The Geography of Need:

Identifying Human Service Needs in Rural America

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Colleen Heflin

Kathleen Miller

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Colleen Heflin and Kathleen Miller
RUPRI, University of Missouri

INTRODUCTION

The delivery of human services in America is undergoing a fundamental restructuring. The Great Recession has created a historically high level of need for social services that has strained the existing infrastructure. At the same time, state and federal budget deficits have resulted in deep cuts to basic programs. As a consequence of this tension in both the supply and demand for human services, technological innovation has transformed the ways in which the public applies for and receives social services. Given these changes, it is of critical importance to generate tools that can help direct financial resources to targeted areas of human service need.

Fortunately, the need for tools coincides with the first time release of American Community Survey five year average county-level data by the U.S. Census Bureau in December 2010. Prior to this, data was only available for counties with populations above certain population thresholds[1]. Currently, however, data are available for each county in the United States, allowing for a comprehensive examination of human services need across the country.

This brief begins by describing the conceptual framework for existing place-based typologies and our rationale for creating a new typology built upon a human service needs profile. We then detail our data and methods for our typology, including a discussion of the relative trade-offs in using different geographic units of analysis. We show the results of our typology both for the nation as a whole and by metropolitan county status. We document how human service needs differ significantly, in both the degree of need as well as the types of needs, in metropolitan and non-metropolitan counties.   Finally, we illustrate how this framework can be used to target human service needs in geographic regions of the country.

EXISTING PLACE-BASED TYPOLOGIES

There are numerous ways to categorize geography into different typologies based on the rurality of places. The most common typology is the Core Based Statistical Area designations by the Office of Management and Budget, which categorizes counties into their official designation of metropolitan, micropolitan, and noncore. Counties that contain an urbanized area form the

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[1] Annual data is released for counties with a population of 65,000 or more; three year average data is released for counties with population of 20,000 or more

central counties of metropolitan areas, and surrounding counties that are linked through commuting ties are outlying counties of metropolitan areas. Counties that contain an urban cluster with between 10,000 and 49,999 individuals form the central counties of micropolitan areas, and surrounding counties that are linked through commuting ties are outlying counties of micropolitan areas. Counties not classified as metropolitan or micropolitan are considered noncore counties. Together, micropolitan and noncore counties make up nonmetropolitan counties, and are usually equated with rural.

Other typologies utilize the CBSA classifications as a basis, but further divide these into additional categories based on the adjacency and size of urban place. The most common of these classifications are the Rural-Urban Continuum Codes and the Urban Influence Codes developed by the Economic Research Service, United States Department of Agriculture.

One important consequence of the classification system for core based statistical areas is the inclusion of some very rural counties into metropolitan areas, due to the commuting criteria that links surrounding counties to metropolitan cores. There are 385 (35%) metropolitan counties that contain a population that is more than 50 percent rural.

Recognizing these difficulties, Dr. Andrew Isserman at the University of Illinois, developed a county-level classification system that classifies counties based on the population density, and distribution of population between urban and rural areas within the county, regardless of the CBSA status of the county. The resultant scheme is a simple four-level classification: urban, rural, mixed-rural, and mixed-urban (see Isserman, 2005).

County classifications remain a useful tool given the availability of data with which to describe conditions and trends, but as is apparent from the previous classification schemes, it is difficult to classify counties into disparate groups. Recognizing this challenge, Dr. Brigitte Waldorf at Purdue University developed an index of relative rurality for all U.S. counties. This index is based on population, population density, extent of urbanized area, and distance to the nearest metropolitan areas. The index is scaled from 0 (most urban) to 1 (most rural). (See Waldorf, 2007)

Other typologies are not based solely on geography, but rather on economic and policy characteristics of rural America. The most common is the Economic Research Service county typologies, which seek to classify the U.S. based on the primary economic activity within each county in the U.S. (farming, mining, manufacturing, service, government, or nonspecialized). The policy typologies, which are not mutually exclusive, seek to identify particular characteristics that exist in geographic areas (persistent poverty, housing stress, low education, low employment, population loss, retirement destination, recreation).Other typologies are more descriptive of the conditions in rural America. For example, Karl Stauber (2001) divides rural America into four categories (urban periphery, sparsely populated, high amenity, high poverty).

