

TECHNICAL NOTES AND RESOURCES



The Northwest Job Gap Study involves a comparison of the number of job seekers to the number of job openings at or above a living wage level. This section defines key terms such as living wage, job seekers, and job openings; describes the data methodology used; and lists resources.

DEFINITIONS OF KEY TERMS

Key terms used in the job gap study include:

- Family budgets and living wages
- Job seekers
- Job openings

FAMILY BUDGETS AND LIVING WAGES

A living wage is a wage that allows families to meet their basic needs without resorting to public assistance, and provides them some ability to deal with emergencies and plan ahead. It is not a poverty wage.

Family budgets have been developed for several different household types, and these budgets have been converted into a living wage assuming that the wage earner works full time year round. The budgets include basic necessities such as food, housing and utilities, transportation, health care, child care (when necessary), clothing, and other personal items. In addition, applicable local, state, and federal taxes are included. Finally, a savings component is included to help cover emergencies and future expenses such as postsecondary education for a child, or the retirement of the wage earner. In each category, care was taken that the budgets not reflect a poverty-level wage, but neither are they designed to provide a luxurious standard of living. For example, a household with a single adult and two children is assumed to occupy a two bedroom apartment but would only be able to afford 40 percent of all units in the area. Details on each budget item are provided later in this section.

Household types were selected to reflect the range of budget requirements for five household types:

- Single adult
- Single adult with one child between the ages of 6 and 8
- Single adult with two children, one between the ages of 6 and 8 and the other between the ages of 1 and 2
- Two adults including one wage earner, with two children, one between the ages of 6 and 8 and the other between the ages of 1 and 2
- Two adults, both wage earners, with two children, one between the ages of 6 and 8 and the other between the ages of 1 and 2

No one household type included in the analysis represents a large percentage of the

population. Rather, the household types provide a representative picture of the wide range of income needs that families experience. This range falls between the requirements for a single adult living alone, and a household with two children and one or two working adults. Between 40 and 50 percent of the households in the four Northwest states will see themselves reflected in one of these budgets. Virtually all of the remainder should be able to approximate a livable wage budget for themselves with some simple arithmetic.

In the job gap calculations, statewide average budgets are used. However, in every state, some areas have relatively higher living costs than others. Rural areas tend to have lower housing and child care costs but higher transportation costs. Some rural areas adjacent to urban areas tend to experience many of the cost pressures of bigger cities. In order to judge the adequacy of the statewide average budget levels, budgets were developed for high and low cost areas in each state.

JOB SEEKERS

The most conventional and widely used measure of job seekers is the official count of unemployed persons. This measure is widely reported on a monthly basis for the nation as a whole, for each state, and for many metropolitan areas. However, the number of unemployed persons, and the even more familiar unemployment rate, are incomplete estimates of job seekers.

To be counted as unemployed, a person must not be employed but actively looking for work at the time of a federal survey. There are two additional components of the job seeker number that are regularly estimated but do not receive as much attention as the number of unemployed and the unemployment rate. First, the federal government provides estimates of discouraged and marginally attached workers, those that have looked for work in recent months but were not looking at the time of the survey. The second group are those persons who are working part time on an involuntary basis. Some workers prefer part-time work such as secondary wage earners, students, and retirees. However, there is another group of people working in one or more part-time jobs who would prefer a full-time job, but have not been able to find one. These “involuntary part-time” workers are also included in the job seeker estimates.

JOB OPENINGS

Readers who track the course of the economy are familiar with employment measures. Each month federal and state governments announce counts of employment and changes in employment; these indicators are widely used in assessing the performance of the economy. In the job gap study, a different indicator is added: job openings. Job openings are created by changes in employment from the growth of the economy, and by employers' worker replacement needs due to retirements, deaths, entering school or military service, or moving across state boundaries.

In the job gap study, the particular measure of replacement used is net replacement; net replacement removes those openings created by the movement of individuals from one

position to another in the same occupation. These openings are largely invisible to the average job seeker because many of them are internal promotions.

Data on job openings are available by occupation for approximately 800 occupational categories. Median wage data are also available for these occupations, making it possible to identify which occupations pay living wages and thus what percentage of job openings are living wage jobs.

TECHNICAL DATA CONSIDERATIONS

Gathering and analyzing data for a regional study presents particular analytical challenges. In every phase of the research, data were gathered to facilitate cross-state comparison. Data from federal agencies and state data developed to meet federal requirements form the basis of this report. Where possible, definitions and methods were employed that result in conservative estimates. 1996 was chosen as the analysis year because it is the most recent year for which job openings, occupational wages, and employment figures are available.

