

Research Spotlight

Regional Price Parities by Expenditure Class, 2005–2009

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PRICE indexes are commonly used to measure price level differences between time periods; the consumer price index (CPI), published by the Bureau of Labor Statistics (BLS), is among the better known examples of these temporal measures of inflation. Less common are price indexes that measure price level differences between one place and another. These spatial price indexes are less common, in part because the methodology and sampling requirements for the two measures differ in important ways. Fortunately, advances in regional analysis and in the techniques used in estimating period-to-period indexes, such as hedonic regressions, are applicable to the estimation of place-to-place indexes.

This article describes an update to the method developed by the Bureau of Economic Analysis (BEA) to create measures of regional price level differences. Percent differences in regional price levels are called regional price parities (RPPs).

The main difference between a temporal index and the price parities described here is that the former measures changes in price levels across different time periods for one specific place, while the latter captures differences in price levels across various places for one specific time period.

RPPs have several applications. They can be used to compare price levels across different geographic areas, such as states or metropolitan areas. For more information on such comparisons, see the box “How to Interpret Regional Price Parities.” Another important application of RPPs is to adjust measures of income

and output for price level differences. This provides users with a better sense of differences in quantities, also known as volume differences, because the price level differences have been removed to the extent possible (Schreyer and Koechlin 2002). The “Selected Results” section below includes discussion of using the RPPs to adjust regional measures of per capita personal income published by BEA.¹

BEA, in a joint project with BLS, first estimated regional price parities for 38 metropolitan and urban areas of the United States for 2003 and 2004 (Aten 2005, 2006). These areas, for which BLS produces the CPI, represent about 87 percent of the total population. The method was expanded to cover the remaining nonmetropolitan portions of each state, and estimates for 2005 and 2006 were reported in the SURVEY OF CURRENT BUSINESS in November 2008 (Aten 2008; Aten and D’Souza 2008).

The estimates in this article differ from previously published prototype estimates in a number of important ways. They incorporate the recently released 5-year American Community Survey (ACS) from the Census Bureau, which includes rural areas; they use updated expenditure data that reflect a regional distribution of rural weights; and they parallel the rolling

1. Annual income data for 2005 to 2009 are adjusted using a single RPP covering the 5-year period. Although the RPPs do not vary across the 5-year period, the ratio of unadjusted to adjusted incomes does vary slightly. This is a result of rebalancing so that for each year, total unadjusted incomes across geographic areas equal the sum of RPP-adjusted incomes across the areas. The adjustments are relatively minor as the balancing factors are close to one.

How to Interpret Regional Price Parities (RPPs)

RPPs compare the price level of a geographical region (such as a state or metropolitan area) with the total national average price level over all reference areas. The national price level is 100. The price level of the comparison area is expressed as a percentage of the national average price level. For example, the price level of all goods and services in California is about 15 percent higher (114.8 / 100) than the national average (table 2). We can also use the RPPs to compare two areas by examining their RPP ratio. While the price level in California is high when compared with the national average, it is about 1.4 percent lower than in the state of New York (114.8 / 116.4).

We can also compare price levels across regions within expenditure categories. Education services (including college tuition) are higher in states such as New York (125.8) and Maryland (134.6) but lower in Florida (82.6) and Kansas (83.3). Furthermore, we can compare the relative cost of education services to goods (such as college textbooks) within an area. The price level of education services relative to goods in Maryland (1.3 = 134.6 / 104) is also higher than in Kansas (0.8 = 83.3 / 99.3), where education services are relatively less expensive than goods. The overall RPP for the education services category (100.2) is the average price of education services in all areas relative to the price of all other expenditures at national prices.

multiyear average of the ACS that begins in 2005–2009 and continues next year with 2006–2010 and so forth. In addition, RPPs will be available on an experimental basis for expenditure classes such as food, apparel, recreation, transportation, housing, education, medical, and other goods and services as well as for rents.

The remainder of this article is organized as follows. First, the article discusses the 2005–2009 RPP estimates and the results of their application to adjusting measures of income. Second, the article explains the updated, two-stage methodology used to estimate the RPPs. Finally, the article discusses areas of future research.

Selected Results

States

Table 1 shows RPPs and unadjusted and adjusted per capita personal income for 50 states and the District of Columbia. In 2005–2009, South Dakota had the lowest price parity of all states at 84 percent of the national

average. Kentucky, Missouri, North Dakota and West Virginia were the other four states with the lowest price parities. Over the same period, Hawaii had the highest price parity, 19 percent higher than the national average. California, Connecticut, New Jersey and New York joined Hawaii as the five states with the highest price parities.

The range between the highest and lowest state per capita incomes shrinks when the data are adjusted using regional price parities. In 2009, the unadjusted range was \$38,443. After adjustment, that figure shrinks 26 percent to \$28,504.

State rankings in terms of per capita personal income shift when comparing unadjusted and adjusted data. In general, states with the lowest RPPs saw the largest increases in rank. While South Dakota's unadjusted per capita income fell in the middle of the distribution, after adjusting for its comparatively low price level, it had the fifth highest per capita personal income among all states in 2009.

Table 1. Per Capita Personal Income Adjusted by Regional Price Parities by State, 2005–2009

	Regional price parities	Per capita personal income (thousands of dollars) ¹					Adjusted per capita personal income (thousands of dollars) ¹				
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Alabama	88.2	29.8	31.4	32.8	33.9	33.4	33.9	35.7	37.3	38.5	37.9
Alaska	108.1	36.8	38.8	41.2	44.4	43.2	34.1	36.0	38.2	41.2	40.0
Arizona	100.1	31.5	33.4	34.4	34.5	33.2	31.5	33.5	34.4	34.5	33.2
Arkansas	86.6	27.9	29.5	31.4	32.6	32.3	32.3	34.1	36.4	37.7	37.4
California	114.8	38.8	41.6	43.2	43.9	42.4	33.8	36.3	37.8	38.3	37.0
Colorado	101.1	38.6	40.9	42.4	43.6	41.9	38.2	40.6	42.0	43.2	41.5
Connecticut	113.2	48.5	52.8	56.5	57.2	55.3	43.0	46.8	50.0	50.6	48.9
Delaware	104.3	37.0	39.1	40.1	40.6	39.6	35.5	37.6	38.6	39.0	38.0
District of Columbia	112.2	54.9	59.6	64.0	68.9	68.8	49.1	53.3	57.2	61.5	61.5
Florida	100.1	35.6	38.2	39.4	40.1	39.0	35.6	38.2	39.5	40.2	39.0
Georgia	93.3	32.2	33.4	34.7	35.4	34.1	34.5	35.9	37.3	38.0	36.6
Hawaii	118.5	35.8	38.5	41.2	42.5	42.2	30.3	32.6	34.8	35.9	35.6
Idaho	93.0	29.6	31.6	32.7	33.1	31.9	31.9	34.1	35.3	35.6	34.3
Illinois	100.5	37.2	39.7	41.7	43.2	41.9	37.1	39.6	41.6	43.1	41.7
Indiana	90.8	31.3	32.8	33.8	35.0	34.0	34.5	36.3	37.4	38.6	37.5
Iowa	87.1	32.4	33.9	36.1	38.2	37.6	37.2	39.0	41.5	43.9	43.3
Kansas	87.3	33.1	35.8	37.8	40.0	39.2	38.1	41.1	43.4	45.9	44.9
Kentucky	86.0	28.5	30.0	31.2	32.3	32.3	33.2	35.0	36.3	37.6	37.6
Louisiana	90.7	30.1	33.8	35.8	38.1	37.6	33.2	37.3	39.6	42.1	41.5
Maine	97.1	32.0	33.7	35.2	36.6	36.5	33.0	34.8	36.3	37.8	37.7
Maryland	109.7	42.5	45.0	47.0	48.5	48.2	38.8	41.1	43.0	44.3	44.0
Massachusetts	108.8	43.8	47.1	49.6	51.0	49.7	40.3	43.5	45.7	47.0	45.7
Michigan	93.9	32.3	33.2	34.2	35.3	34.3	34.4	35.5	36.6	37.2	36.6
Minnesota	95.6	38.0	40.0	41.8	43.2	41.9	39.8	42.0	43.8	45.3	43.9
Mississippi	86.5	26.8	28.0	29.6	30.7	30.4	31.0	32.4	34.3	35.6	35.2
Missouri	86.2	32.2	33.9	35.4	36.9	36.2	37.4	39.4	41.2	42.9	42.0
Montana	92.2	30.1	32.2	33.9	35.3	34.8	32.8	35.0	36.9	38.3	37.8
Nebraska	88.0	34.3	35.7	38.2	40.2	39.3	39.1	40.7	43.5	45.7	44.8
Nevada	102.6	38.1	39.2	40.4	40.0	37.7	37.2	38.3	39.5	39.1	36.8
New Hampshire	107.2	38.4	41.0	42.8	43.7	42.6	35.9	38.3	40.1	40.9	39.8
New Jersey	116.2	44.0	47.7	50.5	51.7	50.0	38.0	41.2	43.6	44.6	43.1
New Mexico	93.1	28.9	30.5	32.0	33.6	33.3	31.1	32.9	34.5	36.2	35.8
New York	116.4	40.7	44.0	47.1	48.1	46.5	35.0	37.9	40.6	41.4	40.0
North Carolina	91.2	32.0	33.6	35.0	35.7	34.9	35.2	36.9	38.5	39.2	38.3
North Dakota	84.5	32.3	33.6	37.0	41.5	40.8	38.3	39.8	43.9	49.2	48.4
Ohio	89.4	32.4	34.0	35.1	36.0	35.4	36.3	38.1	39.4	40.3	39.7
Oklahoma	88.3	30.5	33.2	34.5	36.9	35.8	34.6	37.7	39.2	41.9	40.7
Oregon	97.4	32.5	34.6	35.8	36.8	36.2	33.5	35.7	36.9	37.9	37.2
Pennsylvania	97.3	34.8	37.1	39.1	40.4	40.2	35.9	38.3	40.3	41.7	41.4
Rhode Island	100.0	36.2	38.4	40.4	41.8	41.4	36.3	38.5	40.5	41.9	41.5
South Carolina	90.7	29.2	30.9	32.1	33.1	32.5	32.3	34.2	35.5	36.5	35.9
South Dakota	83.8	33.1	33.7	36.7	39.4	38.4	39.6	40.3	44.0	47.1	45.9
Tennessee	89.3	31.3	32.9	34.2	35.1	34.3	35.1	36.9	38.5	39.9	38.5
Texas	97.1	33.2	35.3	37.1	39.8	38.6	34.2	36.4	38.3	41.1	39.8
Utah	96.0	28.6	30.3	31.9	32.6	31.6	29.9	31.7	33.4	34.0	33.0
Vermont	100.5	33.4	36.0	38.0	39.4	39.2	33.3	36.0	37.9	39.3	39.1
Virginia	101.5	39.0	41.4	43.4	44.7	44.1	38.5	40.8	42.9	44.1	43.5
Washington	103.2	36.7	39.6	42.2	43.7	42.9	35.7	38.4	41.0	42.4	41.6
West Virginia	84.5	26.7	28.7	29.9	31.5	32.1	31.6	34.0	35.4	37.4	38.0
Wisconsin	91.4	33.7	35.6	36.9	37.9	37.4	36.9	39.1	40.5	41.6	41.0
Wyoming	93.8	39.4	44.7	46.3	50.7	48.3	42.1	47.8	49.5	54.1	51.6
All states	100.0	35.4	37.7	39.5	40.7	39.6	35.4	37.7	39.5	40.7	39.6
Maximum	118.5	54.9	59.6	64.0	68.9	68.8	49.1	53.3	57.2	61.5	61.5
Minimum	83.8	26.7	28.0	29.6	30.7	30.4	29.9	31.7	33.4	34.0	33.0
Range	34.7	28.2	31.6	34.4	38.1	38.4	19.2	21.6	23.8	27.5	28.5

1. PCPI is calculated using preliminary population estimates.

NOTE: Adjusted results are balanced to ensure that the sum of nominal income across states equals the

sum of adjusted incomes across states. The annual balancing factors for states from 2005 to 2009 are 0.99780, 0.99721, 0.99709, 0.99797, 0.99846, respectively.

States with the highest RPPs saw the largest declines in rank. Hawaii's unadjusted per capita income fell in the top third of the distribution; however, after adjusting for its relatively high price level, it dropped to the fifth-lowest among all states in terms of per capita personal income in 2009. Despite its inclusion among the five states with the highest RPPs, Connecticut saw only a slight drop in its 2009 rank, from second to third highest on an unadjusted and adjusted basis, respectively. The slight drop was due to the state's relatively high level of per capita personal income, which was 40 percent higher than the national average in 2009.

