increments of .05 (1.30, 1.35, 1.40, 1.45, 1.50) until the post-tax budget no longer exceeds the upper bound." - Economic Policy Institute

# For US Methodology

LW4US Revised Approach to Taxes from that of EPI and Inclusion of Resiliency

## Statutory Deductions from Pay

Federal, state, and local payroll taxes estimated and included using Taxsim and adding local tax rates.



### Challenge:

A variety of payroll taxes with different rates can have a huge impact on the take home pay available to a worker. Further, an employer who offers tax saving benefits where programs are paid for with pre-tax dollars should be able to understand how that might reduce a workers' tax burden so as to better plan ways to ensure workers can cover all of their costs of living .

### LW4US Approach:

We follow a very similar methodology to that employed by EPI as described on the previous page of this document, with the same data sources included. However, we have a custom designed software that continually runs calculations through Taxsim alongside health insurance premium costs, two categories that are variable based on gross living wage, until we get values that represent the precise cost of health insurance and taxes at a living wage level of income for a family. We do this because we have two variable categories of cost as we assess health insurance with subsidies and thus need to link the dependencies between changes in health insurance costs and tax burdens as they impact gross estimates of a living income for a family. We must account for the impact of other cost categories that we add or adjust from EPI's data to ensure appropriate tax calculations.

Additionally, local income taxes apply in 4,964 taxing jurisdictions across 17 states. EPI does not count these local tax rates in their calculations and thus we add those that are significant to our own living wage estimates. We suggest that some, which are very small, might add too much complexity to include in the calculations. However, those above 2% offer a significant enough impact on income that they should be included in the overall methodology. We use Tax Foundation data on local tax rates. Then run the new expected income with the proxy value for federal and state taxes to the overall income and begin an iterative process using Taxsim to calculate accurate tax liabilities. In this way, we can also estimate the savings available if benefits reduce the taxable income of a worker, and can account for that benefit in how an employer reaches a living wage.

## Resiliency

Adhering to the Anker Methodology we include a 5% margin for unforeseen events.



### Challenge:

Life is not always a series of planned typical expenses. A shock, such as a funeral, or our recent covid crisis causing a loss in income can be disastrous for low wage families. As such, some buffer for unexpected circumstances must be included in a living wage.

EPI does not currently include any margin for resiliency in their family budget calculator. As such, and to conform with global best practice, we add this category as part of an adjustment to values provided by EPI.