This section contains:

- Family budget components
- High and Low cost areas
- Job seekers
- Jobs and job openings
- Wages associated with each occupation

FAMILY LIVING WAGE BUDGETS

A living wage is a wage that provides a household with economic self-sufficiency, allowing it to meet its basic needs without government subsidy. For this study, a modified market basket approach was used. The budgets were developed using the most current data available and then inflation-adjusted to 1996 dollars. Household budgets, upon which living wages are based, include:

- Food,
- Housing and utilities,
- Transportation,
- Health care,
- Child care,
- Household, clothing, and personal,
- Savings, and
- State, local, and federal taxes.





Food costs are derived from the “Low Cost Food Plan” produced by the U.S. Department of Agriculture (USDA). The values are based on food expenditures by the 25th to 50th percentiles of the U.S. population, as determined in the National Household Food Consumption Survey. This plan is 25 to 30 percent higher than the “Thrifty Food Plan” which is used as the basis for food stamp allocations and federal poverty benchmarks. The Thrifty Plan was not used because nutritionists consider it to be nutritionally inadequate on a long-term basis. The Low Cost Plan is based on the assumption that all food is prepared at home.

There are no adjustments for these food plans by state or region. Other reports indicate that the variation in food prices is small enough that geographic adjustments are not necessary. The USDA values are based on research published in 1983 and updated monthly for inflation.



Housing and utilities costs are derived from U.S. Department of Housing and Urban Development (HUD) Fair Market Rents, and information provided by US West.

Fair Market Rent data are provided at a county level. For this study, the data were weighted by county population. This ensures that more populous counties contribute proportionately to the overall estimates. Fair Market Rents are gross rent and utility estimates “that would be needed to rent privately owned, decent, safe, and sanitary rental housing of a modest (non-luxury) nature with suitable amenities.” They include shelter rent plus the cost of all utilities, except telephones. HUD sets Fair Market Rents at the 40th percentile (in other words, 40 percent of the standard quality rental housing units are at or below this cost.) The 40th percentile rent is drawn from the distribution of rents of all units occupied by renter households who moved to their present residence within the past 15 months. Public housing units and units less than two years old are excluded. It is assumed that families with one or two children will rent a two bedroom unit, and that a single adult household will rent a one bedroom unit.

US West provided the cost of basic service for unlimited local calls, with no call waiting, voice messaging, or other extras. The estimate does not include any long distance charges.



Transportation costs are derived using the 1995 U.S. National Personal Transportation Study from the U.S. Department of Transportation, the Consumer Expenditure Survey (CES) of the U.S. Department of Labor, and Internal Revenue Service (IRS) reimbursement rates for automobile travel. Private and public transportation costs are included.

- Private transportation costs are based on the assumption that households own and operate a vehicle. The 1995 U.S. National Personal Transportation Study provides data on the average annual vehicle miles of travel per driver. Values for the “Pacific” region are applied to Oregon and Washington, and “Mountain” region values are used for Idaho and Montana. These mileage totals are adjusted for the number of adults, number of workers, and number of persons in a household.
To determine the total cost of private transportation, the mileage totals are multiplied by the IRS reimbursement rate of \$0.31 per mile which covers insurance, gasoline, repairs, depreciation, and vehicle registration fees. Further adjustments for urban and rural areas are based on CES data.
- Public transportation costs are estimated using CES figures for average expenses on fares for local mass transit and long distance travel by public carriers such as airlines, railroads, and buses. The values are added to the total without adjusting for household composition because data for such adjustments were not available.



HEALTH CARE

Health care expenses are derived using updates from the 1987 National Health Care Expenditure Survey, data from the Families USA Foundation, and the CES. They include both out-of-pocket costs and individual contributions for health insurance coverage. All health care expenses are inflation-adjusted using the medical care component of the Consumer Price Index.

- Out-of-pocket costs are based on current estimates of out-of-pocket expenses for individuals by age and gender, drawn from the 1987 National Health Care Expenditure Survey and updated by the U.S. Department of Health and Human Services Agency for Health Care Policy and Research. These figures are then adjusted to take into account differences by state using data from the Families USA Foundation; and urban and rural areas using data from the CES.
- Insurance costs are based on estimates of average individual and family health insurance premiums, as published by the Agency for Health Care Policy and Research. Because employers consistently pay about 84 percent of premiums, these health insurance premium estimates are multiplied by 16 percent to account for the household’s contribution to their health insurance.