Our results show that the RPPs vary systematically with respect to services and goods: areas with higher overall RPPs tend to have a higher RPP for services than for goods, while areas with lower overall RPPs tend to have a lower RPP for services than for goods. This pattern is seen in RPPs for states (table 2), metropolitan, micropolitan and rural areas (see table 3 on the next page), and BLS index areas (see table 4 on

page 78).

Table 2 summarizes the overall 5-year RPP by state and the RPP specific to each expenditure class for goods and services in nine categories: apparel, education, food, household, medical, recreation, transportation, rent, and other. To compare the price levels of two areas, examine the ratio of the two. For example, the average price level in New York is 1.4 times higher than that in South Dakota (116.4 / 83.8).

The range of area price levels varies by expenditure category. In general, services tend to have a broader range of price level differences than goods. By expenditure category, rents varied the most across the states, with the average price level in Hawaii being 2.2 times higher than in West Virginia (146.0 / 65.8). Transportation goods (comprising new and used vehicle purchases) varied the least, with most states being close to the national price average; California (104.7) had the highest average price level and South Dakota (93.3) had the lowest.

Table 2. Regional Price Parities by Expenditure Class by State, 2005–2009

	Regional price parities	Rents	Apparel	Education		Food		Housing		Medical		Other		Recreation		Transportation	
				Goods	Services	Goods	Services	Goods	Services	Goods	Services	Goods	Services	Goods	Services	Goods	Services
Alabama.....	88.2	74.3	93.4	101.0	90.5	95.2	95.0	95.2	88.6	89.2	99.3	87.3	93.4	94.2	92.7	100.2	91.8
Alaska.....	108.1	122.7	92.0	102.2	103.1	111.1	105.4	99.2	93.4	85.9	111.8	119.6	100.3	112.7	108.8	99.5	115.3
Arizona.....	100.1	100.0	100.3	101.9	91.3	97.6	93.8	108.8	97.1	100.7	90.9	107.3	115.3	106.8	108.0	102.4	108.9
Arkansas.....	86.6	71.7	89.8	99.0	87.1	94.6	93.6	92.1	87.5	90.3	98.3	82.4	87.9	93.2	88.3	100.3	91.6
California.....	114.8	139.9	107.2	96.0	99.2	103.4	102.2	108.8	113.2	111.5	103.4	118.6	108.9	102.7	101.8	104.7	105.2
Colorado.....	101.1	100.9	107.3	106.3	97.4	99.2	98.8	105.5	89.2	106.4	130.2	83.4	79.3	111.6	116.1	99.0	110.6
Connecticut.....	113.2	118.5	108.2	103.6	126.3	108.4	111.5	109.8	120.4	121.4	101.7	115.0	126.8	103.9	102.7	100.2	117.5
Delaware.....	104.3	104.4	98.9	104.1	101.6	103.1	106.0	102.5	106.6	121.2	103.8	115.6	103.6	102.6	121.8	98.5	105.9
District of Columbia.....	112.2	127.6	110.1	105.7	135.4	109.0	115.1	92.1	105.3	107.7	77.5	79.4	123.0	99.1	112.1	97.7	102.3
Florida.....	100.1	111.0	100.2	100.6	82.6	97.6	95.9	99.0	93.8	90.8	94.1	91.9	101.8	96.5	96.7	100.1	100.0
Georgia.....	93.3	89.4	100.6	103.2	107.7	95.6	97.7	96.2	90.7	87.3	91.6	81.4	95.0	87.5	84.7	99.2	93.9
Hawaii.....	118.5	146.0	104.2	121.1	109.3	122.7	116.2	93.5	126.0	86.8	108.7	131.2	104.6	96.9	80.6	102.4	111.1
Idaho.....	93.0	78.8	94.7	98.8	99.4	101.7	96.8	96.8	94.8	94.6	100.9	104.5	96.6	107.2	105.7	100.8	103.8
Illinois.....	100.5	101.1	108.9	98.9	107.1	102.3	109.0	97.6	94.5	90.0	100.9	101.2	95.9	109.4	106.8	97.9	90.5
Indiana.....	90.8	80.5	95.7	98.4	96.0	95.8	95.9	98.7	91.8	96.8	101.9	92.2	91.7	97.4	89.1	96.5	87.3
Iowa.....	87.1	75.8	90.1	96.8	87.3	93.3	92.7	95.2	88.7	86.8	103.0	89.8	89.2	90.2	82.3	93.9	85.2
Kansas.....	87.3	79.6	94.9	99.3	83.3	94.8	83.1	101.2	87.3	85.8	98.9	86.7	93.7	91.3	81.1	94.4	83.5
Kentucky.....	86.0	70.2	89.3	98.2	87.7	94.6	92.6	90.6	87.8	91.6	101.0	82.2	86.1	92.6	90.2	100.0	90.4
Louisiana.....	90.7	81.1	94.4	101.5	91.3	95.4	95.3	96.0	88.9	88.8	99.6	88.8	94.8	94.4	93.8	100.1	91.9
Maine.....	97.1	88.2	88.7	101.3	93.5	101.0	102.3	96.8	106.7	110.5	93.3	106.4	105.0	103.9	104.4	97.6	96.8
Maryland.....	109.7	120.7	102.6	104.0	134.6	107.7	116.5	90.0	103.1	128.5	73.4	95.7	115.9	98.7	122.1	97.9	108.6
Massachusetts.....	108.8	117.5	101.9	88.2	114.5	96.5	108.8	102.2	118.6	98.2	93.9	109.2	118.1	103.4	119.6	95.3	112.2
Michigan.....	93.9	86.6	95.3	118.6	95.3	98.0	99.3	95.4	94.2	103.1	90.9	102.6	101.0	93.4	100.0	94.6	101.5
Minnesota.....	95.6	92.0	96.2	90.2	106.9	102.3	93.3	83.2	92.0	106.7	109.8	98.7	101.8	112.3	91.1	94.6	94.4
Mississippi.....	86.5	73.2	87.5	97.6	84.7	94.3	92.6	90.2	86.8	91.0	97.7	79.5	84.1	92.7	85.2	100.3	91.3
Missouri.....	86.2	79.5	94.8	84.9	90.4	94.8	86.3	93.2	80.9	81.6	91.8	83.1	90.0	90.9	83.7	94.2	81.0
Montana.....	92.2	76.1	95.7	97.4	101.3	103.7	95.1	95.6	93.9	90.2	102.8	106.4	95.8	107.2	107.1	100.8	103.1
Nebraska.....	88.0	76.9	91.0	97.2	89.6	93.7	93.0	96.5	89.5	90.6	102.5	90.0	89.6	92.0	83.3	94.6	85.6
Nevada.....	102.6	114.4	92.0	100.7	90.1	96.0	102.6	99.9	97.3	108.5	92.9	98.5	99.3	107.3	97.5	100.8	106.2
New Hampshire.....	107.2	115.4	98.8	92.1	109.8	97.6	107.3	100.9	115.4	102.3	95.3	108.5	115.4	103.5	116.1	96.0	108.3
New Jersey.....	116.2	132.8	101.5	118.1	121.0	104.7	106.6	108.7	124.0	117.0	98.8	132.1	104.1	103.4	117.7	95.4	120.5
New Mexico.....	93.1	80.1	93.4	99.9	95.4	98.8	99.6	98.4	96.0	101.1	96.9	101.6	97.9	107.3	102.2	100.8	105.0
New York.....	116.4	124.6	112.5	100.8	125.8	107.8	111.3	105.3	124.0	120.3	107.4	121.9	119.1	104.5	112.1	99.9	121.6
North Carolina.....	91.2	83.1	93.8	101.0	90.7	95.3	95.1	95.6	88.7	89.0	99.4	87.9	93.8	94.2	93.0	100.2	91.9
North Dakota.....	84.5	68.0	90.0	96.8	87.2	93.2	92.7	95.2	88.7	86.5	103.1	89.8	89.2	90.0	82.2	93.8	85.2
Ohio.....	89.4	79.4	93.2	94.1	89.3	95.7	92.5	94.9	93.2	99.6	102.1	94.3	80.4	95.1	94.1	96.2	84.2
Oklahoma.....	88.3	75.2	92.0	100.2	89.2	95.0	94.4	93.9	88.2	89.6	98.9	85.2	91.2	93.8	91.0	100.2	91.7
Oregon.....	97.4	94.6	106.2	101.8	107.7	99.5	93.6	97.7	98.3	96.3	102.0	99.9	99.9	79.1	110.0	95.6	103.7
Pennsylvania.....	97.3	88.8	93.9	101.6	98.0	102.7	98.1	96.9	108.2	117.9	97.3	112.7	96.9	100.0	109.6	96.8	99.9
Rhode Island.....	100.0	100.6	88.3	101.6	92.2	101.2	102.0	96.7	106.2	111.3	98.1	105.7	104.8	103.7	103.8	97.7	96.3
South Carolina.....	90.7	81.0	94.4	101.4	91.3	95.4	95.3	96.2	88.9	88.8	99.6	88.9	94.8	94.4	93.8	100.2	91.9
South Dakota.....	83.8	67.1	89.3	96.4	85.1	92.9	92.5	94.2	88.1	84.0	103.4	89.5	88.9	88.6	81.3	93.3	84.8
Tennessee.....	89.3	77.4	93.2	100.8	90.3	95.2	94.9	95.1	88.6	89.2	99.3	87.0	93.0	94.1	92.4	100.2	91.8
Texas.....	97.1	93.3	98.7	101.3	102.9	95.5	100.8	103.9	99.0	89.8	100.2	91.3	97.7	99.0	93.0	98.5	99.6
Utah.....	96.0	89.2	92.6	100.3	92.4	97.3	101.3	99.2	96.7	104.9	94.8	99.9	98.7	107.3	99.5	100.8	105.7
Vermont.....	100.5	102.4	88.2	101.7	92.5	101.2	102.0	96.6	106.3	110.8	99.3	106.2	104.5	103.9	103.8	97.7	96.3
Virginia.....	101.5	108.8	99.7	102.7	110.2	100.2	103.1	93.8	95.1	94.2	94.3	86.3	104.9	96.0	100.5	99.5	96.2
Washington.....	103.2	104.1	114.6	95.2	103.8	108.0	101.6	103.3	93.9	95.4	97.7	116.0	100.2	105.0	108.1	100.9	108.7
West Virginia.....	84.5	65.8	90.1	98.6	92.2	95.8	95.3	90.6	89.1	92.6	96.9	80.3	88.8	93.6	88.6	100.1	92.6
Wisconsin.....	91.4	87.4	96.7	99.6	85.0	90.9	91.2	91.1	99.7	95.4	95.2	90.5	97.7	93.6	96.0	87.4	87.4
Wyoming.....	93.8	80.6	95.2	97.9	100.1	102.8	96.0	96.1	94.3	92.1	101.9	105.4	96.1	107.2	106.1	100.8	103.5
All states.....	100.0	101.0	100.0	99.8	100.2	99.7	99.9	99.3	99.8	98.3	98.9	98.7	100.3	99.1	100.1	99.0	100.3
Maximum.....	118.5	146.0	114.6	121.1	135.4	122.7	116.5	109.8	126.0	128.5	130.2	132.1	126.8	112.7	122.1	104.7	121.6
Minimum.....	83.8	65.8	87.5	84.9	82.6	92.9	83.1	83.2	80.9	81.6	73.4	79.4	79.3	79.1	80.6	93.3	81.0
Range.....	34.7	80.2	27.1	36.2	52.8	29.8	33.3	26.6	45.1	46.9	56.8	52.7	47.4	33.6	41.5	11.4	40.6

Metropolitan, micropolitan, and rural areas

Table 3 summarizes RPPs by three geographical categories (metropolitan, micropolitan, and rural) as well as for nine expenditure classes of goods and services within those areas.²

Table 3. Regional Price Parities for Metropolitan, Micropolitan, and Rural Areas, by Expenditure Class, 2005–2009

Regional price parities for all classes by area	Metropolitan		Micropolitan		Rural	
	102.8		88.0		84.6	
Expenditure class	Goods	Services	Goods	Services	Goods	Services
Apparel.....	102.8	.....	88.6	.....	84.3	.....
Education	100.7	103.4	97.2	87.1	94.9	80.5
Food	100.5	101.3	97.2	93.9	94.8	91.9
Household.....	101.9	102.0	92.0	91.3	88.0	88.0
Medical	102.2	98.9	89.5	101.3	86.7	100.2
Other	103.0	102.9	90.4	89.2	82.1	83.0
Recreation	101.0	102.8	94.4	90.5	91.1	82.3
Rent .....	.....	106.4	.....	74.7	.....	67.4
Transportation.....	99.6	101.8	97.7	91.7	97.5	89.7
All classes.....	100.8	103.8	94.9	84.3	92.6	79.5

Metropolitan area price levels are 1.2 times higher on average than rural areas (102.8 / 84.6). Additionally, as these economic areas become less rural and more urban, services by expenditure class tend to become more expensive relative to goods. For example, the price level ratios of transportation services to goods in rural, micropolitan, and metropolitan areas were 0.92, 0.94, and 1.02, respectively. One category that defies this tendency is medical services, including visits to physicians, dentists and other professionals. While the RPPs of medical goods such as over-the-counter drugs are lower in rural and micropolitan areas, they are relatively constant across the three geographic definitions for medical services, with metropolitan areas having a slightly lower price level (98.9) than in micropolitan (101.3) and rural (100.2) areas.

