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The Geography of Urban Poverty

Wende Mix

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The Geography of Urban Poverty

Abstract

The Census Bureau reports poverty statistics annually based on American Community Survey (ACS) data. For the past two years this has included listing the ten places with the highest poverty rates and the ten with the lowest poverty rates. This study considers the interpretation of these statistics when different geographies form the analytical framework. As expected, interpretation of these statistics is influenced by the Modifiable Areal Unit Problem (MAUP) in geography.

Keywords

Buffalo, Poverty/Low Wage Work/Income Inequality, Data/Demographics/History, Demographics and Data, General, Report, Other, PDF

The Geography of Urban Poverty

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Abstract

The Census Bureau reports poverty statistics annually based on American Community Survey (ACS) data. For the past two years this has included listing the ten places with the highest poverty rates and the ten with the lowest poverty rates. This study considers the interpretation of these statistics when different geographies form the analytical framework. As expected, interpretation of these statistics is influenced by the Modifiable Areal Unit Problem (MAUP) in geography.

Introduction

Measuring poverty in the United States is difficult. Poverty levels, as defined by the Office of Management and Budget (OMB), are based on income and family size. Surveys are used to collect this information from a sample of the population. Aggregate estimates are calculated from the individual sample data. Interpretation of the summary statistics often invokes strong political and emotional responses.

The Census Bureau reports poverty statistics annually based on American Community Survey (ACS) data. For the past two years these reports included listing the ten <u>places</u> with the highest and lowest poverty rates. In fact, the bureau summarizes poverty statistics for many different geographies including urbanized areas, metropolitan areas, states and the nation. Place boundaries are legally defined, such as incorporated cities. Urbanized area boundaries are based on the density or concentration of the population. Metropolitan areas are defined by OMB using county boundaries as the basic unit and economic linkages to measure spatial interaction. Note that places, urban areas, and metropolitan areas are not hierarchical or nested geographies. In addition, urbanized and metropolitan areas can

cross state boundaries. This study considers the interpretation of poverty rates when different geographies form the analytical framework for the estimates. Analysis focuses on locations with the ten worst and ten best rates.

Analysis

The ten places with the highest poverty rate estimates in 2006 and 2007 are

Places	Poverty Rate (2006)	Margin of Error
Detroit city, MI	32.5	1.8
Buffalo city, NY	29.9	2.6
Cincinnati city, OH	27.8	2.4
Cleveland city, OH	27.0	1.8
Miami city, FL	26.9	2.3
St. Louis city, MO	26.8	1.9
El Paso city, TX	26.4	1.8
Milwaukee city, WI	26.2	1.7
Philadelphia city, PA	25.1	1.1
Newark city, NJ	24.2	2.6

Table 1 2006 poverty rates for places from "Income, Earnings, and Poverty: Data From the 2006 American Community Survey", American Community Survey Reports, By Bruce H. Webster Jr. & Alemayehu Bishaw, August 2007, p. 25.

	Place	es	Poverty Rate (2007)	Margin of Error
Detroit	city,	MI	33.8	1.4
Cleveland	city,	ОН	29.5	2.1
Buffalo	city,	NY	28.7	2.5
El Paso	city,	ТХ	27.4	1.8
Memphis	city,	TN	26.2	1.9
Miami	city,	FL	25.5	2.2
Milwaukee	city,	WI	24.4	1.4
Newark	city,	NJ	23.9	2.6
Philadelphia	city,	PA	23.8	1.3
Cincinnati	city,	ОН	23.5	2.1

Table 2 2007 poverty rates for places from "Income, Earnings, and Poverty: Data From the 2007 American Community Survey," American Community Survey Reports, By Alemayehu Bishaw & Jessica Semega, August 2008, p. 25. shown in Tables 1 and 2. Memphis, TN joined the group in 2007 and St Louis, MO dropped off the list. Cincinnati, OH has the only statistically significant change at a 90% confidence level during this period. This city went from having the third largest estimate to claiming the tenth largest estimate.