CHILD CARE

Child care expenses are based on the assumption that all single parent households and households with two working parents require child care services. Estimates are derived from market rate surveys conducted by state welfare agencies. Because the federal government and most states subsidize child care for low income families up to the 75th percentile, state level data are readily available and used for these estimates. The total cost is adjusted to reflect the percentage of children using centers versus smaller home based care. School-age children are assumed to attend half-time and toddlers full-time, 12 months a year. In the two parent household, with one parent working, it is assumed that child care is not necessary.



HOUSEHOLD, CLOTHING, AND PERSONAL

Household, clothing, and personal spending estimates are derived from the CES and are calculated as a fixed percentage of total household spending minus child care and taxes. Spending on these items, as a proportion of total income, is consistent across income categories. No detailed expenditures or needs-based estimates are available for these budget categories. A total percentage of 16 percent for this item is used in the household budgets. As defined by the CES:

- Household costs include laundry and cleaning supplies, stationery supplies and postage, household linens (towels, sheets, etc.), sewing materials, furniture, floor coverings, major appliances, miscellaneous housewares (small appliances, plates, etc.), and other items needed to operate and maintain a household. Household costs are estimated at 4 percent.
- Clothing and personal costs include clothing, personal care products, reading materials, and other personal expenses. Clothing and personal costs are estimated at 6 percent.
- Recreation and entertainment costs include fees for participant sports, admissions to sporting events, movies and video rentals, TV/sound equipment, music, pets, toys, and other entertainment expenses. Entertainment costs are estimated at 4 percent.
- Miscellaneous costs include items not covered in the above categories such as school supplies, bank fees, and credit card finance charges. Miscellaneous costs are estimated at 2 percent.



SAVINGS

Savings rates are based on the recommendations of experts. They are set at 10 percent of spending minus childcare and taxes. The American Savings Education Council has developed a formula for estimating the percentage of income that a household should save. When applied to the households in our study, the recommendation is that they should save between 7 and 13 percent of their income for retirement. Using the lower estimate of 7 percent, an additional 3 percent was added to cover emergencies and allow families to plan ahead.



STATE, LOCAL, AND FEDERAL TAXES

Taxes include employment taxes (FICA), federal taxes (including child care credits and the Earned Income Tax Credit), and state and local sales and income taxes, as appropriate. Employment taxes are calculated at 7.65 percent of earned income. Federal taxes assume no itemized deductions, no outside income, and a 15 percent tax rate. Where appropriate, deductions are made for applicable child care and EITC benefits, including the \$400 per child credit set to take effect in 1998. Appropriate state sales tax rates are applied to appropriate categories. State income tax rates, as identified by the Citizens for Tax Justice, are applied to total earned income.

HIGH & LOW COST AREAS

Household budget numbers published in earlier chapters are statewide averages. Household budgets and living wages have also been developed for high and low cost areas. These distinctions are based on county population, proximity to a metropolitan area, and the costs of housing and child care. Where the cost of living in an area is higher, the living wage budgets have been modified to better reflect those costs. Where county specific data were available, budgets were developed using the counties identified below. Otherwise, budget items were modified using percentages determined by the CES for urban and rural areas.

- Idaho's high cost areas are defined as counties with an urban population of more than 100,000 persons and counties with a population of 20,000 or more that are adjacent to a metro area. This includes Ada, Canyon, and Kootenai counties.
- Montana's high cost areas are defined as counties that contain an urban population of 20,000 or more persons. This includes Yellowstone, Missoula, Cascade, Flathead, Gallatin, Lewis and Clark, Silver Bow, and Ravalli counties.
- Oregon's high cost areas are defined as counties with an urban population of more than 100,000 persons or adjacent to a metro area. This includes Multnomah, Washington, Clackamas, Marion, Polk, Yamhill, Benton, Lane, Deschutes, and Jackson counties.
- Washington's high cost areas are defined as counties with an urban population of more than 100,000 persons or adjacent to a metro area. This includes King, Pierce, Snohomish, Spokane, Clark, Kitsap, Yakima, Thurston, Whatcom, Benton, and Franklin counties.