The Carsey Institute describes "three rural Americas:" (amenity-rich, declining resource-dependent, chronically poor).

While all of these typologies provide a descriptive picture of rural America, none were designed to capture the full breadth of needs, which this analysis attempts to do.

RATIONALE FOR HUMAN SERVICE NEEDS PROFILE

Given the of wide variation of programs and services that fall under the large umbrella of *human services*, an effort to try to identify the magnitude of needs across the life course at the geographic level requires a multidimensional approach. In developing a human service needs profile, our thinking was informed by an understanding of how population demographics combine with economic risk factors to create different patterns of need across the country. This section contains the rational for our approach.

Human service needs depend on the characteristics of the population in need. For example, elderly populations require different programs and services to meet their needs than do households with young children. Similarly, as compensation for military service, veterans have access to a host of programs and services that are not available to non-veteran households. As a result, in these instances, the human service needs of an area will depend upon the age structure, fertility rate, and prevalence of veterans in the population.

Additionally, the provision of human services may need to be adapted to deal with language barriers, cultural issues, transportation needs, or low education levels.   For example, areas with a high foreign born population may find it helpful to provide services in languages besides English. Areas with high levels of Native American or Hispanic populations may need to adopt culturally appropriate programming. Similarly areas with high levels of transportation needs may find it helpful to adopt on-line approaches to service delivery that remove the necessity to appear in person to apply for human service programs. Conversely, areas in which a proportion of the population does not have a high school diploma may find the adoption of on-line approaches to service delivery more challenging.

Human services needs are partly a function of the economic needs of an area. There is a long history of identifying the needs of an area by focusing on the proportion of the area that is poor and the percent of total income received from government transfers. More recently, the SNAP participation rate has become an alternative measure of economic distress. In addition to economic distress, the recent recession has also created a high level of family distress—one measure of this distress is the extent to which households are composed of more than one family.

DATA AND METHODS

Selecting the unit of analysis

In selecting geographic units for analysis below the state level, there are relatively few standard statistical units to choose between: counties, pumas, census tracks, and census block groups.

- Counties provide an easily recognized unit of analysis that is stable over time, with few exceptions. While counties are not often recognized as an official unit of government in New England states (Connecticut), data is still tabulated at that level across the U.S. and is readily available from several sources.
- Public Use Micro Data Areas (PUMAS) are geographic areas developed by the Census Bureau for which raw data is provided. The geographic size of a PUMA varies widely, based on population, but each PUMA has approximately 100,000 population. However the geographic boundaries of PUMAS change over time.
- A Census tract is a subdivision of counties that contain between 1,500 and 8,000 people, with the optimal size being 4,000. The geographic size of tracts varies widely, depending on the density of population
- A block group has a population of 300 to 6,000, with the optimal size being 1,500. These are the lowest geographic unit for which the Census Bureau tabulates and presents data in the American Community Survey.

Table 1 summaries the strengths and weaknesses of each geographic unit for use in this analysis.

Table 1. Relative Strengths of Different Units of Analysis

	County	*PUMA*	*Tract*	*Block Group*
Stable boundaries over time	Yes	No	No	No
Boundaries consistent with human service delivery areas	Yes	No	No	No
Frequency of available data in the American Community Survey	Varied	Annual	5 year averages	5 year averages
Data widely available from other sources?	Yes	No	Limited	Limited
Geographic size consistent across regions	No	No	No	No
Population size relatively consistent across regions	No	Yes	Yes	Yes

Given the relative advantages and disadvantages of the different geographical units, we elected to use the county as the main unit of analysis for this exercise. It is important to point out that, in general, counties tend to be smaller in the East and larger in the West. The size differential has the consequence that counties in the East are more likely to be homogeneous than in the West. Western counties therefore may have pockets of need that are of similar size to pockets of need in the East but because the pockets are contained within larger geographic units, the need is not identified by our method here. While this possibility is more prevalent in larger geographic counties such as in the West, this does occur across all states, and is the same problem that is inherent with other official statistics such as county unemployment rates, poverty rates and the like. Therefore, while counties are not ideal, they are the best unit available for our purposes.