Detailed metropolitan areas

Table 5 (page 83) shows metropolitan area per capita personal income adjusted by RPPs for 2005–2009. Over this period, Jefferson City, MO, had the lowest price parity at 79 percent of the national average. Metropolitan areas with the lowest RPPs also include Jonesboro, AR, Cape Girardeau-Jackson, MO-IL, Morristown, TN, and Danville, IL. Over the same period, Bridgeport-Stamford-Norwalk, CT, had the highest RPP, which was 24 percent higher than the national average. Metropolitan areas with the highest RPPs also

2. A metropolitan area is defined by the Office of Management and Budget as one or more counties with a high degree of social and economic integration, with a core urban population of 50,000 or more. Micropolitan areas have an urban core population of less than 50,000 but more than 10,000, and the remaining areas are rural.

include San Jose-Sunnyvale-Santa Clara, CA, San Francisco-Oakland-Fremont, CA, New York-Northern New Jersey-Long Island, NY, and Santa Cruz-Watsonville, CA.

For metropolitan areas, the range between the highest and lowest per capita incomes shrank when these data were adjusted using RPPs. In 2009, the unadjusted range was \$54,258. After adjustment, the figure shrank 29 percent to \$38,510.

Metropolitan area rankings of per capita personal income change when comparing unadjusted and adjusted data. Among all metropolitan areas in 2009, Jefferson City, MO, increased the most. In 2009, the area increased from the second quartile in terms of unadjusted per capita personal income to the top quartile on an adjusted basis.

The five metropolitan areas with the highest RPPs were not among the areas with the largest declines in rank when comparing adjusted and unadjusted per capita personal income. For example, the area with the largest RPP, Bridgeport-Stamford-Norwalk, CT, only experienced a slight drop in its 2009 rank, from first on an unadjusted basis to third on an adjusted basis. The slight decrease is due to the area's relatively high level of per capita personal income, which was 81 percent higher than the national average in 2009.

Among all metropolitan areas in 2009, Poughkeepsie-Newburgh-Middletown, NY, experienced the largest decline in rank when comparing unadjusted and adjusted per capita personal income. The area dropped from the top quartile of metropolitan areas in terms of unadjusted per capita personal income to the bottom quartile on an adjusted basis.

Overview of the Methodology

First stage

Hedonic adjustment. The BEA estimation begins with the individual price observations used in the CPI. The CPI collects price quotes for hundreds of consumer goods and services, ranging from new automobiles to haircuts, as well as price information on rents and owners' equivalent rents. There are more than 1 million price quotes observed each year, which are organized into eight groups of goods and services: housing excluding rents, transportation, food, education, recreation, medical, apparel, and other goods and services. Rents and owners' equivalent rents are treated separately and discussed in the following section.

Each of the eight groups is subdivided into categories termed "item strata," such as major appliances, and then into more detailed categories termed "elementary level items (ELIs)," such as refrigerators

and freezers. Some ELIs are further subdivided into clusters. A full listing of item strata, ELIs and clusters can be found in “CPI Requirements of CE” by William Casey (2010).

In cooperation with BLS, we estimate hedonic regression models that take into account differences in characteristics of the goods and services, such as differences in packaging, unit size, and type of outlet where they are sold.

We derive approximately 150 individual hedonic regressions for each year at the most detailed level possible, subject to the data.³ The regressions cover the 75 most important item strata in terms of their overall contribution to total expenditures. These item strata account for approximately 85 percent of total expenditures.⁴

Rents and owners’ equivalent rents. Rents and owners’ equivalent rents account for 30 percent of overall consumer expenditures.⁵ As a result, the regression models for these two categories will have the largest impact on the overall price levels. An analysis of this sensitivity is given in Aten (2005). Because of their importance, regressions that account for differences in characteristics of rents and owners’ equivalent rents require a more sophisticated treatment than the regressions described above for other goods and services.⁶

Characteristics used in the regressions of rents include the timing of the collection cycle and the classification of each observation as a rental or as an owners’ equivalent rental. In addition, numerous housing characteristics are available, including structure type, number of rooms and bathrooms, utilities, parking, air conditioning, rent control status, length of occupancy, and approximate age of the unit.

As described above, relative price levels are obtained from hedonic regressions for the top 75 item strata and from the detailed regressions for rents and owners’ equivalent rents. For the remaining item strata, we estimate relative price levels using a short cut approach called a weighted country product dummy method.⁷ This is equivalent to a weighted geometric mean across

3. Details of a hedonic regression for an ELI are available in Aten (2005).

4. We use the term “expenditures” to refer to the cost weights associated with each item and each area. Cost weights are derived from the Consumer Expenditure Survey (CE) but are adjusted internally by BLS for use with CPI price data and do not match exactly the CE distributions which are published every two years.

5. Owners’ equivalent rents (also referred to as rental equivalence) are estimates of the amount a homeowner would pay to rent, or would earn from renting, his or her home in a competitive market. For more information, see www.bls.gov/cpi/cpifact6.htm.

6. See Moulton (1995).

7. For information about the weighted country product dummy method, see Summers (1973), Sergeev (2004), Silver (2004), Diewert (2002), Rao (2004), and Selvanathan and Rao (1994).

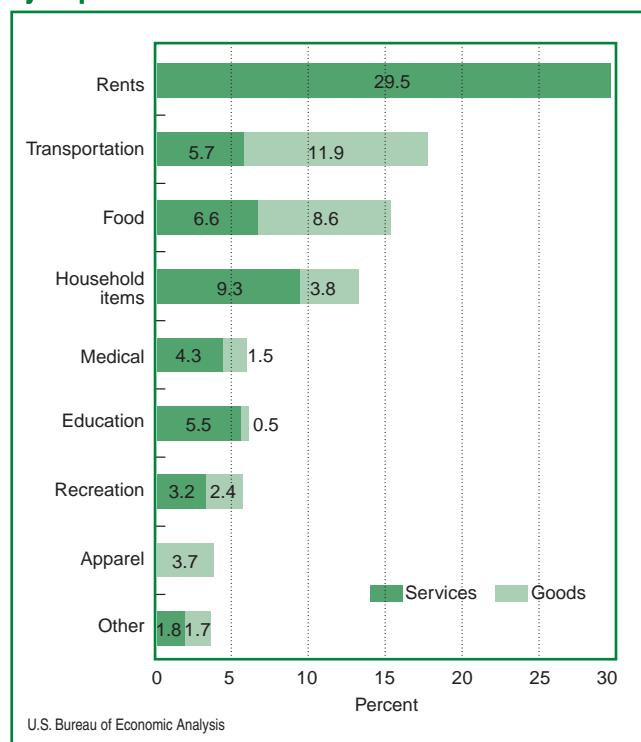
all ELIs within an item stratum when there are no missing observations.

Multilateral aggregation. The price observations and the relative price levels undergo an outlier checking procedure called Quaranta analysis, modeled after the methods used in the OECD, Eurostat, and in the International Comparison Program of the United Nations and World Bank. For each year of data, three rounds of Quaranta analysis were completed, removing approximately 1.3 percent of the observations.

Once the Quaranta analysis has been completed, we take the individual item strata price levels for each of the 38 areas and aggregate them into 16 expenditure classes: food (at home and away-from-home), apparel, education (goods and services), medical (goods and services), housing (goods and services), recreation (goods and services), transport (goods and services), other (goods and services), and imputed and actual rents.

Chart 1 shows the percentage of all expenditures in each class, categorized by goods and services. Goods account for about one-third of expenditures, while services are two-thirds, but the number of item strata in each grouping is reversed: only one-third for services (68 out of 207) and two-thirds for goods (139 out of 207).

Chart 1. Share of Household Expenditures by Expenditure Class



The detailed item strata price levels for the 38 geographic areas are aggregated to the 16 expenditure classes using the Geary multilateral formula below.⁸

Geary Aggregation

$$P_{Geary}^c = \frac{\sum_{n=1}^N p_n^c q_n^c}{\sum_{n=1}^N \pi_n q_n^c}$$

$$\pi_n = \sum_{c=1}^M \frac{p_n^c}{P_{Geary}^c} \frac{q_n^c}{\sum_{d=1}^M q_n^d}$$

$P_{Geary} =$	Geary multilateral price index
$p =$	item price
$q =$	notional quantity = $(pq)/p$
Subscript $n =$	1 ... N indicates items
Superscript $c, d =$	1 ... M indicates areas

One advantage of the Geary system is that it is additive, meaning that we can obtain price indexes at any level of aggregation and that they are consistent with the overall index. This is done by dividing the unadjusted expenditures (pq) by the adjusted expenditures (πq), where π is the reference price defined as the average price level across all areas for each item n .

Table 4 summarizes the first-stage multilateral results. It shows the average RPP across the 5 years for two categories of expenditures: goods and services, including rents. The total RPP across all items is also shown.

The range of RPPs for services is much greater than for goods, as might be expected, and there is an inverse relationship between the two with respect to the total RPP; that is, the RPP for services is higher than the RPP for goods in the areas with higher total RPPs but lower than the RPP for goods in the areas with lower total RPPs. New York City, for example, has the highest total RPP of 136.3, with a goods RPP of 107.3 and a services RPP of 149.8. The Midwest nonmetropolitan urban areas have the lowest total RPP of 79.3, with a goods RPP of 86.3 and a services RPP of 75.5.

8. The notations and formulas are from Deaton and Heston (2010).

Second stage

BLS index area and states and metropolitan areas. To extend the study beyond these 38 areas to states and metropolitan areas, it is necessary to obtain an estimate of price levels for the broad BLS index areas and price levels for the rural areas not covered by the CPI. Once again, we separate the process into two stages: estimates of rents and estimates of all other goods and services.

With respect to rents, the only comprehensive price level measure available for both the broad BLS index areas and for the rural areas not covered by the CPI is in the housing data from the 5-year American Community Survey (ACS) released by the Census Bureau in December 2010. The ACS consists of nearly 8

**Table 4. Regional Price Parities for BLS Index Areas, 2005–2009
Ranked by Total Regional Price Parity**

PSU ¹	Area ²	Goods	Services	Total
A109	New York City.....	107.3	149.8	136.3
A110	New York-Connecticut Suburbs	111.7	147.0	135.2
A422	San Francisco-Oakland-San Jose, CA	113.6	140.8	131.5
A426	Honolulu, HI.....	106.8	145.5	130.6
A419	Los Angeles-Long Beach, CA.....	104.2	139.2	126.1
A111	New Jersey-Pennsylvania Suburbs.....	101.4	132.6	121.6
A424	San Diego, CA.....	103.0	126.2	118.0
A103	Boston-Brockton-Nashua, MA-NH-ME-CT	96.8	128.1	116.6
A312	Washington, DC-MD-VA-WV	99.8	120.9	114.1
A420	Los Angeles Suburbs, CA.....	101.7	120.4	113.4
A102	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD....	103.6	111.2	108.7
A427	Anchorage, AK.....	103.2	111.7	108.6
A423	Seattle-Tacoma-Bremerton, WA	106.5	108.5	107.8
A313	Baltimore, MD	99.9	110.0	106.7
A207	Chicago-Gary-Kenosha, IL-IN-WI.....	103.2	108.3	106.5
A320	Miami-Fort Lauderdale, FL	99.7	106.7	104.5
A433	Denver-Boulder-Greeley, CO	100.0	101.7	101.1
A211	Minneapolis-St. Paul, MN-WI.....	98.2	100.3	99.6
A316	Dallas-Fort Worth, TX.....	97.8	98.3	98.1
A425	Portland-Salem, OR-WA.....	92.2	100.4	97.5
A318	Houston-Galveston-Brazoria, TX	97.3	97.5	97.4
X100	Northeast small metropolitan.....	97.9	95.8	96.5
A429	Phoenix-Mesa, AZ	102.2	93.4	96.4
X499	West small metropolitan.....	98.0	94.2	95.6
A208	Detroit-Ann Arbor-Flint, MI.....	97.1	93.5	94.7
A319	Atlanta, GA	95.7	93.2	94.0
D400	West nonmetropolitan urban.....	99.7	89.9	93.3
A321	Tampa-St. Petersburg-Clearwater, FL.....	97.6	90.3	92.7
A212	Milwaukee-Racine, WI	97.5	86.4	90.0
X300	South small metropolitan	96.5	86.5	89.9
A213	Cincinnati-Hamilton, OH-KY-IN	94.0	86.8	89.2
X200	Midwest small metropolitan	96.8	84.9	88.9
A210	Cleveland-Akron, OH	95.2	81.9	85.9
A214	Kansas City, MO-KS	96.4	79.7	85.1
A104	Pittsburgh, PA	93.2	80.7	84.8
A209	St. Louis, MO-IL.....	90.0	80.3	83.5
D300	South nonmetropolitan urban	90.9	76.2	81.4
D200	Midwest nonmetropolitan urban.....	86.3	75.5	79.3
	All areas.....	98.7	100.7	100.0
	Maximum	113.6	149.8	136.3
	Minimum	86.3	75.5	79.3
	Range	27.3	74.3	57.0

1. Primary sampling unit. See "Consumer Price Index" in *BLS Handbook of Methods* (June 2007): 12–17; www.bls.gov.

2. These correspond to Bureau of Labor Statistics (BLS) area definitions used in the CPI and are not the same as metropolitan statistical areas. For more information on BLS area definitions, see chapter 17 in the *BLS Handbook of Methods*.

million observations on housing units for 2005–2009. Approximately 3 million of these are for rents, enabling us to make estimates at a very detailed level of geography, including for rural versus urban portions of counties.