Contrary to what was reported in the local media, in 2006, there is no statistically significant difference between the poverty rate in Buffalo, NY and the poverty rate in Detroit, Cincinnati, Cleveland Miami, and St. Louis. In 2007, there is no significant difference between the poverty

rate in Buffalo, NY and the poverty rate in Cleveland, El Paso, Memphis, and Miami.

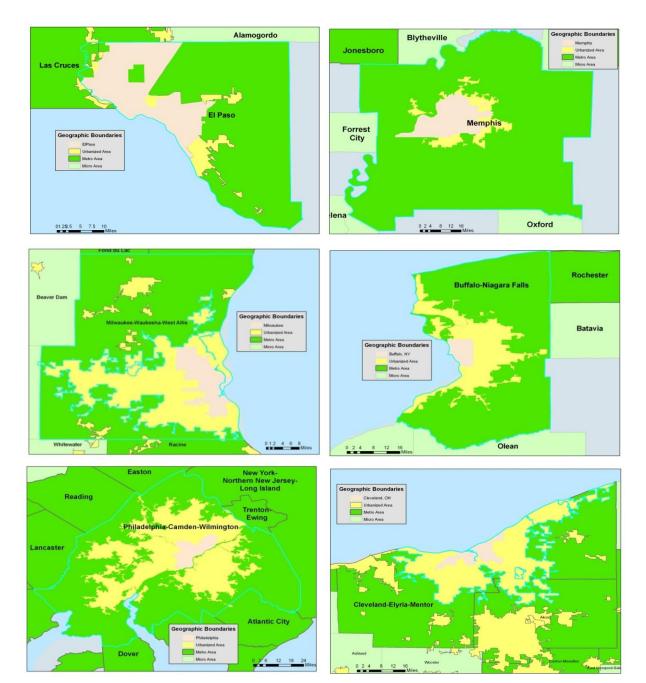
Table 3 details the relationships between cities in the 2007 top ten worst rate group and their corresponding urbanized and metropolitan areas with respect to land area and population. Figures 1 through 10 are maps showing the positional relationships of these boundaries.

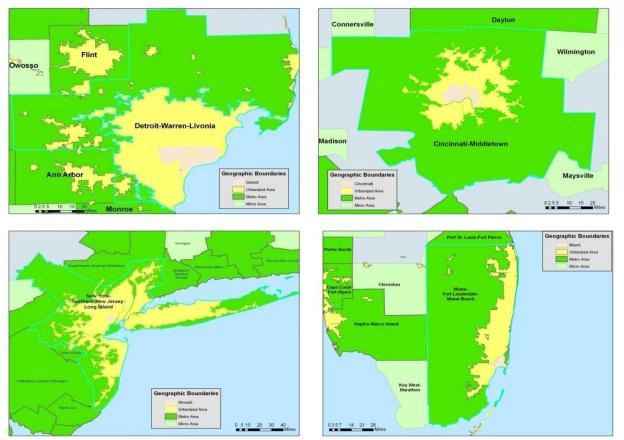
GEOGRAPHY	Ratio of City Land Area to URBANIZED AREA Land Area	Ratio of City Population to URBANIZED AREA Population (Estimate)	Margin of Error	GEOGRAPHY		Ratio of City Population to METRO AREA Population (Estimate)	Margin of Error
El Paso city, TX	113%	88.1%	0.7%	El Paso city, TX	25%	83.1%	1.2%
Memphis city, TN	73%	66.1%	0.9%	Memphis city, TN	6%	49.4%	0.8%
Milwaukee city, WI	19%	43.7%	0.6%	Milwaukee city, WI	6%	37.4%	0.5%
Buffalo city, NY	12%	28.0%	0.9%	Philadelphia city, PA	3%	24.7%	0.0%
Philadelphia city, PA	8%	27.8%	0.1%	Buffalo city, NY	3%	23.0%	0.8%
Cleveland city, OH	12%	23.0%	0.6%	Cleveland city, OH	4%	18.8%	0.5%
Detroit city, MI	11%	21.1%	0.3%	Detroit city, MI	4%	18.0%	0.3%
Cincinnati city, OH	12%	18.6%	0.6%	Cincinnati city, OH	2%	13.5%	0.4%
Miami city, FL	4%	6.6%	0.3%	Miami city, FL	1%	6.4%	0.3%
Newark city, NJ	1%	1.4%	0.1%	Newark city, NJ	0.4%	1.4%	0.1%

Table 3 2007 Cities with highest poverty rates land area and population relationships with surrounding urbanized and metropolitan areas.