Our data come from Census Bureau Annual Population Estimates (2009), the Census Bureau American Community Survey 5-year average data (2005-2009), the Census Bureau Small Area Income and Poverty Estimates (2009), the Bureau of Economic Analysis Regional Economic Information System (2008), and the Veteran's Administration (2009). From Annual Population Estimates, we calculate the percent of the population age 65 and over, the percent of the population that is Native American, Hispanic, and African-American. We calculate the work dependency ratio as the ratio of the population under 20 and over 64 to the population age 20 to 64. The percent of the population that are veterans is based on county level estimates from the Veteran's Administration divided by the total population from the Population Estimates.

We use data from the American Community Survey 2005-2009 five year county level averages for data on the percentage of the county population in subfamilies, the number of births to women age 15-50, the percentage of the population age 25 and older without a high school diploma, the percentage of the population that is foreign born, the percentage of households without a vehicle available and the percent of households participating in the Supplemental Nutritional Assistance Program (or SNAP, formerly known as food stamps).

Finally, the county level poverty rate comes from the Small Area Income and Poverty Estimates (SAIPE) from the Census Bureau. County level data on the percent of total county income from transfers is taken from the BEA REIS for 2008.

Because the use of a five year average data point may smooth out trends in specific indicators, we utilized annual data wherever available for counties as an alternative to the ACS. The official counts of population from the Census Bureau are the annual population estimates, so this is the proper source for the age, race, and ethnicity calculations. The annual data estimates for poverty was selected over the five year average to avoid the smoothing out of the poverty that may result from including the pre-recession years in the average. For several indicators, however, the ACS is the only available source for data. While ACS data is available at an annual basis and three-year average for some counties, it is appropriate to use the same data across all counties, so the 5-year average data is used for all counties.

For each measure, we estimated the national county level distribution and selected the 90th percentile as the threshold that indicates that the county has a need that is significant. This level is reflective of counties experiencing the need, and provides us with a consistent number of counties in each of our need indicators. Thus, we have roughly 314 counties that stand out as having a high need for each of our measures. While using the 90th percentile as our cut-off has the advantage that it is a consistent rule, it does have its disadvantages. In some cases, the number of counties with a recognized need is actually higher than the 314 that we allow. This is the case for poverty in which a high poverty county is often defined as a county with a poverty rate above 20 percent. Using our 90th percentile rule, however, results in a threshold of 25 percent. In other cases, the 90th percentile rule may be too generous. For example, in the case of Native Americans our 90th percentile rule results in a threshold of 3 percent of total population. In most cases, however, our rule results in a substantively meaningful threshold.

For our race variable, we identify counties as having a human service need if they have a high Native American, high Hispanic or high African-American population.

DEMOGRAPHIC NEEDS PROFILE

Table 2 presents the indicator, source, national average and 90th percentile threshold for each of the nine measures included in the demographic needs profile. Counties with demographic characteristics above the 90th percent national distribution receive one "point" for each area in which they exceed the threshold.

Table 2. Demographic Needs Profile

Indicator	National Average	90th Percentile	Data Source
Percent of Population Age 65 and Over	12.9%	21.0%	Census Bureau Population Estimates, 2000
Racial/Ethnic Minorities:			
African America	12.9%	30.0%	Census Bureau Population
Native American	1.0%	3.0%	Estimates, 2009
Hispanic/Latino	15.8%	21.0%	
Percent of Population Living in Subfamilies	3.0%	5.0%	American Community Survey, 2005-2009
Work Age Dependency Ratio (Population Under 20 and Over 64 to Population 20 to 64)	66.8%	87.0%	Census Bureau Population Estimates, 2009
Birth to Women Age 15 to 50	5.6%	8.0%	American Community Survey, 2005-2009
Veterans as Percent of Total Population	7.4%	12.0%	Census Bureau Population Estimates, 2009; Veterans Administration, 2009
Percent of Population age 25 and over without a High School Diploma	15.4%	28.0%	American Community Survey, 2005-2009
Percent of Population Foreign Born	12.4%	10.0%	American Community Survey, 2005-2009