JOB SEEKERS

Data on job seekers come from the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor through the Current Population Survey (CPS). Ideally, the count of job seekers would capture everyone, working or not, who needs a living wage job. Unfortunately, data are not available for all groups and our resulting count is likely an underestimate of the total number of job seekers in 1996. For the purposes of this study, job seekers are defined to include:

- **Unemployed.** The unemployed are those who are not employed, are available for work, and have looked for work within the last four weeks. Specific groups include:
 - Persons who have been laid off or otherwise had their employment end involuntarily (about 50 percent of the total unemployed);
 - Job leavers who have quit their jobs or otherwise terminated their employment voluntarily and immediately begun looking for work (about 12 percent);
 - Re-entrants who have worked previously but were out of the labor market prior to beginning their job search (about 33 percent); and
 - New entrants who have never worked (about five percent).
- **Involuntary Part-time Workers.** Involuntary part-time workers are those who regularly work less than 35 hours a week because of a lack of work from their employers or because they are unable to find a full time job. They are sometimes referred to as the under-employed. In the four Northwest states, about 21 percent of

all employed people work part time. Of these, BLS estimates that about 12 to 15 percent would prefer to work full time. Since these people desire full time work, they are counted as job seekers.

- **Marginally Attached and Discouraged Workers.** Marginally attached and discouraged workers are those who are not working, but are not defined as “unemployed” because they did not look for work in the previous four weeks. They want and are available for work, and have looked for work sometime in the past year. Discouraged workers are not seeking work because they believe there are no jobs available or there are none for which they qualify. Marginally attached workers are not seeking work because of personal or financial reasons such as ill health, family responsibilities, or a lack of child care or transportation. As they have demonstrated a recent interest in working, both groups are counted as job seekers. Because there are relatively few discouraged and marginally attached workers, the number is subject to considerable rounding and sampling errors.

Not included in the definition of job seekers are:

- **Unemployed Due to Temporary Layoff.** Some persons counted among the unemployed are on temporary layoff and have been given a date to return to work or expect to return to work within six months. Since these people expect to be rehired, they are not likely to be among those seeking a new job. Therefore, they have been subtracted from the total unemployed.
- **Unemployed Seeking Part-Time Work.** About 20 to 25 percent of the unemployed seek part-time work for a number of reasons, including continuing education and family or personal obligations. Since they are not interested in a full time job, they are excluded from the count of job seekers.
- **Persons who were both unemployed and involuntary part-time.** CPS estimates that approximately 22 percent of people who were unemployed also worked part-time involuntarily. This double-counting was subtracted from the job seeker count.

JOB SEEKERS, 1996

	<u>ID</u>	<u>MT</u>	<u>OR</u>	<u>WA</u>
Unemployed individuals not on temporary layoff and who are seeking full time work.	32,573	27,144	106,766	211,723
Involuntary part-time workers	16,800	14,560	48,160	107,520
Marginally attached and discouraged workers	4,000	5,000	12,000	38,000
Total Job Seekers	53,373	46,704	166,926	357,243

Since this report examines all seekers and openings during the entire year, BLS’s monthly unemployment averages were converted to annual totals. According to BLS estimates, 16.786 million persons across the U.S. experienced at least one week of unemployment during 1996. The 1996 monthly average unemployment was 7.236 million. This results in a

multiplier of 2.32, or in other words, for every 100 people counted in an average month, there were 232 people unemployed that year. A similar computation yielded a 1.12 multiplier for employment in 1996. These multipliers were applied to average monthly state data to estimate the number of job seekers who were unemployed or under-employed at any time in 1996. No multipliers were developed for discouraged or marginally attached workers.

In spite of these adjustments, the total number of seekers is likely still an underestimate of the actual number of job seekers. The count of job seekers should capture every person, whether or not they are working, who needs a living wage job. However, our estimate understates the number of job seekers in that it does not count those who are working full time at a job paying less than a living wage, but who want a living wage job. It likely overstates the true number in that all the unemployed are counted, even though some may not be looking for a living wage job; also, people who left the labor market and then re-entered the same occupation are counted among the job seekers, whereas those who moved directly from one job to another in the same occupation are not. However, assuming even a fraction of the people working at less than a living wage job for a single adult want a living wage job, the count is, on balance, an underestimate.

JOB OPENINGS

Job openings are estimated annual openings due to growth and net replacement. Openings estimates are produced by each state at least every two years following guidelines developed by the states in cooperation with the Bureau of Labor Statistics and the Employment and Training Administration (ETA).

- **Job openings due to growth.** These are job openings that result from new jobs being created by new or existing firms. Between 40 and 50 percent of all openings are due to growth of the economy.
- **Job openings due to net replacement.** These are job openings that result from people retiring, entering school or the military, moving across state boundaries, changing occupations, or otherwise leaving the occupation in which they currently work.

Job openings data exclude openings due to self-employment or work in an unpaid family business since this research attempts to model the labor market as viewed by an unemployed job seeker. Self-employment opportunities are often seen as more risky than a wage or salary job. Also, wage data for self-employed individuals are not presently available. Openings due to self-employment represent less than 12 percent of all openings and do not appreciably affect the results even if one assumes an identical median wage for those occupations.