We estimate a hedonic regression for rents from the ACS with the following characteristics: the number of rooms and bedrooms and the age and type of housing unit. In our previous work, we included the housing cost data for owners, and ran separate regressions for those with mortgages and those without (Aten and D’Souza 2008). However, since the ACS does not collect information on the length of mortgage loans or the applicable interest rates, we focus only on the rental price levels. The rents in the ACS and the rents in the BLS are conceptually the same, but owner-cost levels in the ACS are different conceptually from the owner-equivalent rents of the BLS.⁹

For the remaining goods and services other than rents, we assume that the within-area price levels are the same as the average for the area; that is, if a BLS index-area is made up of n counties, the price level for each of the n counties will be the same. This applies to all counties within an area, including rural counties.

Of the 38 index areas, 31 are metropolitan areas made up of predominantly urban counties, 4 areas are denoted as “small metropolitan areas,” and 3 areas are

9. See Crone, Nakamura, and Voith (2004), Short and O’Hara (2008), Garner and Short (2009), Garner and Verbrugge (2007), Heston and Nakamura (2009).

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Part of the work reported here is based on a 5-year agreement with the Bureau of Labor Statistics (BLS) to access consumer price index data in the Office of Prices and Living Conditions. We would like to thank Walter Lane, Frank Ptacek, Josh Klick, Robert Cage and Lyubov Rozental in the Consumer Price Indexes program, at BLS as well as Roger D’Souza at BEA for their technical and programmatic assistance in this and in previous versions of our estimates. Another important part of the work was based on the five-year American Community Survey housing data, and we thank the support of Trudi Renwick in the Poverty Statistics Branch and David Johnson in the Housing and Household Economic Statistics Division of the Census Bureau.

denoted as “urban, nonmetropolitan areas.” The latter two groups may have rural counties or parts of counties that are sparsely populated and would thus fall under Census Bureau-designated rural tracts.

Although we did not have any price level information for these rural counties or for the parts of counties that are rural, BLS provides a distribution of expenditure weights for four broad rural regions, corresponding to the Northeast, Midwest, South and West.

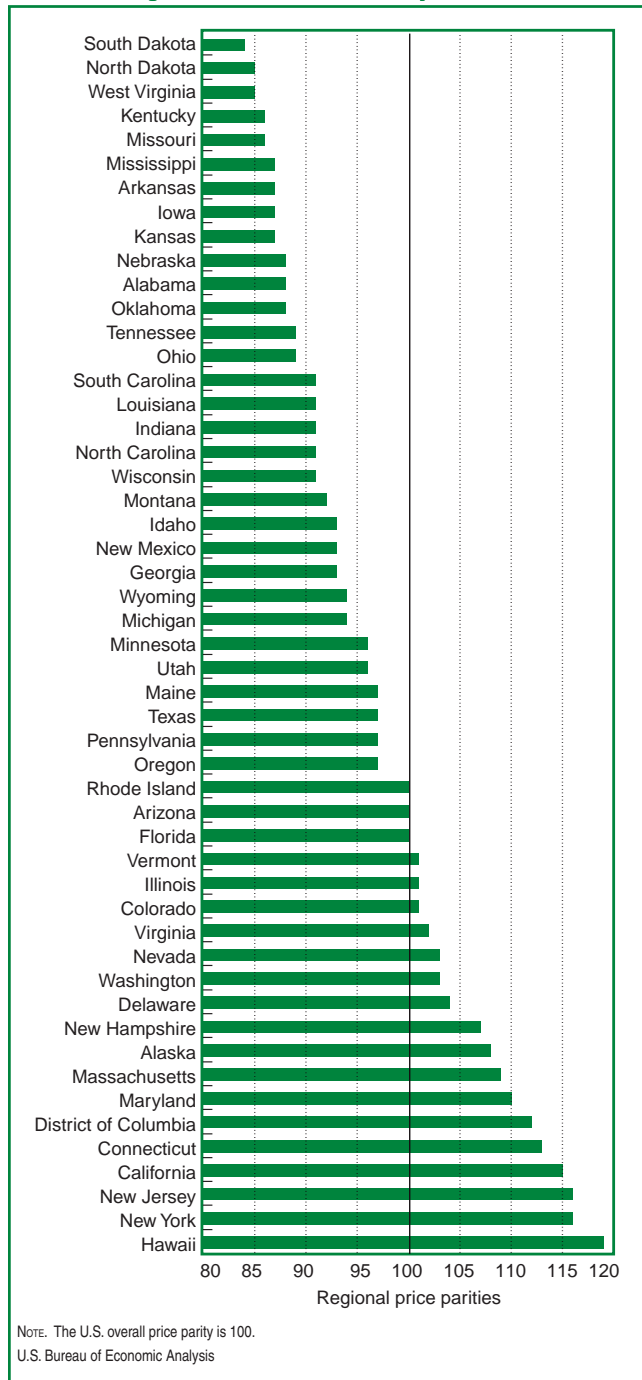
We distribute the expenditure weights to counties within an index area based on a uniform per capita expenditure distribution; that is, the per capita expenditure distribution in the index area is assumed to be equal to the per capita expenditure distribution in the counties within that area, with the exception of the rural counties. For rural counties, we use the rural regional distribution and assume that the per capita expenditure distribution in each region is equal to that of the rural counties within the region. In other words, we allocate expenditure weights to the counties based on the ratio of their populations to the total population of the index area or rural region.

Multilateral aggregation. Once the price levels and weights by all expenditure classes have been allocated to all the counties in each year, we reaggregate them up to (1) the states and to (2) the metropolitan areas as defined by the Office of Management and Budget. This reaggregation is simply the weighted geometric mean of the counties within states and metropolitan areas.

At this stage, we substitute the BLS rents price levels with the ACS rents price levels. The latter are more robust because they are derived directly at the state and metropolitan area levels and are not weighted geometric means built up from the 38 allocated index areas.

Thus, we have a stacked panel of five years of annual data, one each for states and for metro areas, with price levels and weights for the 16 major expenditure classes. The panels are the final inputs to a multilateral Geary aggregation that yields the overall regional price parity (RPP). These multiyear RPPs cover the 5-year period; RPPs are not developed for individual years.

The state-level RPP estimates are summarized in chart 2. The lowest RPP is for South Dakota at 84, and the highest is for Hawaii at 119. New York and New Jersey are close behind at 116, and California is ranked fourth at 115. West Virginia and North Dakota join South Dakota on the lower end of the scale with RPPs of 85. (The RPP for the entire United States is 100).

Chart 2. Regional Price Parities by State

Future Research

An important extension of this work would be to explore the development of RPPs that reflect more than consumption goods and services, such as investment and government price level differences. In international comparisons, the price level of consumption is often a good approximation for gross domestic prod-

uct price levels from the expenditure side because the relative prices of investment and government change systematically in opposite directions when measured across per capita incomes. It is not clear whether this pattern would be found across states or metropolitan areas within a country, but it seems worth examining. One approach to this would be to see if there is a geographic pattern in the prices of inputs and outputs related to construction, producers' durable equipment, and government compensation.

Another extension would be to use additional indicators of housing costs, perhaps creating a hybrid approach using BLS owner-equivalent data, ACS owner cost data, and other sources of asset-based estimates of housing. Since rents and owners' equivalent rents are jointly the most important expenditure heading, it is critical to make explicit the commonalities and differences between the two sources of data.

A separate but important issue with respect to rents is how to reconcile the personal consumption expenditure (PCE) weights in the national accounts with the expenditure weights in the Consumer Expenditure Survey (CE). The national share of rents out of total expenditures is significantly lower in the PCE than in the CE. Although the PCE does not have a regional distribution of weights, we would like to analyze whether redistributing that share to all other expenditure categories would affect the RPPs systematically.

Lastly, we made a strong, albeit transparent, assumption about the price levels of all other goods and services excluding rents: that they are uniformly distributed across counties within a BLS index area. For example, the food price level in Jefferson County (WV), in Prince George's County (MD), and in Alexandria City (VA), are assumed to be the same as the average in the entire Washington-DC-MD-VA-WV area. Arguably, the more remote areas may purchase goods and services in the larger population centers, but there may be food "deserts" and higher transportation costs that are not captured by using the average for the metropolitan area. However, neither BLS nor the Census Bureau collects relative prices of other consumption goods and services at this finer detail of geography, and obtaining supplementary local price and expenditure information was beyond the scope of this study.

Similarly, we do not have the relative distribution of expenditures across item strata below the 38 BLS index areas. Thus we assume the same relative distribution for the smaller counties and for the larger area. Since total expenditures are highly correlated with total populations, this is a reasonable assumption. Research is

underway to possibly use a measure of income or of earnings. But whether we use income, earnings, or population, the main constraint is that we would still not capture variations across expenditure headings within the areas; that is, the proportion spent on food versus apparel or rents for different counties within larger areas is unknown. The ACS does have a measure of the proportion of unadjusted income that households spend on rents, and we would try to incorporate that information in future estimates.

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Table 5. Per Capita Personal Income Adjusted by Regional Price Parities by Metropolitan Area, 2005–2009—Continues

