

## **COUNTY COST OF LIVING ESTIMATES**

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Each month the federal government releases the Consumer Price Index, or CPI. The CPI can be used to measure changes in the average price of a market basket of consumer goods and services. This change is commonly referred to as the "inflation rate" or the "change in the cost of living". In recent years the CPI has shown the inflation rate to be averaging less than 3 percent per year.

However, consumers are also interested in how the average "cost of living" varies within the country. Unfortunately, the federal government doesn't provide CPI data for all localities in the country. Private researchers and academics have had to pick up the ball to estimate localized measures of the cost of living.

Estimates of the cost of living in states have shown considerable variation in these costs. A study of costs in 1990 among the continental states showed a 42 percent cost difference between the highest cost state (Connecticut) and the lowest cost state (Mississippi). In this study, North Carolina was estimated to have a cost of living 3 percent below the average cost of living in the country.<sup>2</sup>

Studies have also been done of the variation in the cost of living within a state. One study found a 60 percent difference between the highest and lowest cost of living counties in Illinois. A study in Pennsylvania found a 38 percent difference between the highest and lowest cost of living county in that state.

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<sup>2</sup>Ibid.

## **A North Carolina Study**

There are no readily available estimates of the cost of living in all North Carolina counties. The purpose of this article is to report on the methods and results of a study which developed such estimates.

The American Chamber of Commerce Researchers Association (ACCRA) does collect and report the prices of commonly purchased consumer goods and services across the country each quarter. However, these data are reported for only 20 communities in North Carolina.

The following procedure was used to estimate county level cost of living indices for North Carolina. First, the quarterly ACCRA price data for the 20 communities in North Carolina was collected for 1991 through 1994. Second, these price data were formed into a cost of living index for each community. Third, the cost of living indices were related to "structural" factors of communities which are thought to determine differences in the local cost of living. Fourth, the results of the statistical analysis in the third step were used to develop cost of living indices for all 100 of North Carolina counties.

The "structural" factors of communities which were found to be most strongly related to the local cost of living were population, population growth, the percentage of local workers in professional and managerial jobs, the local property tax rate, and the average Scholastic Aptitude Test (SAT) score of the local school district.

Greater population and greater population growth increased the local cost of living. A greater percentage of professional and managerial workers decreased the local cost of living, probably because such persons are more knowledgeable shoppers. A higher tax rate decreased, and a higher SAT score increased, the local cost of living. These latter findings are interesting because they indicate that households consider public sector factors in deciding where to live. Everything else equal, higher local tax rates discourage location in the community and thereby put downward pressure on local prices,

especially housing prices. Conversely, higher local public output, as measured by SAT scores, attract households to the community and put upward pressure on local prices.

### **Results**

Table 3 gives the estimated cost of living indices for North Carolina counties, and Figure 1 presents the same information in pictorial form. The indices were estimated for the first quarter of 1993.

The pattern of cost of living differences seems to make intuitive sense. Urban and metropolitan counties, such as Wake and Mecklenburg, tend to have the highest cost of living, and lower costs are found in rural counties like Northampton and Hertford. But there are some surprises. Several far western counties have relatively high costs of living, and metropolitan counties like Guilford and Forsyth aren't in the top cost of living category.

There are several uses for these indices. One use is to measure the difference in the cost of living between two counties. To do this, take the ratio of the higher cost of living to the lower cost of living and express the result as a percentage. For example, the cost of living index for Wake County is 118.176, and the index for Northampton County is 94.585. The ratio is  $118.176/94.585$ , or 1.249. This means the estimated cost of living in Wake County is 24.9 percent higher than the estimated cost of living in Northampton County.

The indices can be used to calculate relative economic prosperity in North Carolina counties. For example, county per capita incomes can be adjusted by the cost of living indices to calculate "real", or "cost of living adjusted" per capita incomes. Also, the wages or salaries of the same job in different counties can be adjusted by the cost of living indices to determine the "real" pay of the job in the counties.

**Table 3. Estimated Cost of Living Indices for North Carolina Counties, 1st Quarter, 1993.**

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Alamance	109.538	Cumberland	111.509
Alexander	108.055	Currituck	111.891
Alleghany	105.598	Dare	112.878
Anson	99.862	Davidson	108.046
Ashe	109.200	Davie	110.008
Avery	106.077	Duplin	104.306
Beaufort	103.650	Durham	104.457
Bertie	101.099	Edgecombe	101.294
Bladen	103.007	Forsyth	107.435
Brunswick	112.148	Franklin	108.111
Buncombe	109.168	Gaston	104.463
Burke	109.207	Gates	105.553
Cabarrus	108.857	Graham	105.604
Caldwell	107.926	Granville	104.282
Camden	102.695	Greene	103.668
Carteret	112.581	Guilford	108.228
Caswell	102.942	Halifax	103.663
Catawba	111.102	Harnett	109.484
Chatham	108.378	Haywood	106.795
Cherokee	110.604	Henderson	113.279
Chowan	105.684	Hertford	96.396
Clay	107.899	Hoke	106.323
Cleveland	107.404	Hyde	101.228
Columbus	103.045	Iredell	111.911
Craven	107.082	Jackson	111.232
		Johnston	109.578

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Jones	103.187	Robeson	102.102
Lee	106.011	Rockingham	105.421
Lenoir	103.474	Rowan	109.074
Lincoln	109.631	Rutherford	106.446
Macon	113.162	Sampson	104.311
Madison	104.058	Scotland	99.745
Martin	101.085	Stanly	106.905
McDowell	105.566	Stokes	110.470
Mecklenburg	114.100	Surry	108.531
Mitchell	107.964	Swain	105.789
Montgomery	102.100	Transylvania	109.534
Moore	110.535	Tyrrell	99.206
Nash	107.443	Union	111.319
New Hanover	111.898	Vance	101.285
Northampton	94.585	Wake	118.176
Onslow	107.776	Warren	103.332
Orange	110.934	Washington	100.348
Pamlico	105.340	Watauga	111.202
Pasquotank	106.562	Wayne	105.628
Pender	109.362	Wilkes	109.453
Perquimans	103.092	Wilson	104.169
Person	107.548	Yadkin	107.549
Pitt	108.402	Yancey	109.635
Polk	109.841		
Randolph	111.647		
Richmond	102.678		

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