These ten cities follow four general patterns with respect to their relationship to the surrounding urbanized and metropolitan areas. Miami and Newark represent very small proportions of both land area and population with respect to the other geographies. The opposite may be said of El Paso and Memphis which represent over 70% of the land area and more than two thirds of the population of the surrounding urban area. Excluding Milwaukee, the remaining five cities represent between 8% and 12% of the land area and between 18% and 28% of the population of the surrounding urban area. Milwaukee falls between these cities and the two cities that represent both large land area and

population. With respect to the surrounding metropolitan area, all cities except El Paso represent a very small proportion of the land area. Five cities have less than one fifth of the metropolitan area population. Another two have less than one fourth the metro area population and another two represent less than one half of the metro area population.





Figures 1-10: Maps of place, urban, and metro boundaries for 10 places with highest poverty rates.

Places with the ten lowest poverty rate estimates in 2006 and 2007 are shown in Table 4. San Diego, CA joined the list in 2007 and Anaheim, CA dropped out of the group. Colorado Springs, CO, San Francisco, CA, Honolulu, HI and Anchorage, AK experienced statistically significant change at a 90% confidence level in poverty rate during this period. Poverty rates decreased for all except Colorado Springs, CO.

Geography	Poverty Rate 2006	Margin of Error	Geography	Poverty Rate 2007	Margin of Error
Anaheim City, CA	12.3%	2.2%	San Diego city, CA	12.1%	0.9%
San Francisco city, CA	12.1%	1.1%	Las Vegas city, NV	11.9%	1.6%
Honolulu CDP, HI	11.5%	1.7%	Colorado Springs city, CO	11.8%	1.6%
Las Vegas city, NV	11.2%	1.4%	San Francisco city, CA	10.5%	0.8%
Mesa city, AZ	11.0%	1.7%	Mesa city, AZ	10.2%	1.3%
San Jose city, CA	10.3%	0.8%	San Jose city, CA	9.9%	1.0%
Anchorage municipality, AK	9.6%	1.8%	Honolulu CDP, HI	8.6%	1.0%
Colorado Springs city, CO	9.6%	1.4%	Anchorage municipality, AK	7.3%	1.4%
Virginia Beach city, VA	7.2%	1.1%	Virginia Beach city, VA	6.4%	1.1%
Plano city, TX	5.1%	2.2%	Plano city, TX	5.9%	1.4%

Table 4: 2006 poverty rates for places from "Income, Earnings, and Poverty: Data From the 2006 American Community Survey", American Community Survey Reports, By Bruce H. Webster Jr. & Alemayehu Bishaw, August 2007, p. 25. 2007 poverty rates for places from "Income, Earnings, and Poverty: Data From the 2007 American Community Survey," American Community Survey Reports, By Alemayehu Bishaw & Jessica Semega, August 2008, p. 25.

GEOGRAPHY	Ratio of City Land Area to URBANIZED AREA Land Area	Ratio of City Population to URBANIZED AREA Population (Estimate)	Margin of Error	GEOGRAPHY	Ratio of City Land Area to METRO AREA Land Area	METRO AREA Population	Margin of Error
Anchorage municipality,				Anchorage municipality,			
AK	2298%	117%	2.0%	AK	7%	77%	0.1%
Colorado Springs, CO	94%	83%	1.0%	Colorado Springs, CO	7%	64%	1.2%
San Jose, CA	68%	58%	1.0%	San Jose, CA	7%	52%	0.9%
Honolulu CDP, HI	54%	48%	1.4%	Honolulu CDP, HI	8%	43%	0.8%
San Diego, CA	43%	46%	0.8%	San Diego, CA	14%	39%	1.3%
Las Vegas, NV	40%	37%	1.3%	Las Vegas, NV	2%	31%	1.1%
Virginia Beach, VA	54%	30%	0.2%	Virginia Beach, VA	11%	26%	0.0%
San Francisco, CA	11%	23%	0%	San Francisco, CA	2%	18%	0.0%
Mesa, AZ	16%	15%	0.5%	Mesa, AZ	1%	12%	0.4%
Plano, TX	5%	6%	0.2%	Plano, TX	1%	4%	0.1%
Population ratios are calculated	using ACS 2007 of	data and represent	t the popul	ation for which poverty was deterr	nined from tal	ole B17001. San F	rancisco,