Area	Regional price parities	Per capita personal income (thousands of dollars)					Adjusted per capita personal income (thousands of dollars) ¹				
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Abilene, TX.....	89.3	28.2	29.8	32.3	35.6	35.2	31.7	33.6	36.4	40.0	39.6
Akron, OH.....	86.0	33.8	35.7	37.3	37.9	37.1	39.5	41.7	43.6	44.2	43.2
Albany, GA.....	83.8	25.9	26.5	27.8	29.2	29.2	31.1	31.8	33.4	35.1	35.0
Albany-Schenectady-Troy, NY.....	98.2	36.2	38.3	40.4	42.1	42.2	37.1	39.2	41.3	43.1	43.2
Albuquerque, NM.....	92.8	31.7	33.5	34.5	35.6	35.3	34.4	36.3	37.4	38.6	38.2
Alexandria, LA.....	86.8	30.9	31.4	33.1	35.8	35.9	35.8	36.4	38.3	41.5	41.5
Allentown-Bethlehem-Easton, PA-NJ.....	98.3	33.9	35.8	37.8	39.0	38.5	34.6	36.6	38.7	39.8	39.3
Alltoona, PA.....	85.7	28.1	29.1	31.0	32.0	32.7	33.0	34.2	36.4	37.6	38.3
Amarillo, TX.....	90.0	29.5	31.1	32.9	35.8	35.5	33.0	34.7	36.8	39.9	39.6
Ames, IA.....	85.0	31.3	33.2	34.4	35.8	35.6	37.0	39.3	40.7	42.3	42.0
Anchorage, AK.....	108.3	40.2	42.2	44.6	47.9	46.2	37.3	39.2	41.5	44.4	42.8
Anderson, IN.....	86.3	28.0	29.3	30.0	31.8	30.6	32.5	34.1	34.9	37.0	35.6
Anderson, SC.....	84.8	27.4	28.7	29.8	30.8	30.3	32.5	34.1	35.4	36.5	35.9
Ann Arbor, MI.....	100.5	37.1	38.3	38.9	39.9	37.9	37.1	38.3	38.9	39.9	37.8
Anniston-Oxford, AL.....	83.2	27.5	29.1	31.1	32.5	32.0	33.2	35.1	37.6	39.2	38.6
Appleton, WI.....	88.4	34.5	36.2	37.3	38.1	36.8	39.2	41.1	42.5	43.3	41.8
Asheville, NC.....	89.2	30.6	32.4	34.2	35.1	34.4	34.4	36.5	38.5	39.5	38.7
Athens-Clarke County, GA.....	90.4	27.3	28.3	29.6	30.6	29.8	30.3	31.5	32.9	34.0	33.1
Atlanta-Sandy Springs-Marietta, GA.....	96.4	36.2	37.6	38.7	38.9	37.1	37.8	39.2	40.4	40.6	38.6
Atlantic City-Hammonton, NJ.....	106.4	35.8	37.2	38.7	39.9	39.2	33.8	35.1	36.4	37.7	36.9
Auburn-Opelika, AL.....	83.9	24.8	26.2	27.4	28.2	27.6	29.7	31.4	32.8	33.8	33.1
Augusta-Richmond County, GA-SC.....	87.1	29.5	30.7	32.1	33.6	33.6	34.0	35.4	37.1	38.8	38.8
Austin-Round Rock-San Marcos, TX.....	97.2	34.9	36.7	37.6	38.9	37.5	36.1	38.0	38.9	40.3	38.8
Bakersfield-Delano, CA.....	94.2	26.5	27.8	29.4	30.1	29.6	28.3	29.7	31.4	32.1	31.6
Baltimore-Towson, MD.....	104.8	42.1	44.6	46.8	48.3	48.2	40.3	42.8	44.9	46.3	46.2
Bangor, ME.....	92.3	29.4	30.6	31.9	33.3	33.8	32.0	33.3	34.8	36.2	36.7
Barnstable Town, MA.....	101.3	43.8	47.0	49.8	51.3	50.1	43.4	46.6	49.5	50.9	49.7
Baton Rouge, LA.....	90.6	31.7	32.9	35.0	37.9	38.1	35.1	36.5	38.8	42.0	42.2
Battle Creek, MI.....	88.0	28.3	29.1	30.5	31.9	32.2	32.4	33.3	34.8	36.4	36.8
Bay City, MI.....	86.3	28.0	29.0	30.1	31.3	31.2	32.6	33.8	35.1	36.4	36.3
Beaumont-Port Arthur, TX.....	87.9	29.2	32.0	33.8	36.5	36.6	33.4	36.6	38.7	41.7	41.8
Bellingham, WA.....	95.4	30.3	32.6	35.5	36.3	35.5	31.9	34.4	37.4	38.2	37.3
Bend, OR.....	95.7	33.1	35.5	36.7	37.0	36.0	34.8	37.4	38.5	38.9	37.7
Billings, MT.....	89.6	33.9	36.3	38.2	40.0	39.2	38.0	40.7	42.8	44.8	43.9
Binghamton, NY.....	91.6	28.3	30.1	32.6	34.1	34.4	31.0	33.1	35.8	37.4	37.7
Birmingham-Hoover, AL.....	89.9	35.9	37.9	39.2	39.9	38.6	40.2	42.4	43.8	44.7	43.1
Bismarck, ND.....	85.9	33.5	34.9	36.9	38.7	39.3	39.2	40.9	43.3	45.3	46.0
Blacksburg-Christiansburg-Radford, VA.....	84.0	24.9	26.4	27.9	28.5	28.4	29.8	31.6	33.4	34.0	33.9
Bloomington, IN.....	89.9	26.7	28.1	29.3	30.7	31.0	29.8	31.4	32.8	34.3	34.5
Bloomington-Normal, IL.....	91.0	33.7	36.0	37.1	39.0	38.7	37.3	39.8	41.0	43.0	42.7
Boise City-Nampa, ID.....	91.1	33.1	35.8	36.0	35.4	34.0	36.5	39.5	39.7	39.0	37.4
Boston-Cambridge-Quincy, MA-NH.....	111.0	47.6	51.5	54.1	55.4	53.6	43.1	46.6	49.0	50.1	48.4
Boulder, CO.....	104.6	46.4	49.0	50.0	50.7	48.1	44.5	47.0	48.1	48.7	46.1
Bowling Green, KY.....	81.4	27.9	29.2	30.5	31.6	30.9	34.0	36.0	37.7	39.1	38.1
Bremerton-Silverdale, WA.....	100.5	37.8	39.8	42.2	43.9	43.4	37.8	39.8	42.2	43.8	43.3
Bridgeport-Stamford-Norwalk, CT.....	124.3	68.5	76.8	80.9	79.6	74.8	55.4	62.1	65.5	64.4	60.4
Brownsville-Harlingen, TX.....	82.6	18.5	19.4	20.6	22.1	22.4	22.6	23.6	25.0	26.9	27.2
Brunswick, GA.....	83.2	32.3	34.3	35.4	36.3	35.1	39.0	41.5	42.8	43.8	42.4
Buffalo-Niagara Falls, NY.....	92.2	31.8	33.7	36.0	37.3	37.5	34.6	36.8	39.2	40.7	40.8
Burlington, NC.....	89.0	28.5	30.2	31.4	31.9	30.7	32.2	34.1	35.5	36.0	34.6
Burlington-South Burlington, VT.....	100.6	35.9	38.7	40.4	41.9	41.6	35.9	38.6	40.4	41.9	41.5
Canton-Massillon, OH.....	85.2	29.7	30.7	32.0	32.8	32.4	35.0	36.2	37.7	38.7	38.1
Cape Coral-Fort Myers, FL.....	97.0	39.1	42.3	42.3	42.5	40.7	40.5	43.9	43.9	44.0	42.2
Cape Girardeau-Jackson, MO-IL.....	78.6	28.2	29.5	31.4	32.3	32.8	36.1	37.7	40.2	41.3	41.9
Carson City, NV.....	100.0	38.9	40.6	42.6	41.9	40.2	39.1	40.9	42.8	42.1	40.4
Casper, WY.....	88.5	43.2	49.7	50.0	57.3	53.4	49.0	56.5	56.9	65.1	60.5
Cedar Rapids, IA.....	86.8	33.7	35.4	37.6	39.5	39.0	38.9	41.0	43.6	45.7	45.1
Champaign-Urbana, IL.....	92.0	29.7	31.0	32.7	35.0	34.6	32.4	33.9	35.8	38.3	37.8
Charleston, WV.....	83.4	31.2	33.8	35.2	37.3	37.7	37.6	40.7	42.5	44.9	45.4
Charleston-North Charleston-Summerville, SC.....	94.0	31.8	33.6	35.3	36.1	35.3	34.0	35.9	37.7	38.6	37.7
Charlotte-Gastonia-Rock Hill, NC-SC.....	92.2	37.7	39.5	40.1	40.2	38.0	41.0	43.1	43.7	43.8	41.4
Charlottesville, VA.....	96.8	37.4	40.6	42.9	43.8	42.9	38.8	42.1	44.6	45.5	44.5
Chattanooga, TN-GA.....	86.7	31.2	32.9	34.3	34.7	33.8	36.1	38.2	39.8	40.2	39.1
Cheyenne, WY.....	90.1	37.6	41.3	43.3	46.2	46.0	42.0	46.1	48.4	51.6	51.2
Chicago-Joliet-Naperville, IL-IN-WI.....	104.7	40.1	42.8	44.9	46.1	44.4	38.5	41.1	43.1	44.3	42.5
Chico, CA.....	97.3	28.0	29.9	31.6	32.6	32.6	28.9	30.9	32.6	33.6	33.6
Cincinnati-Middletown, OH-KY-IN.....	89.8	35.7	37.4	38.1	39.0	38.0	40.0	41.9	42.7	43.6	42.5
Clarksville, TN-KY.....	86.1	30.1	32.6	33.1	35.9	35.3	35.1	38.0	38.6	41.8	41.2
Cleveland, TN.....	81.1	27.7	28.4	29.6	30.5	29.9	34.4	35.2	36.7	37.7	37.1
Cleveland-Elyria-Mentor, OH.....	86.9	35.9	38.0	39.4	40.4	39.5	41.6	44.0	45.6	46.7	45.6
Coeur d'Alene, ID.....	93.1	28.7	30.5	31.9	32.5	31.8	31.0	33.0	34.4	35.1	34.3
College Station-Bryan, TX.....	91.2	24.5	25.9	27.6	29.8	29.8	26.9	28.5	30.0	32.8	32.8
Colorado Springs, CO.....	95.7	34.2	35.7	37.6	38.5	38.4	36.0	37.6	39.5	40.4	40.3
Columbia, MO.....	89.6	32.2	33.7	35.4	36.4	36.6	36.1	37.8	39.7	40.9	41.0
Columbia, SC.....	90.4	31.8	33.8	35.0	36.1	35.5	35.3	37.6	38.9	40.1	39.4
Columbus, GA-AL.....	87.5	31.1	33.0	34.8	37.1	36.6	35.6	37.9	40.0	42.5	41.9
Columbus, IN.....	83.4	33.2	35.8	36.8	39.7	37.6	40.0	43.2	44.4	47.8	45.3
Columbus, OH.....	91.6	35.6	37.0	38.1	38.6	38.0	39.0	40.6	41.8	42.4	41.7
Corpus Christi, TX.....	92.5	29.7	31.8	34.3	37.3	36.6	32.3	34.6	37.3	40.6	39.7
Corvallis, OR.....	95.9	34.1	35.7	36.9	38.6	37.9	35.7	37.5	38.7	40.5	39.7
Crestview-Fort Walton Beach-Destin, FL.....	95.9	36.3	39.2	41.1	42.3	42.0	38.1	41.1	43.1	44.3	44.0
Cumberland, MD-WV.....	82.6	26.0	27.3	28.5	30.3	31.4	31.6	33.2	34.7	36.8	38.2

Table 5. Per Capita Personal Income Adjusted by Regional Price Parities by Metropolitan Area, 2005–2009—Continues