When we compute the needs profile by summing the demographic needs across all eight
measures, we find that high demographic needs counties are over represented among noncore
and micropolitan counties ; metropolitan counties are most likely to have no demographic needs
identified. (See Table 3.) Of the eight demographic categories considered, the highest observed
jointly is seven, which is observed in Hall County, Texas.

Table 3. Demographic Needs Summary by County Type

Number of Demographic Risk Factors	Metropolitan		Micropolitan		Noncore		All Counties	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	641	58.3%	376	54.8%	422	31.1%	1,439	45.8%
1	275	25.0%	155	22.6%	399	29.4%	829	26.4%
2	129	11.7%	91	13.3%	300	22.1%	520	16.5%
3	36	3.3%	39	57%	162	11.9%	237	7.5%
4	15	1.4%	17	2.5%	56	4.1%	88	2.8%
5	2	0.2%	5	0.7%	14	1.0%	21	0.7%
6	2	0.2%	3	0.4%	3	0.2%	8	0.3%
7	0	0.0%	0	0.0%	1	0.1%	1	0.0%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Map 1 shows the demographic needs profile for the U.S. Just over half of all counties experience at least one of the risk factors.   Areas with multiple risk factors (three or more) are concentrated in several geographic regions of the country: the Mississippi Delta, Texas border region, Central California, Great Plains and areas with high Native American populations. Appendix 1 presents the maps for each individual indicator in the demographic needs index, and counties which are above the 90th percentile for each factor.

Map 1. Demographic Risk Factor Index

Number of Risk Factors
- 0
- 1
- 2
- 3 or 4
- 5 to 7

Sources: U.S. Census Bureau 2009 Population Estimates, 2005-2009 American Community Survey, and 2009 SAIPE Estimates; Department of Veterans Affairs Analysis and Mapping by RUPRI; AK and HI are not to scale