CA urbanized area has insufficient sample cases in 2007so ACS 2006 data were used.

Table 5: 2007 Cities with lowest poverty rates land area and population relationships with surrounding urbanized and metropolitan areas.

Table 5 details the relationships between cities in the 2007 top ten lowest rates group and their corresponding urbanized and metropolitan areas with respect to land area and population. Anchorage, AK stands out from the list since the urbanized area of Anchorage (based on density) is much smaller than the politically defined boundaries of the city. These ten cities follow the same general patterns with respect to their relationship with the surrounding urbanized and metropolitan areas as those in the worst list. However, more of these cities contain significant amounts of land area and population of the surrounding urban and metropolitan areas. San Francisco, CA, Mesa, AZ and Plano, TX are the exceptions. Mesa and Plano may be considered edge cities of Phoenix and Dallas, respectively. San Francisco is adjacent to Oakland, a sizable city in the metropolitan cluster.

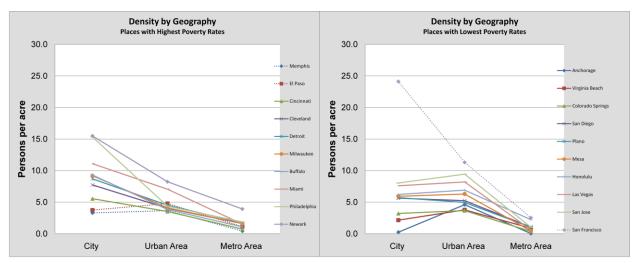


Figure 11: Density of the ten worst and best places and their surrounding urbanized and metropolitan areas.

Seven of the ten cities with the highest poverty rates contain less than 30% of the urban area population and less than 25% of the Metro area population. In contrast, seven of the ten cities with the lowest poverty rates contain more than 30% of the urban area population and more than 25% of the Metro

area population. Eight of the ten cities with the worst rates contain less than 20% of the urban area land. In contrast, seven of the ten cities with the lowest poverty rates contain more than 40% of the urban area land. Seven of the ten cities with the lowest poverty rates have densities (persons per acre) that are <u>lower</u> than their surrounding urban area (Figure 11). In contrast, eight of the ten cities with the highest poverty rates have densities that <u>exceed</u> the surrounding urban area. These cities are two to three times more dense than their urban areas which is only true for San Francisco in the lowest rate group.

Top Ten	POPULATION FOR WHOM POVERTY STATUS IS DETERMINED: Total (Estimate)	Margin of Error	POPULATION FOR WHOM POVERTY STATUS IS DETERMINED: Income in the past 12 months below poverty level (Estimate)	Margin of Error	Poverty Rate	Margin of Error
Places with lowest poverty rate	5,614,895	41,412	570,270	22,180	10.2%	0.4%
Places with highest poverty rate	5,502,260	30,899	1,468,642	33,441	26.7%	0.6%
Urban Area stats for best rate places	16,237,280	40,225	1,966,031	41,631	12.1%	0.3%
Urban Area stats for worst rate places	38,894,187	33,754	5,158,875	59,269	13.3%	0.2%
Metro Area stats for best rate places	24,186,319	10,003	2,667,932	49,031	11.0%	0.2%
Metro Area stats for worst rate places	42,624,598	10,744	5,480,709	61,395	12.9%	0.1%

Table 6: 2007 population and poverty statistics for the ten best and worst places and their surrounding urbanized and metropolitan areas.