Similarly, the analysis also does not include those openings that are due to people who change employers, but remain within the same occupation. This is a large component of what is called “frictional” unemployment or “churning” in the labor market. There are no new net openings for accountants, for example, that result from an accountant who simply moves from one firm to another. Therefore both these job changers and the jobs they occupy have been excluded from the analysis.

BLS has classified occupations into eleven education and training categories. The categories range from “short-term on the job training” to “Ph.D.” required. These categories were applied to the openings to determine which openings are available to people with different educational backgrounds.

WAGES

Data on the wages associated with job openings come primarily from the Occupational Employment Statistics (OES) wage survey of employers conducted by state Employment Security Agencies in cooperation with the BLS and the ETA.

To determine which occupations pay a living wage, the state’s median wage for each occupation was identified. Using a median wage overestimates the number of jobs that meet the living wage criteria. The median means that half the people in the occupation earn less and half earn more than that amount. Since most persons who are new to a job do not start at the median wage, this has the effect of overstating the number of living wage jobs and job openings and underestimating the overall job gap.

When state figures were not available, the national median wage for that occupation was adjusted to reflect prevailing wage rates in that state. Adjustments were made on a statewide basis, using existing state data to estimate the percent difference between state median wages and national median wages.¹ Finally, using the living wage budgets described earlier, occupations were classified as non-living wage or as living wage for each household type. The openings were aggregated to reflect all jobs that pay a living wage for each household. In other words, since the living wage for Household 3 is greater than that for Household 1, if a high wage job pays living wage for Household 3 therefore it is also sufficient to support Household 1.

RESOURCES

DATA SOURCES

American Savings Education Council. See: <http://www.asec.org/toolshm.htm>

Citizens For Tax Justice, Institute on Taxation and Economic Policy, June 1996. “Who Pays? A Distributional Analysis of the Tax Systems in all 50 States.” See: <http://www.ctj.org> Or call 202-626-3780.

Families USA Foundation. Press Release November 22, 1993. 202-628-3030

State Departments of Social, Health, Welfare, Family or Human Services, child care rate specialists

State Departments of Employment Security, Labor, or other Labor Market Information units

United States Bureau of the Census. See: <http://www.census.gov/>

United States Bureau of Labor Statistics. Consumer Expenditure Survey See: <http://stats.bls.gov/csxhome.htm>

Consumer Price Index. See: <http://stats.bls.gov/cpihome.htm>

Local Area Unemployment Stats. See: <http://stats.bls.gov/lauhome.htm> Or call 202-606-6392

Occupational Employment Stats. See: http://stats.bls.gov/oes/oes_data.htm Or call 202-606-6503

United States Department of Agriculture, Center for Nutrition Policy and Promotion. See: <http://www.usda.gov/fcs/cnpp.htm> Or call 202-418-2312

United States Department of Health and Human Services, Agency for Health Care Policy and Research. See: <http://www.meps.ahrp.gov/> Or call 301-594-1406 ext. 1458

United States Department for Housing and Urban Development, Policy Development and Research. See: <http://www.huduser.org/data/factors.html> Or call 202-708-9426, ext. 328

United States Department of Transportation, Center for Transportation Analysis. See: <http://www.cta.ornl.gov/npts/1995/doc/> Or call 202-366-5026

OTHER JOB GAP AND RELATED STUDIES

Are There Enough Jobs for All Those Who Must Work? May 1997. The California Budget Project, 921 11th St., Suite 701, Sacramento CA 95814-2821. Phone 916-444-0500; Fax 914-444-0172.

The Job Gap Study. 1995. JOBS NOW Coalition, 818 Minnesota Building, 46 East 4th St., St. Paul MN, 55101. Phone 612-290-0240; Fax 612-290-0162. <http://www.osjspm.org/jobgap.htm>

Work After Welfare: Is the Midwest's Booming Economy Creating Enough Jobs? 1997. The Midwest Job Gap Project, Office for Social Policy Research, Northern Illinois University, phone 815-753-1309; and the Research and Planning Department, Chicago Urban League, phone 773-451-3590.

Vermont Job Gap Study. 1997. Peace & Justice Center, 21 Church St., Burlington VT 05401. Phone: 802-863-2345 <http://www.igc.org/pjc/>

¹ When state level occupational data was not available, we used a regression to adjust national data to state levels. Using existing state wage data we ran the following regression for each state:

$$\beta \ln(\text{state_MED}) = \beta \ln(\text{US_MED}) + \text{intercept} + \epsilon$$