Area	Regional price parities	Per capita personal income (thousands of dollars)					Adjusted per capita personal income (thousands of dollars) ¹				
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Dallas-Fort Worth-Arlington, TX.....	99.8	37.9	39.9	41.5	43.7	41.8	38.2	40.2	41.8	44.0	42.0
Dalton, GA.....	83.1	27.4	28.0	29.1	28.9	28.0	33.2	33.9	35.3	35.0	33.9
Danville, IL.....	79.3	26.1	27.0	28.2	30.6	30.7	33.0	34.2	35.7	38.8	38.9
Danville, VA.....	84.1	27.1	27.5	29.1	29.9	30.1	32.4	32.9	34.8	35.8	35.9
Davenport-Moline-Rock Island, IA-IL.....	87.5	33.0	35.0	37.1	39.2	38.7	37.9	40.2	42.6	45.0	44.3
Dayton, OH.....	89.0	32.1	33.8	34.9	35.4	35.3	36.2	38.2	39.4	40.0	39.7
Decatur, AL.....	82.8	28.4	29.9	31.2	32.2	32.0	34.5	36.3	37.9	39.0	38.8
Decatur, IL.....	86.0	33.6	35.3	37.7	39.6	39.2	39.2	41.3	44.0	46.2	45.7
Deltona-Daytona Beach-Ormond Beach, FL.....	95.0	29.3	30.9	32.3	32.8	32.3	31.0	32.7	34.2	34.7	34.1
Denver-Aurora-Broomfield, CO.....	100.5	43.2	46.2	47.3	48.6	46.6	43.2	46.2	47.4	48.6	46.6
Des Moines-West Des Moines, IA.....	91.4	38.3	40.4	42.0	43.0	42.0	42.1	44.4	46.2	47.2	46.1
Detroit-Warren-Livonia, MI.....	95.6	36.5	37.3	38.5	39.6	37.9	38.4	39.2	40.5	41.6	39.8
Dothan, AL.....	82.2	29.6	30.8	32.5	33.4	33.0	36.2	37.7	39.8	40.9	40.4
Dover, DE.....	93.6	28.7	29.5	30.7	31.3	31.1	30.9	31.7	33.0	33.6	33.4
Dubuque, IA.....	87.1	30.8	32.8	34.7	36.1	35.6	35.6	37.9	40.0	41.6	41.1
Duluth, MN-WI.....	87.7	30.2	31.9	33.7	35.2	34.9	34.6	36.6	38.7	40.4	39.9
Durham-Chapel Hill, NC.....	93.0	36.3	38.5	40.8	41.5	41.0	39.3	41.6	44.1	44.9	44.3
Eau Claire, WI.....	88.7	29.7	31.5	32.7	33.8	33.7	33.6	35.7	37.1	38.2	38.1
El Centro, CA.....	91.4	24.3	25.5	26.7	28.6	28.7	26.7	28.0	29.4	31.5	31.5
Elizabethtown, KY.....	81.0	29.9	32.1	33.0	34.6	35.1	37.1	39.8	41.0	43.0	43.5
Elkhart-Goshen, IN.....	89.1	31.5	32.6	33.4	32.7	30.1	35.5	36.8	37.7	36.8	33.9
Elmira, NY.....	91.8	27.9	29.4	31.3	33.3	32.9	30.6	32.2	34.3	36.4	36.0
El Paso, TX.....	84.6	24.1	25.5	27.0	28.9	29.4	28.7	30.4	32.1	34.3	34.9
Erie, PA.....	90.1	27.8	29.3	31.2	32.6	32.6	31.0	32.6	34.8	36.3	36.3
Eugene-Springfield, OR.....	93.9	30.1	32.4	33.1	34.1	33.6	32.2	34.7	35.4	36.5	35.9
Evansville, IN-KY.....	87.2	32.6	34.5	34.9	37.0	36.5	37.6	39.7	40.2	42.6	42.0
Fairbanks, AK.....	103.5	32.3	34.9	36.4	39.5	38.9	31.3	33.9	35.3	38.4	37.7
Fargo, ND-MN.....	87.9	34.0	35.9	37.8	41.0	39.9	38.9	41.0	43.3	46.8	45.5
Farmington, NM.....	90.5	25.0	27.4	29.2	31.9	30.7	27.7	30.4	32.4	35.4	34.0
Fayetteville, NC.....	89.0	32.3	33.9	36.7	39.4	40.0	36.4	38.4	41.5	44.5	45.2
Fayetteville-Springdale-Rogers, AR-MO.....	87.5	29.1	30.6	32.0	32.5	31.8	33.4	35.1	36.7	37.4	36.4
Flagstaff, AZ.....	97.5	29.5	31.8	33.2	34.8	34.5	30.4	32.8	34.3	35.8	35.5
Flint, MI.....	89.6	27.3	28.2	29.4	29.4	29.5	30.6	31.7	32.4	33.0	33.1
Florence, SC.....	83.4	28.5	30.5	31.7	32.8	32.7	34.3	36.8	38.2	39.5	39.4
Florence-Muscle Shoals, AL.....	81.2	26.4	27.7	29.6	30.8	30.8	32.6	34.3	36.7	38.2	38.1
Fond du Lac, WI.....	81.8	32.5	33.8	35.4	36.3	35.4	39.9	41.6	43.5	44.6	43.4
Fort Collins-Loveland, CO.....	95.2	35.0	36.9	38.8	39.3	37.8	36.9	39.0	41.0	41.5	39.9
Fort Smith, AR-OK.....	83.4	27.1	28.7	30.1	31.6	30.9	32.6	34.6	36.3	38.1	37.2
Fort Wayne, IN.....	87.7	31.3	33.0	34.0	34.6	33.7	35.8	37.8	39.1	39.7	38.5
Fresno, CA.....	95.2	27.8	29.3	30.5	31.1	30.6	29.3	31.0	32.3	32.8	32.3
Gadsden, AL.....	82.2	26.4	27.4	29.1	30.2	30.0	32.2	33.5	35.7	36.9	36.6
Gainesville, FL.....	95.5	31.1	32.8	34.2	35.4	35.1	32.7	34.5	36.0	37.2	37.0
Gainesville, GA.....	86.4	29.0	29.9	30.3	30.5	29.0	33.7	34.8	35.3	35.5	33.7
Glens Falls, NY.....	96.3	28.7	29.9	31.4	32.9	33.1	30.0	31.2	32.8	34.3	34.5
Goldsboro, NC.....	82.8	27.2	28.5	30.5	31.7	31.7	33.0	34.6	37.1	38.5	38.4
Grand Forks, ND-MN.....	87.4	29.7	31.4	34.1	36.6	36.1	34.1	36.1	39.2	42.0	41.5
Grand Junction, CO.....	94.0	30.1	32.1	34.9	37.3	34.8	32.2	34.3	37.4	39.9	37.2
Grand Rapids-Wyoming, MI.....	89.4	31.4	32.7	33.0	33.5	32.4	35.3	36.7	37.1	37.6	36.4
Great Falls, MT.....	83.8	30.6	33.7	35.2	37.1	37.4	36.7	40.4	42.3	44.6	44.9
Greeley, CO.....	93.6	26.6	27.2	28.2	28.7	27.2	28.5	29.2	30.3	30.8	29.1
Green Bay, WI.....	88.6	33.4	35.0	36.2	37.2	36.7	37.9	39.8	41.1	42.1	41.6
Greensboro-High Point, NC.....	88.4	32.6	34.2	35.3	35.7	34.9	37.1	38.9	40.1	40.5	39.7
Greenville, NC.....	87.4	28.9	30.1	31.4	32.7	32.3	33.3	34.7	36.2	37.6	37.1
Greenville-Mauldin-Easley, SC.....	87.6	30.4	32.3	33.7	34.5	33.4	34.9	37.0	38.7	39.5	38.3
Gulfport-Biloxi, MS.....	91.6	29.2	32.4	37.6	36.1	35.9	32.0	35.5	41.3	39.6	39.3
Hagerstown-Martinsburg, MD-WV.....	94.5	29.4	30.9	32.0	32.8	33.1	31.2	32.9	34.1	34.8	35.2
Hanford-Corcoran, CA.....	94.5	23.7	24.1	26.8	27.3	26.4	25.2	25.7	28.5	29.0	28.1
Harrisburg-Carlisle, PA.....	94.5	35.3	36.7	38.5	39.7	39.7	37.5	39.0	40.9	42.2	42.2
Harrisonburg, VA.....	86.6	27.6	29.0	30.7	31.4	30.7	32.1	33.7	35.6	36.4	35.6
Hartford-West Hartford-East Hartford, CT.....	100.7	43.6	46.9	50.5	51.7	50.7	43.6	46.8	50.4	51.6	50.5
Hattiesburg, MS.....	83.2	26.1	27.7	28.5	29.5	29.3	31.5	33.5	34.5	35.6	35.3
Hickory-Lenoir-Morganton, NC.....	85.7	28.2	29.3	30.2	30.6	29.8	33.1	34.3	35.4	35.8	35.0
Hinesville-Fort Stewart, GA.....	83.8	22.7	24.4	25.5	28.3	26.4	27.2	29.2	30.6	33.9	31.6
Holland-Grand Haven, MI.....	91.0	30.6	32.0	32.4	32.8	32.3	33.8	35.4	35.8	36.3	35.7
Honolulu, HI.....	120.2	38.1	41.0	43.9	45.6	45.5	31.8	34.3	36.7	38.1	38.0
Hot Springs, AR.....	83.0	28.9	30.7	32.8	33.9	33.7	34.9	37.2	39.8	41.0	40.8
Houma-Bayou Cane-Thibodaux, LA.....	86.2	29.1	33.3	37.0	41.1	40.5	34.0	38.8	43.2	47.9	47.2
Houston-Sugar Land-Baytown, TX.....	100.2	39.6	42.7	44.6	48.9	46.6	39.7	42.8	44.8	49.1	46.7
Huntington-Ashland, WV-KY-OH.....	81.7	25.9	27.6	29.1	30.9	31.6	31.9	34.0	35.9	38.0	38.8
Huntsville, AL.....	87.3	33.5	35.3	37.0	38.7	38.4	38.6	40.6	42.7	44.6	44.1
Idaho Falls, ID.....	90.2	30.4	31.9	33.1	33.8	32.6	33.8	35.5	37.0	37.6	36.3
Indianapolis-Carmel, IN.....	91.6	36.5	38.3	39.8	39.8	38.5	40.0	42.0	42.6	43.7	42.2
Iowa City, IA.....	92.6	33.1	35.0	37.2	38.9	38.3	35.9	38.0	40.4	42.2	41.5
Ithaca, NY.....	101.3	28.3	29.7	31.9	33.9	33.7	28.0	29.4	31.6	33.6	33.4
Jackson, MI.....	88.0	26.9	27.5	28.5	29.8	29.5	30.8	31.4	32.6	34.0	33.6
Jackson, MS.....	90.2	31.9	34.0	34.9	36.5	36.0	35.6	37.9	38.9	40.7	40.1
Jackson, TN.....	81.4	29.2	30.1	31.6	32.8	32.1	36.0	37.1	39.0	40.4	39.5
Jacksonville, FL.....	94.8	36.5	39.3	40.3	40.5	39.4	38.7	41.7	42.7	43.0	41.7
Jacksonville, NC.....	90.1	31.7	33.1	36.9	40.3	42.5	35.4	36.9	41.2	44.9	47.3
Janesville, WI.....	89.4	29.2	31.1	31.6	32.1	31.3	32.8	34.9	35.6	36.1	35.1
Jefferson City, MO.....	78.6	30.4	31.5	33.2	34.8	34.7	38.8	40.3	42.4	44.5	44.3
Johnson City, TN.....	82.1	26.7	28.2	29.9	31.2	30.8	32.7	34.5	36.7	38.2	37.6
Johnstown, PA.....	80.9	26.7	28.0	30.1	31.6	32.0	33.1	34.8	37.4	39.2	39.6
Jonesboro, AR.....	78.7	26.6	27.7	29.0	30.6	30.2	33.9	35.4	37.1	39.1	38.5
Joplin, MO.....	84.6	26.6	27.7	28.8	30.0	29.8	31.5	32.9	34.3	35.6	35.4

Table 5. Per Capita Personal Income Adjusted by Regional Price Parities by Metropolitan Area, 2005–2009—Continues