1				
			Universe:	Universe:
			POPULATION	POPULATION FOR
			FOR WHOM	WHOM POVERTY
		Universe:	POVERTY	STATUS IS
		POPULATION FOR	STATUS IS	DETERMINED:
		WHOM POVERTY	DETERMINED:	Income in the past
	Universe: POPULATION	STATUS IS	Income in the	12 months below
	FOR WHOM POVERTY	DETERMINED:	past 12 months	poverty
Places with the Most People	STATUS IS DETERMINED:	Total(Margin of	below poverty	level(Margin of
Living in Poverty	Total (Estimate)	Error)	level (Estimate)	Error)
New York city, New York	8,149,049	+/-2,938	1,507,696	+/-36,229
Los Angeles city, California	3,739,923	+/-42,353	691,887	+/-25,367
Chicago city, Illinois	2,686,892	+/-31,833	550,580	+/-22,044
Houston city, Texas	2,011,802	+/-30,979	417,160	+/-20,514
Philadelphia city, Pennsylvania	1,400,617	+/-2,316	333,142	+/-18,331
Detroit city, Michigan	796,076	+/-12,025	269,011	+/-12,159
Phoenix city, Arizona	1,494,708	+/-21,742	266,702	+/-17,690
Dallas city, Texas	1,219,471	+/-19,769	257,788	+/-15,624
San Antonio city, Texas	1,248,991	+/-13,352	227,135	+/-14,348
El Paso city, Texas	600,214	+/-8,541	164,748	+/-11,532
Memphis city, Tennessee	619,769	+/-10,107	162,209	+/-11,950
Places with the Fewest People				
Living in Poverty				
Mesa city, Arizona	475,355	+/-15,795	48,618	+/-6,526
Arlington city, Texas	357,474	+/-12,622	46,621	+/-6,980
Colorado Springs city, Colorado	382,234	+/-7,379	45,212	+/-6,058
Lexington-Fayette urban county, Ke		+/-521	43,484	+/-5,141
Anaheim city, California	339,133	+/-15,988	42,475	+/-7,360
Raleigh city, North Carolina	336,320	+/-9,113	41,030	+/-6,592
Riverside city, California	307,109	+/-14,521	37,591	+/-6,953
Honolulu CDP, Hawaii	349,102	+/-11,158	30,064	+/-3,671
Virginia Beach city, Virginia	420,467	+/-1,317	26,705	+/-4,629
Anchorage municipality, Alaska	274,912	+/-666	20,113	+/-3,768
Plano city, Texas	262,236	+/-8,642	15,453	+/-3,749

Overall, the population of all places with the lowest and highest poverty rates is nearly equal (see Table 6). However, the total people living below the poverty level in the ten places with the highest poverty rate is nearly three times the number in the ten places with the lowest rates. At the urban and metropolitan levels, total poverty rates for the ten best and worst places are almost equal and these geographies for the worst places contain more than double (urban areas) and nearly double (metropolitan areas) the population.

Four of the cities with the highest poverty rates belong to the group of cities with the most

Table 6.1 Numbers of people living in poverty

people living in poverty. Six of the cities with the lowest poverty rates belong to the group of cities with the fewest people living in poverty. (see Table 6.1)

GEOGRAPHY	URBANIZED AREA POVERTY RATE (Estimate)	Margin of Error	GEOGRAPHY	METRO AREA POVERTY RATE (Estimate)	Margin of Error
El Paso, TX	30.2%	1.8%	El Paso, TX	28.7%	1.7%
Memphis, TN	20.4%	1.5%	Memphis, TN	18.8%	1.1%
Detroit, MI	14.8%	0.5%	Detroit, MI	13.9%	0.4%
Buffalo, NY	14.4%	0.9%	Buffalo, NY	13.5%	0.9%
Milwaukee, WI	14.0%	0.8%	Miami, FL	12.8%	0.4%
Cleveland, OH	13.3%	0.7%	Cleveland, OH	12.7%	0.6%
Miami, FL	12.8%	0.4%	Milwaukee, WI	12.7%	0.7%
Newark, NJ	12.5%	0.2%	Newark, NJ	12.2%	0.2%
Philadelphia, PA	12.1%	0.4%	Philadelphia, PA	11.5%	0.4%
Cincinnati, OH	11.2%	0.7%	Cincinnati, OH	11.1%	0.6%

Table 7: Urbanized and Metropolitan Area poverty rates from American Factfinder, www.census.gov, ACS 2007 Table B17.

