Behind the Numbers
Cost of Living

Behind the Numbers takes a look at specific measures or indicators to provide a better understanding of what the data for the indicators mean, how data are used and where you can get them.

What is cost of living?
The amount of money needed to buy certain goods and services. Two types of indices are typically used to compare the price of certain goods and services, including food, housing and transportation, so that costs may be compared among communities or over time.

What does it measure?
The price of goods and services for a specific location or time period.

What does it tell us?
Relative prices in different places or times.

What doesn't it tell us?
The absolute cost of living in the community.

How is the data collected?
Through surveys and shopping for a "basket" of goods and services.

Where can I get it?
To compare cost of living across time, use the Consumer Price Index (CPI) from the U.S. Department of Labor's Bureau of Labor Statistics. To compare cost of living across space, use the Cost of Living Index (COLI) from ACCRA-The Council for Community and Economic Research.

When to use it:
- CPI – To compare the cost of living in a community over time.
- COLI – To compare the cost of living in one community to another community.

Defining Cost of Living

Webster defines cost of living as "the cost of purchasing those goods and services that are included in an accepted standard level of consumption." A cost-of-living index measures changes over time or across space in the amount that consumers need to spend to reach a certain "utility level" or "standard of living."

According to the Bureau of Labor Statistics, a cost-of-living index is a conceptual measurement goal that would not only reflect changes in the prices of goods and services, such as food and clothing that are directly purchased in the marketplace, but would go beyond this to also take into account changes in other governmental or environmental factors that affect consumers' well being. It is very difficult to determine the proper treatment of public goods, such as safety and education, and other broad concerns, such as health, water quality, and crime, which would comprise a complete cost-of-living framework.

There are two commonly used measures of the cost of living in the U.S. The Bureau of Labor Statistics' (BLS) Consumer Price Index, or CPI, is used to measure change in prices over time, while ACCRA – The Council for Community and Economic Research's Cost of Living Index (COLI) is used to look at differences across places. The Center for Rural Pennsylvania has also published a cost-of-living index for use in comparing the counties in this state.

About the CPI

The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. It affects nearly all Americans because of the many ways it is used. It is primarily used as:

- An economic indicator.
- A means of adjusting dollar values for inflation.

The CPI reflects spending patterns for each of two population groups:

- *All Urban Consumers* (CPI-U) represents about 87 percent of the total U.S. population. It is based on the expenditures of urban or metropolitan residents.
- *Urban Wage Earners and Clerical Workers* (CPI-W) is based on the expenditures of a subset of CPI-U households that also meet two requirements: More than one-half of the household's income must come from clerical or wage occupations and at least one of the household's earners must have been employed for at least 37 weeks during the previous 12 months. The CPI-W's population represents about 32 percent of the total U.S. population.

Not included in the CPI are the spending patterns of persons living in rural non-metropolitan areas, farm families, persons in the Armed Forces, and those in institutions, such as prisons and psychiatric hospitals.

The CPI market basket is developed from detailed expenditure information provided by families and individuals on what they actually bought and represents all goods and

An **index** is a tool that simplifies the measurement of differences in a numerical series, with one point in time or space being the reference point with a value of 100. For example then, an index of 110 means this point is 10 percent higher than the reference point; similarly an index of 90 means 10 percent lower.

services purchased for consumption. BLS has classified all expenditure items into the following eight major groups:

1. Food & beverages
2. Housing
3. Apparel
4. Transportation
5. Medical care
6. Recreation
7. Education & communication
8. Other goods & services

• Included within these groups are government-charged user fees (such as water and sewerage charges, auto registration fees, and vehicle tolls) and taxes (such as sales and excise taxes) that are directly associated with the prices of specific goods and services. The CPI excludes taxes (such as income and Social Security taxes) not directly associated with the purchase of consumer goods and services.

• The CPI does not include investment items, such as stocks, bonds, real estate, and life insurance as these items do not relate to day-to-day consumption expenses.

Uses of the CPI

• The CPI is generally the best measure for adjusting payments to consumers when the intent is to allow consumers to purchase, at today's prices, a market basket of goods and services equivalent to one that they could purchase in an earlier period. It is also the best measure to use to translate retail sales and hourly or weekly earnings into real or inflation-free dollars.

• Seasonally adjusted data can show the underlying trend in short-term price change. It is often difficult to tell from unadjusted statistics whether developments between any two months reflect changing economic conditions or only normal seasonal patterns. Unadjusted data are more appropriate to determine wage increases.

• The CPI is published for some local areas, but these figures cannot be used to measure differences in price levels or living costs between one place and another; it measures only time-to-time changes in each place. A higher index for one area does not necessarily mean that prices are higher there than in another area with a lower index. It merely means that prices have risen faster since their common reference period. In addition, BLS strongly urges users to use the national CPI to determine wage increases.

Calculating differences over time using the CPI

To calculate the percent change in cost of living over time, use the following formula: (New - Original)/Original.

Using the table below, we can calculate the percent change in cost of living in the nation from 2004 to 2005 as follows:

(195.3 - 188.9)/188.9 = .034

Inflation was 3.4 percent in that time period.

Limitations

• The CPI cannot measure differences across place, rather only over time in the same place.

• Rural areas are not included - the measure is only for urban consumers.

CPI-U: Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9
2005	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3

About the COLI

ACCRA's Cost of Living Index measures relative price levels for consumer goods and services in participating areas and reflects cost differentials for the standard of living present in a professional and/or managerial household. Each participating area collects its own price data.

ACCRA publishes a Composite (Total) Index and six component indices. The components are:

1. Grocery items
2. Housing
3. Utilities
4. Transportation
5. Health care
6. Miscellaneous goods & services

Calculating differences between areas using the COLI

The average for all participating places in a given quarter equals 100, and each participant's index is read as a percentage of the average for all participating places. (See box below for example.)

Limitations

• The COLI cannot be used for historical comparisons as it does not measure inflation.

• Because the number of items priced is limited, it is not valid to treat percentage differences between areas as exact measures. Small differences should not be construed as significant, or even as indicating correctly which area is the more expensive place to live.

• Due to the multiplicity of state and local taxes, taxing jurisdictions, and assessment procedures, it is not feasible to calculate local tax burdens reliably. For this reason, the COLI measures cost differences in goods and services but does not incorporate taxes.

• Rural places are not included - participation in the index is restricted to areas considered urban, patterned after the federal government's distinction between urban and rural areas.

Example:
City A has a composite index of 98.3 and City B has a composite index of 128.5. If you live in City A and are contemplating a job offer in City B, how much of an increase in your after-tax income is needed to maintain your present lifestyle?

(City B - City A)/City A= .307 = 30.7% Increase

Conversely, if your are considering a move from City B to City A, how much of a cut in after-tax income can you sustain without reducing your lifestyle?

(City A - City B)/City B = -.235 = 23.5% Decrease

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