Area	Regional price parities	Per capita personal income (thousands of dollars)					Adjusted per capita personal income (thousands of dollars) ¹				
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Kalamazoo-Portage, MI.....	89.6	30.3	31.5	32.6	33.8	33.1	34.0	35.4	36.6	37.9	37.1
Kankakee-Bradley, IL.....	95.5	27.7	28.8	30.3	31.7	31.8	29.2	30.3	31.9	33.4	33.4
Kansas City, MO-KS.....	85.7	36.1	38.4	40.1	41.3	40.4	42.3	45.0	47.1	48.4	47.3
Kennewick-Pasco-Richland, WA.....	91.8	29.4	30.1	32.6	34.0	34.5	32.2	32.9	35.7	37.2	37.8
Killeen-Temple-Fort Hood, TX.....	90.6	30.1	32.8	35.5	38.3	39.3	33.4	36.4	39.4	42.5	43.6
Kingsport-Bristol-Bristol, TN-VA.....	81.6	27.3	29.1	30.6	32.1	31.8	33.6	35.9	37.7	39.4	39.1
Kingston, NY.....	102.6	30.7	33.0	35.3	36.5	36.5	30.0	32.4	34.6	35.8	35.7
Knoxville, TN.....	86.9	31.3	33.0	34.2	34.9	33.9	36.2	38.1	39.5	40.3	39.2
Kokomo, IN.....	85.2	30.4	31.7	33.2	33.1	31.7	35.9	37.4	39.2	39.1	37.3
La Crosse, WI-MN.....	87.6	31.3	33.0	34.2	35.7	35.9	35.8	37.8	39.2	40.9	41.1
Lafayette, IN.....	90.9	27.9	28.8	29.9	31.4	30.6	30.8	31.8	33.0	34.7	33.8
Lafayette, LA.....	88.2	33.3	36.6	39.2	42.8	41.7	37.9	41.7	44.7	48.7	47.4
Lake Charles, LA.....	86.0	28.9	31.8	34.6	37.4	36.2	33.8	37.2	40.4	43.7	42.3
Lake Havasu City-Kingman, AZ.....	93.7	23.5	24.6	25.9	26.5	26.2	25.2	26.4	27.8	28.4	28.0
Lakeland-Winter Haven, FL.....	93.8	30.3	31.7	32.5	33.2	32.3	32.5	34.0	34.9	35.6	34.6
Lancaster, PA.....	96.2	33.0	34.3	36.1	37.1	36.3	34.5	35.8	37.8	38.7	37.9
Lansing-East Lansing, MI.....	91.9	30.2	31.5	32.8	34.5	34.2	33.0	34.5	35.9	37.7	37.3
Laredo, TX.....	88.1	20.2	21.0	22.0	23.6	23.3	23.0	24.0	25.1	26.9	26.5
Las Cruces, NM.....	87.3	24.0	25.1	26.7	27.8	28.2	27.6	28.9	30.8	32.1	32.4
Las Vegas-Paradise, NV.....	100.6	37.6	38.7	39.7	39.2	36.7	37.5	38.7	39.7	39.2	36.6
Lawrence, KS.....	92.8	27.6	29.9	31.0	32.2	32.1	29.9	32.4	33.6	34.8	34.7
Lawton, OK.....	86.8	28.6	31.6	33.0	35.8	36.6	33.1	36.6	38.3	41.5	42.3
Lebanon, PA.....	91.4	31.7	33.3	35.2	36.7	36.9	34.9	36.6	38.7	40.3	40.5
Lewiston, ID-WA.....	88.8	29.5	31.0	33.1	34.5	34.2	33.3	35.1	37.5	39.0	38.6
Lewiston-Auburn, ME.....	91.2	30.7	32.0	33.7	35.0	35.5	33.8	35.3	37.2	38.6	39.0
Lexington-Fayette, KY.....	88.8	33.3	35.3	36.4	36.6	35.7	37.7	40.0	41.2	41.5	40.4
Lima, OH.....	84.3	27.8	29.0	30.0	31.0	30.6	33.2	34.6	35.8	37.0	36.4
Lincoln, NE.....	89.2	33.8	35.4	36.8	38.0	37.4	38.1	39.9	41.5	42.8	42.0
Little Rock-North Little Rock-Conway, AR.....	89.7	34.0	36.1	38.9	39.5	39.4	38.1	40.4	43.6	44.2	44.1
Logan, UT-ID.....	89.1	22.6	23.4	25.1	26.1	25.2	25.5	26.4	28.3	29.4	28.4
Longview, TX.....	87.8	29.8	32.1	34.8	38.7	37.6	34.1	36.8	39.8	44.3	43.0
Longview, WA.....	92.5	26.8	27.7	29.7	30.6	30.9	29.1	30.1	32.3	33.3	33.5
Los Angeles-Long Beach-Santa Ana, CA.....	116.6	38.9	42.2	43.6	44.5	42.8	33.5	36.4	37.6	38.3	36.8
Louisville-Jefferson County, KY-IN.....	87.4	34.1	36.3	37.5	38.2	37.7	39.2	41.8	43.1	44.0	43.3
Lubbock, TX.....	91.1	28.6	29.7	31.6	34.2	34.1	31.5	32.8	34.9	37.7	37.5
Lynchburg, VA.....	85.9	29.5	31.3	32.6	33.8	33.3	34.5	36.7	38.2	39.5	38.9
Macon, GA.....	86.3	30.5	31.9	33.1	34.6	34.4	35.6	37.1	38.5	40.3	40.0
Madera-Chowchilla, CA.....	94.2	23.9	25.0	26.6	26.9	26.8	25.4	26.6	28.4	28.7	28.5
Madison, WI.....	95.0	39.4	42.0	43.3	44.1	43.1	41.7	44.4	45.8	46.7	45.5
Manchester-Nashua, NH.....	108.1	40.4	42.8	44.9	45.7	44.2	37.5	39.9	41.8	42.5	41.1
Manhattan, KS.....	85.2	28.9	32.1	36.5	39.4	39.9	34.0	37.9	43.1	46.5	47.0
Mankato-North Mankato, MN.....	82.9	31.7	33.5	34.0	36.2	35.3	38.5	40.6	41.3	43.9	42.7
Mansfield, OH.....	85.2	27.2	28.1	28.9	30.1	29.6	32.1	33.2	34.1	35.6	34.9
McAllen-Edinburg-Mission, TX.....	82.4	17.5	18.0	19.2	20.3	20.5	21.4	22.0	23.4	24.8	25.0
Medford, OR.....	94.4	31.3	33.7	34.6	34.7	34.3	33.3	35.9	36.8	36.9	36.5
Memphis, TN-MS-AR.....	91.3	34.9	36.5	38.0	38.7	37.6	38.4	40.2	41.8	42.6	41.4
Merced, CA.....	92.8	24.4	25.2	28.2	28.0	27.5	26.4	27.3	30.6	30.3	29.8
Miami-Fort Lauderdale-Pompano Beach, FL.....	104.5	38.7	41.9	43.6	44.5	42.8	37.2	40.3	42.0	42.8	41.1
Michigan City-La Porte, IN.....	82.6	27.4	28.9	29.8	31.2	30.2	33.4	35.2	36.3	38.0	36.7
Midland, TX.....	92.1	43.0	49.2	52.3	59.7	54.2	47.0	53.7	57.1	65.1	59.1
Milwaukee-Waukesha-West Allis, WI.....	91.6	37.9	40.7	41.8	43.0	42.3	41.6	44.7	45.9	47.2	46.4
Minneapolis-St. Paul-Bloomington, MN-WI.....	99.4	42.7	45.0	46.8	47.7	45.8	43.2	45.5	47.3	48.2	46.3
Missoula, MT.....	93.9	31.4	33.2	34.5	35.3	35.2	33.6	35.6	36.9	37.8	37.6
Mobile, AL.....	87.4	26.5	28.6	29.6	31.0	30.9	30.4	32.9	34.0	35.6	35.4
Modesto, CA.....	97.8	28.5	29.7	31.1	31.7	31.2	29.3	30.5	31.9	32.5	32.1
Monroe, LA.....	84.0	28.5	30.3	31.6	33.8	34.2	34.1	36.3	37.8	40.4	40.9
Monroe, MI.....	91.9	31.5	32.3	33.5	33.5	32.0	34.4	35.4	36.6	36.6	34.9
Montgomery, AL.....	89.5	32.3	33.9	34.8	36.3	35.9	36.3	38.1	39.1	40.7	40.3
Morgantown, WV.....	82.9	28.3	30.5	32.9	34.0	34.8	34.2	37.0	39.9	41.2	42.1
Morristown, TN.....	79.5	24.8	25.8	26.8	27.7	27.6	31.4	32.6	33.9	35.1	34.8
Mount Vernon-Anacortes, WA.....	98.5	32.3	35.4	37.7	38.8	38.2	32.9	36.1	38.4	39.6	38.9
Muncie, IN.....	87.2	27.0	27.7	28.7	29.7	29.4	31.1	31.9	33.1	34.2	33.9
Muskegon-Norton Shores, MI.....	85.7	25.7	26.6	27.3	28.1	27.8	30.2	31.2	32.1	33.0	32.5
Myrtle Beach-North Myrtle Beach-Conway, SC.....	92.8	28.1	29.5	30.1	30.0	29.1	30.5	31.9	32.6	32.4	31.5
Napa, CA.....	118.6	45.7	49.0	51.0	51.8	49.8	38.7	41.5	43.3	43.8	42.1
Naples-Marco Island, FL.....	100.5	54.7	61.4	63.6	63.7	60.0	54.7	61.4	63.7	63.7	60.0
Nashville-Davidson-Murfreesboro-Franklin, TN.....	91.6	36.1	38.2	39.5	40.2	38.7	39.6	41.9	43.4	44.2	42.4
New Haven-Milford, CT.....	114.9	40.3	43.2	46.5	48.2	47.4	35.3	37.8	40.7	42.1	41.4
New Orleans-Metairie-Kenner, LA.....	95.6	33.1	43.7	44.7	44.4	42.7	34.8	46.0	47.0	46.7	44.8
New York-Northern New Jersey-Long Island, NY.....	121.1	45.9	50.1	53.6	54.4	52.0	38.1	41.6	44.5	45.2	43.1
Niles-Benton Harbor, MI.....	85.6	29.5	31.0	32.7	34.0	33.5	34.7	36.4	38.5	40.0	39.3
North Port-Bradenton-Sarasota, FL.....	98.6	44.6	48.1	49.4	50.0	48.5	45.4	49.0	50.9	50.9	49.4
Norwich-New London, CT.....	100.8	40.1	42.2	46.2	47.4	46.8	40.0	42.1	46.1	47.2	46.6
Ocala, FL.....	92.0	28.5	30.6	31.4	31.6	31.1	31.2	33.5	34.4	34.5	33.9
Ocean City, NJ.....	106.1	40.3	42.3	44.8	46.1	46.3	38.2	40.1	42.5	43.6	43.8
Odessa, TX.....	89.4	26.5	29.7	32.6	36.1	35.5	29.7	33.4	36.6	40.5	37.7
Ogden-Clearfield, UT.....	91.2	28.9	30.8	32.9	33.4	32.7	31.9	33.9	36.3	36.8	36.0
Oklahoma City, OK.....	89.3	33.3	36.6	37.4	40.0	38.7	37.5	41.2	42.1	45.0	43.6
Olympia, WA.....	101.7	35.1	37.3	39.8	41.1	40.8	34.7	36.8	39.4	40.6	40.3
Omaha-Council Bluffs, NE-IA.....	90.9	38.3	40.7	42.5	44.0	43.0	42.4	45.0	47.0	48.6	47.5
Orlando-Kissimmee-Sanford, FL.....	97.9	33.0	35.0	36.1	36.6	35.3	33.9	35.9	37.1	37.6	36.2
Oshkosh-Neenah, WI.....	87.8	33.0	35.3	35.9	37.4	37.1	37.8	40.4	41.1	42.8	42.4
Owensboro, KY.....	81.2	28.3	29.8	31.0	32.8	32.8	35.0	36.9	38.4	40.6	40.6
Oxnard-Thousand Oaks-Ventura, CA.....	109.9	42.2	45.3	47.2	47.1	45.9	38.6	41.5	43.3	43.1	41.9

Table 5. Per Capita Personal Income Adjusted by Regional Price Parities by Metropolitan Area, 2005–2009—Continues