Table 7 contains individual 2007 poverty rate estimates for urbanized areas and metropolitan areas surrounding the ten places with the worst rates. The urban and metro areas are sorted from highest to lowest. El Paso and Memphis, the two places that represent large proportions of land area and population for these surrounding geographies, have the highest poverty rates. Poverty rates for the remaining eight urban and metro areas fall below 15%. Urban and Metro area poverty rates are less than half the size of city poverty rates.

Table 8 contains a summary comparing the statistical significance between the differences in poverty rates of each of the worst rate cities and their surrounding geographies. Except for El Paso, the city poverty rate is significantly larger than the urban area and metro area poverty rates. Urban and metro areas that contain significantly more people than the city have significantly lower poverty rates than the city. All cities have poverty rates that are significantly larger than their corresponding state and national rates.

Only Detroit and Milwaukee have urban area poverty rates that are significantly larger than their metro area rates.

Cleveland's, Buffalo's, and Philadelphia's urbanized area poverty rates are no different from the corresponding state's poverty rate. Cincinnati's urbanized area rate is significantly lower than the Ohio state rate. However, the Cincinnati urbanized area includes parts on Kentucky and Indiana. The remaining six urbanized area rates are all significantly larger than their corresponding state poverty rate.

Cleveland's and Miami's urbanized area poverty rates are no different from the national poverty rate. Newark's, Philadelphia's, and Cincinnati's urbanized area poverty rates are significantly lower than the national rate. The remaining five urbanized area rates are all significantly larger than the national poverty rate.

Detroit's, Cleveland's, Buffalo's, and Philadelphia's metro area poverty rates are no different from the corresponding state's poverty rate. Cincinnati's metro area rate is significantly lower than the Ohio state rate. The remaining five metro area rates are all significantly larger than their corresponding state

City to Other Geographies	Urbanized Area	Metro Area	State	National
Detroit city, MI	L	L	L	L
Cleveland city, OH	L	L	L	L
Buffalo city, NY	L	L	L	L
El Paso city, TX	S	ND	L	L
Memphis city, TN	L	L	L	L
Miami city, FL	L	L	L	L
Milwaukee city, WI	L	L	L	L
Newark city, NJ	L	L	L	L
Philadelphia city, PA	L	L	L	L
Cincinnati city, OH	L	L	L	L
Urbanized Area to Other				
Geographies		Metro Area	State	National
Detroit UA, MI		L	L	L
Cleveland UA, OH		ND	ND	ND
Buffalo UA, NY		ND	ND	L
El Paso UA, TX		ND	L	L
Memphis UA, TN		ND	L	L
Miami UA, FL		ND	L	ND
Milwaukee UA, WI		L	L	L
Newark UA, NJ		ND	L	S
Philadelphia UA, PA		ND	ND	S
Cincinnati UA, OH		ND	S	S
Metro Area to Other				
Geographies			State	National
Detroit Metro Area, MI			ND	L
Cleveland Metro Area, OH			ND	ND
Buffalo Metro Area, NY			ND	ND
El Paso Metro Area, TX			L	L
Memphis Metro Area, TN			L	L
Miami Metro Area, FL			L	ND
Milwaukee Metro Area, WI			L	ND
Newark Metro Area, NJ			L	S
Philadelphia Metro Area, PA			ND	S
Cincinnati Metro Area, OH			S	S

Table 8: Comparison of poverty rates of ten worst places for different geographies. L = 90% confident that poverty rate for left row geography is Larger than poverty rate for corresponding column geography. E.g. The poverty rate for Detroit city exceeds the poverty rate for the Detroit urban and metro areas, the state of Michigan, and the U.S.. S = 90% confident that poverty rate for left row geography is Smaller than poverty rate for

corresponding column geography. E.g. The poverty rate for El Paso city is smaller than the poverty rate for the El Paso urban area.

ND = 90% confident that there is No Difference between the poverty rate for the left row geography and the corresponding column geography. E.g. There is no difference in the poverty rate of the Cleveland Urban Area and the Cleveland Metro Area, the state of Ohio, or the U.S..

poverty rate.

Cleveland's, Buffalo's, Milwaukee's, and Miami's metro area poverty rates are no different from the national poverty rate. Newark's, Philadelphia's, and Cincinnati's metro area poverty rate is significantly lower than the national rate. Only three metro area rates are significantly larger than the national poverty rate.

Table 9 contains a summary comparing the statistical significance between the differences in poverty rates of each of the lowest rate cities and their surrounding geographies. Most cities' poverty rate is no different or significantly smaller than the urban area and metro area poverty rates. San Jose and possibly San Francisco, CA are the two exceptions. There was insufficient sample in the San Francisco urbanized area for the Census Bureau to produce estimates. All cities have lower rates than their corresponding state and national rates.

Except for Mesa, AZ and Plano, TX, urban area rates are no different from metro area rates for the cities with the lowest rates.

City to Other Geographies	Urbanized Area	Metro Area	State	National
San Diego city, CA	ND	ND	ND	S
Las Vegas city, NV	ND	ND	ND	ND
Colorado Springs city, CO	ND	ND	ND	ND
San Francisco city, CA	no data	L	S	S
Mesa city, AZ	S	S	S	S
San Jose city, CA	L	L	S	S
Honolulu CDP, HI	ND	ND	ND	S
Anchorage municipality, AK	ND	ND	ND	S
Virginia Beach city, VA	S	S	S	S
Plano city, TX	S	S	S	S
Urbanized Area to Other Geographies		Metro Area	State	National
San Diego_UA, CA		ND	S	S
Las Vegas_UA, NV		ND	ND	S
Colorado Springs UA, CO		ND	ND	S
San Francisco_UA, CA		no data	no data	no data
Mesa_UA, AZ		L	ND	S
San Jose UA, CA		ND	S	S
Honolulu CDP, HI		ND	ND	S
Anchorage municipality, AK		ND	ND	S
Virginia Beach_UA, VA		ND	L	S
Plano_UA, TX		L	S	S
Metro Area to Other Geographies			State	National
San Diego Metro Area, CA			S	S
Las Vegas Metro Area, NV			ND	S
Colorado Springs Metro Area, CO			S	S
San Francisco Metro Area, CA			S	S
Mesa Metro Area, AZ			S	ND
San Jose Metro Area, CA			S	S
Honolulu CDP, HI			ND	S
Anchorage municipality, AK			ND	S
Virginia Beach Metro Area, VA			ND	S
Plano Metro Area, TX			S	S

Only Virginia Beach has an urban area poverty rate that is greater than the state rate. None of the urban areas has rates higher than the national rate.

None of the metro area poverty rates is higher than the corresponding state or national rates.

Finally, Table 10 shows the lists of ten lowest and ten highest poverty rates for urbanized and metropolitan areas with over 250,000 population in 2007. This is equivalent to Table 11 (pg 25) in the 2007 Census report if the analysis had been done using these different geographies.

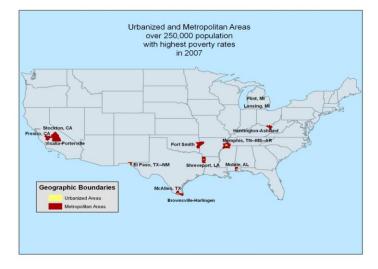
Only El Paso, TX and Memphis, TN are in the top ten for all three geographies (places, urbanized, and metropolitan areas) with the highest poverty rates. With

Table 9: Comparison of poverty rates of ten best places for different geographies.

L = 90% confident that poverty rate for left row geography is Larger than poverty rate for corresponding column geography.

S = 90% confident that poverty rate for left row geography is **S**maller than poverty rate for corresponding column geography.

ND = 90% confident that there is No Difference between the poverty rate for the left row geography and the corresponding column geography.



respect to the ten lowest rates, Honolulu, HI is on the list for all three geographies. San Jose makes the list for places and urbanized areas but not metropolitan areas. Anchorage is on the list for places and metropolitan areas but not urbanized areas.