Area	Regional price parities	Per capita personal income (thousands of dollars)					Adjusted per capita personal income (thousands of dollars) ¹				
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Palm Bay-Melbourne-Titusville, FL.....	95.8	33.4	35.6	37.0	37.6	37.5	35.0	37.4	38.8	39.4	39.2
Palm Coast, FL.....	91.9	29.0	30.9	31.8	32.8	32.7	31.7	33.8	34.8	35.9	35.7
Panama City-Lynn Haven-Panama City Beach, FL.....	94.9	31.8	33.6	35.5	36.4	36.3	33.7	35.6	37.6	38.6	38.4
Parkersburg-Marietta-Vienna, WV-OH.....	83.8	26.7	28.6	30.0	31.5	31.9	32.1	34.4	36.0	37.8	38.2
Pascagoula, MS.....	89.7	27.8	28.9	33.6	33.9	33.9	31.2	32.4	37.6	37.9	38.0
Pensacola-Ferry Pass-Brent, FL.....	92.5	29.3	31.4	33.0	33.8	33.9	31.8	34.2	35.8	36.7	36.8
Peoria, IL.....	88.5	34.3	37.2	39.0	41.0	39.8	39.0	42.2	44.3	46.5	45.2
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD.....	107.3	40.4	43.4	45.3	46.7	46.1	37.9	40.6	42.4	43.7	43.1
Phoenix-Mesa-Glendale, AZ.....	99.5	33.9	36.0	36.7	36.2	34.5	34.2	36.3	37.1	36.5	34.8
Pine Bluff, AR.....	84.0	24.8	25.9	27.6	29.0	29.5	29.7	31.0	33.0	34.7	35.3
Pittsburgh, PA.....	86.1	35.8	38.9	40.9	42.6	42.3	41.8	45.4	47.8	49.7	49.3
Pittsfield, MA.....	93.9	37.3	39.6	41.8	43.3	42.8	39.9	42.4	44.8	46.3	45.8
Pocatello, ID.....	87.8	25.6	26.8	28.2	28.9	28.5	29.3	30.7	32.3	33.1	32.6
Portland-South Portland-Biddeford, ME.....	98.2	36.4	38.9	40.5	42.0	41.4	37.3	39.8	41.5	42.9	42.3
Portland-Vancouver-Hillsboro, OR-WA.....	96.8	35.9	38.0	39.4	40.4	39.2	37.2	39.5	41.0	41.9	40.7
Port St. Lucie, FL.....	96.9	36.9	39.5	40.3	41.0	39.6	38.2	40.9	41.9	42.5	41.0
Poughkeepsie-Newburgh-Middletown, NY.....	120.2	34.4	36.4	38.9	39.9	39.1	28.8	30.4	32.5	33.4	32.6
Prescott, AZ.....	96.7	26.7	28.1	29.9	30.1	29.1	27.8	29.3	31.1	31.3	30.3
Providence-New Bedford-Fall River, RI-MA.....	98.2	35.7	37.9	39.9	41.2	40.8	36.5	38.8	40.8	42.2	41.7
Provo-Orem, UT.....	93.0	22.1	22.9	23.9	24.4	23.9	23.9	24.8	25.9	26.3	25.3
Pueblo, CO.....	87.6	26.8	27.6	29.5	31.0	31.6	30.7	31.7	33.9	35.6	36.2
Punta Gorda, FL.....	95.0	31.9	34.4	35.8	36.4	35.9	33.7	36.5	37.9	38.5	37.9
Racine, WI.....	88.8	33.2	34.9	36.0	37.1	36.7	37.5	39.5	40.7	42.0	41.5
Raleigh-Cary, NC.....	93.5	36.9	38.8	40.0	39.7	38.0	39.7	41.8	43.1	42.7	40.8
Rapid City, SD.....	86.3	33.4	35.0	36.8	38.1	37.3	38.9	40.8	42.9	44.3	43.4
Reading, PA.....	94.4	32.0	34.2	35.7	36.7	36.3	34.1	36.5	38.1	39.0	38.6
Redding, CA.....	96.2	30.9	32.9	34.4	34.4	34.1	32.2	34.4	36.0	35.9	35.6
Reno-Sparks, NV.....	99.4	43.0	44.0	45.4	44.9	42.4	43.4	44.5	46.0	45.4	42.8
Richmond, VA.....	94.2	38.0	40.0	41.7	42.4	41.2	40.5	42.7	44.5	45.2	43.8
Riverside-San Bernardino-Ontario, CA.....	103.1	28.1	29.5	30.4	30.5	29.7	27.4	28.7	29.6	29.8	28.9
Roanoke, VA.....	88.2	33.7	35.4	37.6	38.8	38.3	38.4	40.4	42.9	44.2	43.6
Rochester, MN.....	90.7	37.7	39.7	41.8	42.7	42.2	41.8	44.0	46.3	47.2	46.7
Rochester, NY.....	96.3	34.1	35.9	38.0	39.4	39.0	35.6	37.4	39.7	41.1	40.7
Rockford, IL.....	89.2	29.3	31.2	32.2	32.8	32.0	33.1	35.1	36.3	37.0	36.0
Rocky Mount, NC.....	85.5	28.1	29.2	30.6	31.7	31.9	33.0	34.3	36.0	37.3	37.5
Rome, GA.....	82.0	28.5	29.6	31.1	32.3	31.8	35.0	36.3	38.2	39.5	39.0
Sacramento-Arden-Arcade-Roseville, CA.....	101.4	37.0	39.0	40.5	41.3	40.3	36.6	38.6	40.2	41.0	39.9
Saginaw-Saginaw Township North, MI.....	87.5	27.3	28.2	29.3	30.1	30.1	31.4	32.4	33.7	34.6	34.6
St. Cloud, MN.....	89.7	29.9	31.5	32.7	34.4	33.6	33.5	35.3	36.7	38.5	37.6
St. George, UT.....	95.4	24.2	25.4	26.9	27.0	26.1	25.5	26.8	28.3	28.4	27.5
St. Joseph, MO-KS.....	84.5	27.0	28.5	30.2	31.8	32.2	32.1	33.9	35.9	37.8	38.2
St. Louis, MO-IL.....	85.5	36.5	38.8	40.3	42.3	40.7	42.8	45.6	47.4	49.7	47.8
Salem, OR.....	91.4	28.3	30.4	31.4	32.6	32.3	31.1	33.4	34.6	35.8	35.5
Salinas, CA.....	104.5	37.3	40.9	42.3	42.5	41.7	35.8	39.4	40.7	40.9	40.1
Salisbury, MD.....	87.5	29.3	30.1	31.7	32.9	33.2	33.6	34.6	36.5	37.8	38.0
Salt Lake City, UT.....	96.1	33.8	36.2	38.0	38.6	37.5	35.4	37.9	39.8	40.3	39.2
San Angelo, TX.....	88.8	29.7	30.8	32.4	36.0	35.9	33.6	34.8	36.7	40.7	40.6
San Antonio-New Braunfels, TX.....	91.5	31.2	33.0	34.7	36.5	36.3	34.3	36.2	38.2	40.1	39.8
San Diego-Carlsbad-San Marcos, CA.....	111.7	41.5	44.0	45.8	47.0	45.7	37.3	39.6	41.2	42.3	41.1
Sandusky, OH.....	82.2	33.5	34.7	35.7	36.8	36.2	40.9	42.5	43.7	45.0	44.3
San Francisco-Oakland-Fremont, CA.....	123.5	54.9	59.4	61.7	62.4	60.0	44.7	48.4	50.3	50.8	48.8
San Jose-Sunnyvale-Santa Clara, CA.....	124.1	51.6	55.8	59.3	58.4	55.2	41.8	45.2	48.1	47.2	44.6
San Luis Obispo-Paso Robles, CA.....	104.1	35.6	38.6	40.7	41.1	40.1	34.4	37.2	39.3	39.7	38.7
Santa Barbara-Santa Maria-Goleta, CA.....	107.7	41.7	46.0	47.1	48.0	46.6	38.9	42.9	44.0	44.8	43.4
Santa Cruz-Watsonville, CA.....	120.4	44.0	48.2	51.3	51.2	49.1	36.8	40.3	42.9	42.8	41.0
Santa Fe, NM.....	97.0	39.1	41.5	43.3	44.4	42.6	40.5	43.0	44.9	46.0	44.1
Santa Rosa-Petaluma, CA.....	117.3	42.3	46.0	47.8	47.3	44.8	36.3	39.4	41.0	40.5	38.3
Savannah, GA.....	93.8	33.7	36.0	38.0	39.5	38.3	36.1	38.6	40.7	42.3	41.0
Scranton-Wilkes-Barre, PA.....	88.9	30.9	32.5	34.5	35.9	36.2	35.0	36.7	39.1	40.6	40.8
Seattle-Tacoma-Bellevue, WA.....	106.0	43.2	47.0	49.9	51.6	50.4	40.9	44.6	47.4	49.0	47.7
Sebastian-Vero Beach, FL.....	89.0	50.3	56.3	56.9	56.3	56.7	56.7	63.6	64.2	67.3	63.5
Sheboygan, WI.....	88.0	34.7	36.6	37.9	38.5	37.8	39.6	41.9	43.3	44.0	43.1
Sherman-Denison, TX.....	89.5	26.6	27.9	30.0	32.0	32.1	29.8	31.3	33.7	35.9	36.0
Shreveport-Bossier City, LA.....	87.5	31.4	33.6	34.5	38.7	38.4	36.1	38.7	39.7	44.5	44.0
Sioux City, IA-NE-SD.....	85.9	30.0	30.7	33.0	35.6	34.7	35.1	35.9	38.7	41.6	40.6
Sioux Falls, SD.....	88.6	36.4	37.7	39.1	40.4	39.8	41.3	42.8	44.4	45.8	45.1
South Bend-Mishawaka, IN-MI.....	88.0	31.5	33.3	34.4	35.7	34.2	36.0	38.1	39.3	40.8	39.0
Spartanburg, SC.....	85.5	27.9	29.1	30.1	31.1	30.2	32.7	34.2	35.4	36.5	35.5
Spokane, WA.....	91.5	29.6	31.6	33.6	34.8	34.6	32.5	34.8	36.9	38.2	37.9
Springfield, IL.....	88.8	34.4	35.9	37.9	40.3	40.5	38.9	40.6	43.0	45.6	45.8
Springfield, MA.....	95.5	32.9	34.6	36.5	38.0	37.9	34.6	36.4	38.5	39.9	39.8
Springfield, MO.....	86.0	28.7	29.8	31.3	32.2	31.8	33.6	34.9	36.6	37.6	37.1
Springfield, OH.....	86.1	29.0	30.4	31.5	32.5	32.6	33.9	35.5	36.8	37.9	38.0
State College, PA.....	97.9	29.0	30.6	32.6	33.9	34.0	29.7	31.4	33.5	34.7	34.9
Steubenville-Weirton, OH-WV.....	82.1	26.2	27.8	29.4	31.4	31.7	32.1	34.0	36.0	38.4	38.7
Stockton, CA.....	99.7	28.0	29.5	31.1	31.6	31.1	28.2	29.8	31.4	31.8	31.3
Sumter, SC.....	85.2	25.5	27.1	28.4	29.5	29.5	30.1	32.0	33.5	34.8	34.7
Syracuse, NY.....	93.8	31.5	33.1	35.5	36.7	36.8	33.7	35.5	38.0	39.3	39.4

Table 5. Per Capita Personal Income Adjusted by Regional Price Parities by Metropolitan Area, 2005–2009—Table Ends

Area	Regional price parities	Per capita personal income (thousands of dollars)					Adjusted per capita personal income (thousands of dollars) ¹				
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Tallahassee, FL	94.7	30.9	32.3	33.5	34.2	33.8	32.8	34.3	35.6	36.3	35.9
Tampa-St. Petersburg-Clearwater, FL	93.1	34.6	36.7	37.8	38.4	37.6	37.4	39.6	40.8	41.5	40.6
Terre Haute, IN	84.7	26.2	27.2	28.6	30.0	30.1	31.1	32.3	33.9	35.6	35.6
Texarkana, TX-Texarkana, AR	84.8	27.9	29.2	31.4	33.3	33.1	33.0	34.6	37.3	39.4	39.2
Toledo, OH	87.1	30.5	32.0	32.9	33.5	33.2	35.2	36.9	38.1	38.7	38.3
Topeka, KS	87.4	30.9	32.8	34.9	36.6	36.8	35.5	37.8	40.2	42.1	42.3
Trenton-Ewing, NJ	112.3	45.9	50.4	52.5	54.0	51.9	41.1	45.1	47.0	48.3	46.4
Tucson, AZ	94.6	30.1	32.1	33.2	34.6	33.8	32.0	34.1	35.3	36.7	35.9
Tulsa, OK	88.5	34.9	38.5	39.5	42.1	40.4	39.6	43.8	44.9	47.8	45.8
Tuscaloosa, AL	88.2	29.4	31.1	32.8	34.0	33.5	33.5	35.5	37.4	38.8	38.1
Tyler, TX	92.2	32.6	33.8	35.7	39.2	38.3	35.5	36.9	39.0	42.7	41.7
Utica-Rome, NY	91.1	28.0	29.3	31.4	32.9	33.3	30.9	32.4	34.7	36.3	36.7
Valdosta, GA	82.4	25.9	26.7	28.2	29.6	29.2	31.5	32.6	34.4	36.1	35.5
Vallejo-Fairfield, CA	115.8	34.7	36.6	38.5	39.2	39.0	30.1	31.8	33.4	34.0	33.8
Victoria, TX	89.2	30.3	32.4	34.7	37.7	36.4	34.1	36.5	39.1	42.5	41.0
Vineland-Millville-Bridgeton, NJ	99.3	27.8	29.2	30.3	31.7	31.9	28.1	29.6	30.7	32.1	32.2
Virginia Beach-Norfolk-Newport News, VA-NC	96.2	34.1	36.3	38.4	39.8	39.5	35.6	38.0	40.1	41.6	41.2
Visalia-Porterville, CA	91.3	25.3	26.0	28.3	28.5	27.7	27.9	28.6	31.2	31.3	30.5
Waco, TX	89.6	27.3	28.6	30.1	31.9	32.3	30.6	32.1	33.8	35.8	36.1
Warner Robins, GA	90.1	29.5	30.9	32.2	33.2	33.1	32.9	34.5	35.9	37.0	36.9
Washington-Arlington-Alexandria, DC-VA-MD-WV	115.2	50.1	53.4	56.0	57.8	57.0	43.7	46.6	48.9	50.4	49.6
Waterloo-Cedar Falls, IA	87.1	30.9	32.5	34.5	36.6	36.4	35.7	37.5	39.8	42.2	41.9
Wausau, WI	87.7	33.4	34.8	36.2	36.7	36.1	38.2	39.9	41.5	42.1	41.3
Wenatchee-East Wenatchee, WA	91.7	28.2	29.8	31.8	33.5	33.3	30.9	32.6	34.9	36.7	36.4
Wheeling, WV-OH	79.5	27.7	29.3	30.4	32.3	32.3	35.0	37.1	38.4	40.8	40.8
Wichita, KS	88.3	34.0	37.6	38.3	40.3	38.9	38.7	42.8	43.7	45.8	44.3
Wichita Falls, TX	89.3	30.0	33.0	34.5	38.9	38.2	33.8	37.1	38.8	43.7	42.9
Williamsport, PA	89.0	27.4	28.7	30.1	31.5	31.9	30.9	32.5	34.1	35.5	36.0
Wilmington, NC	90.9	30.9	32.4	33.8	34.7	34.0	34.2	35.8	37.4	38.3	37.5
Winchester, VA-WV	88.1	30.8	32.7	33.9	34.6	34.1	35.1	37.3	38.7	39.4	38.8
Winston-Salem, NC	87.8	33.5	34.8	35.8	36.4	35.0	38.4	39.8	41.0	41.7	40.0
Worcester, MA	102.1	36.9	39.3	41.6	42.8	42.0	36.3	38.7	41.0	42.1	41.3
Yakima, WA	88.5	26.0	27.3	29.6	31.6	31.3	29.5	31.0	33.6	35.9	35.5
York-Hanover, PA	93.8	32.5	33.4	35.2	36.3	36.0	34.8	35.8	37.7	38.9	38.5
Youngstown-Warren-Boardman, OH-PA	85.0	28.5	30.1	31.5	32.0	31.7	33.7	35.6	37.2	37.8	37.4
Yuba City, CA	95.6	27.3	28.6	29.7	30.9	31.3	28.7	30.1	31.2	32.4	32.8
Yuma, AZ	91.8	22.8	23.3	24.7	25.2	25.4	25.0	25.6	27.1	27.6	27.7
All metropolitan areas	100.0	37.1	39.5	41.3	42.4	41.2	37.1	39.5	41.3	42.4	41.2
Maximum	124.3	68.5	76.8	80.9	79.6	74.8	56.7	63.6	65.5	67.3	63.5
Minimum	78.6	17.5	18.0	19.2	20.3	20.5	21.4	22.0	23.4	24.8	25.0
Range	45.7	51.0	58.7	61.7	59.3	54.3	35.4	41.6	42.1	42.5	38.5

1. Adjusted results are balanced to ensure that the sum of nominal income across metropolitan areas equals the sum of adjusted incomes across metropolitan areas. The annual balancing factors for metropolitan areas from 2005 to 2009

are 0.99522, 0.99455, 0.99436, 0.99528, 0.99617, respectively.