Conclusions

Identifying locations with high or low rates of poverty depends heavily on the criteria used to establish boundaries around those locations. In this application the impact of boundaries created by political decisions, density measures, and economic interactions on poverty statistics were evaluated. When individual data are aggregated differently, the results of the spatial analysis change. Others have suggested evaluating spatial statistics for several zoning alternatives prior to drawing conclusions from the data. This approach as applied here indicates that locations with significant poverty issues include El Paso, TX and Memphis, TN. However, both of these places contain large proportions of the surrounding urban and metro populations. In fact, there is very little difference between the place zone and the urban zone for these locations. More importantly, <u>eight of the places with the worst rates are not part</u> of the top ten when zone boundaries change.

Other findings include: 1) most places with the worst rates are surrounded by less dense urban areas and most places with the best rates are surrounded by more dense urban areas. 2) Places with the highest rates have significantly higher rates than all the other geographies considered, including state and national, whereas places with the lowest rates have rates that are no different from or smaller than those of surrounding geographies. Politically defined boundaries may not be the best for evaluating poverty.

	Ten of the Highest Rates			Ten of the Lowest Rates	
Area	Ra		Area	Ra	
		Margin of		E atima ata	Margin o
Link and Anna a	Estimate	Error (+/-)		Estimate	Error (+/-)
Urbanized Areas			Urbanized Areas		
McAllen, TX	33.9%	2.6%	San Jose, CA	8.5%	0.7%
El Paso, TXNM	30.2%	1.8%	OgdenLayton, UT	8.2%	1.1%
Mobile, AL	22.3%	2.2%	Honolulu, HI	8.0%	0.8%
Shreveport, LA	22.0%	2.3%	Boise City, ID	8.0%	1.3%
Memphis, TNMSAR	20.4%	1.5%	TemeculaMurrieta, CA	7.7%	1.4%
			Round Lake BeachMcHenryGrayslake,		
Fresno, CA	19.9%	1.6%	ILWI	7.5%	1.9%
Jackson, MS	19.4%	1.8%	Washington, DCVAMD	7.3%	0.4%
Flint, MI	19.2%	1.9%	BridgeportStamford, CTNY	6.7%	0.9%
Lansing, MI	18.5%	1.8%	Mission Viejo, CA	5.9%	0.9%
Stockton, CA	18.5%	2.5%	Concord, CA	5.5%	0.9%
Metropolitan Areas			Metropolitan Areas		
Brownsville-Harlingen, TX	34.7%	2.5%	Minneapolis-St. Paul-Bloomington, MN-WI	8.4%	0.4%
McAllen-Edinburg-Mission, TX	34.3%	2.6%	Palm Bay-Melbourne-Titusville, FL	8.3%	1.0%
El Paso, TX	28.7%	1.7%	Allentown-Bethlehem-Easton, PA-NJ	8.0%	0.8%
Visalia-Porterville, CA	23.7%	2.3%	Ogden-Clearfield, UT	7.9%	1.1%
Mobile, AL	21.1%	1.9%	Anchorage, AK	7.7%	1.1%
Shreveport-Bossier City, LA	21.0%	1.7%	Honolulu, HI	7.6%	0.7%
Fresno, CA	20.0%	1.6%	Manchester-Nashua, NH	6.8%	1.2%
			Washington-Arlington-Alexandria, DC-VA-		
Fort Smith, AR-OK	19.1%	2.1%	MD-WV	6.8%	0.4%
Huntington-Ashland, WV-KY-					
ОН	19.1%	2.3%	Bridgeport-Stamford-Norwalk, CT	6.6%	0.9%
Memphis, TN-MS-AR	18.8%	1.1%	Norwich-New London, CT	6.5%	1.2%

Percentage in Poverty in the Past 12 Months for Ten of the Highest and Lowest Poverty-Rate Urbanized and Metropolitan Areas With 250,000 or More People: 2007

Table 10: Ten worst and best poverty rates for urbanized and metropolitan areas.