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ECONOMIC NEEDS PROFILE

Table 4 presents the indicator, source, national average and 90th percentile threshold for each of the four measures included in the economic needs profile. As with the demographic needs profile, counties with economic characteristics above the 90th percent national distribution receive one point for each area in which they exceed the threshold.
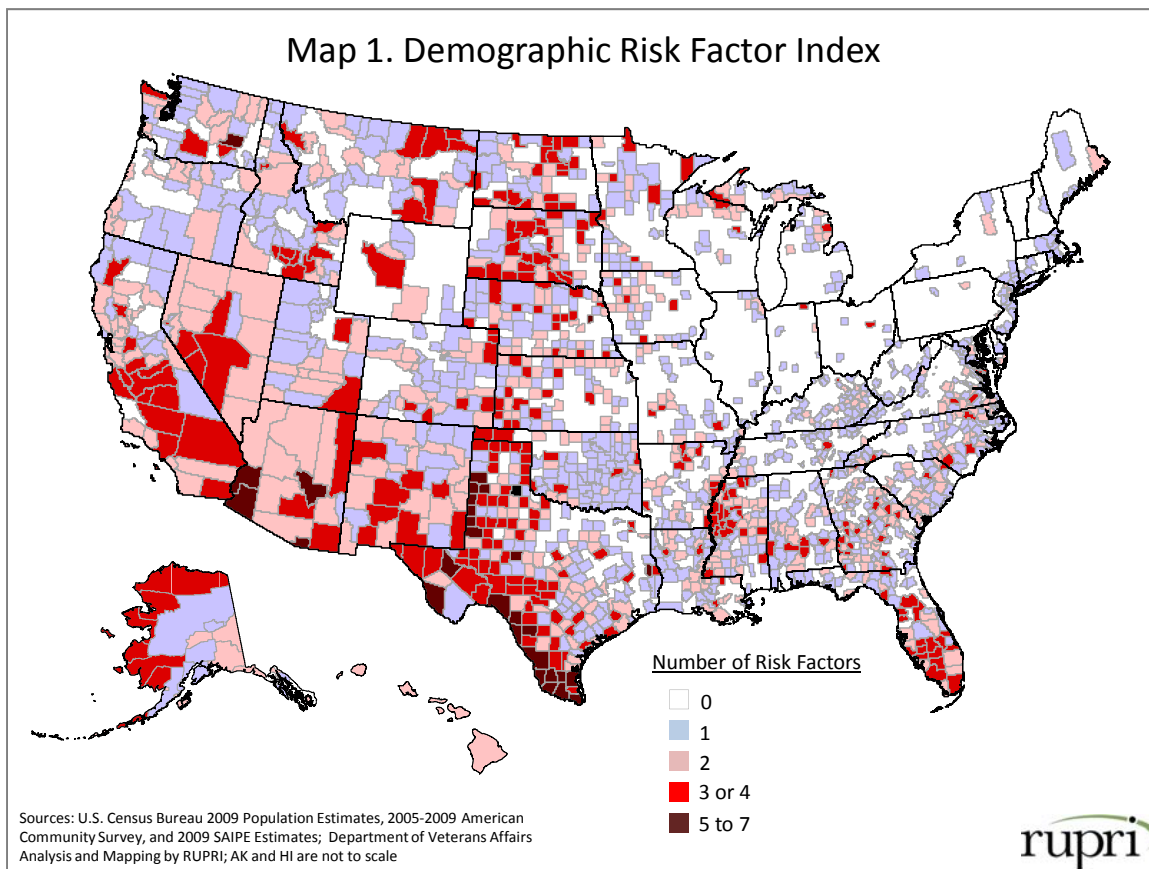
Table 4. Economic Needs Profile

Indicator	National Average	90th Percentile	Source
County Poverty Rate for Total Population	14.2%	25.0%	Census Bureau Small Area Income and Poverty Estimates, 2009
Percent of Housing Units with No Vehicles Available	8.8%	10.0%	American Community Survey, 2005-2009
Percent of Households Receiving SNAP benefits	8.5%	18.0%	American Community Survey, 2005-2009
Percent of Total County Income from Transfer Payments	15.3%	32.0%	Bureau of Economic Analysis, Regional Economic Information System, 2008

When we compute the needs profile by summing the index of economic needs across the four measures, we find that high economic need counties are once again heavily concentrated in noncore and micropolitan counties. In fact, there are no metropolitan counties that score high on all four economic measures but 4 micropolitan counties and 23 noncore counties that meet the same criteria. (See table 5)

Table 5. Economic Needs Summary by County Type								
Number of Economic Risk Factors	**Metropolitan**		**Micropolitan**		**Noncore**		**All Counties**	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	937	85.2%	541	78.9%	949	69.9%	2,427	77.2%
1	121	11.0%	78	11.4%	197	14.5%	396	12.6%
2	28	2.5%	23	3.4%	88	6.5%	139	4.4%
3	13	1.2%	31	4.5%	74	5.5%	118	3.8%
4	1	0.1%	13	1.9%	49	3.6%	63	2.0%

Map 2 shows the economic risk factors for all counties in U.S. Unlike the demographic risk factors, only a quarter of counties experience at least one of the risk factors, and 63 counties experience all four of the risk factors. The experience of multiple economic risk factors is concentrated in Appalachia, the black belt, Mississippi Delta, Texas border region, and areas with high Native populations.

Map 2. Economic Risk Factor Index

Number of Risk Factors
- 0
- 1
- 2
- 3
- 4

Sources: U.S. Census Bureau 2005-2009 American Community Survey; Census Bureau
2009 SAIPE Estimates; Bureau of Economic Analysis Regional Economic Information
System; Analysis and Mapping by RUPRI; AK and HI are not to scale

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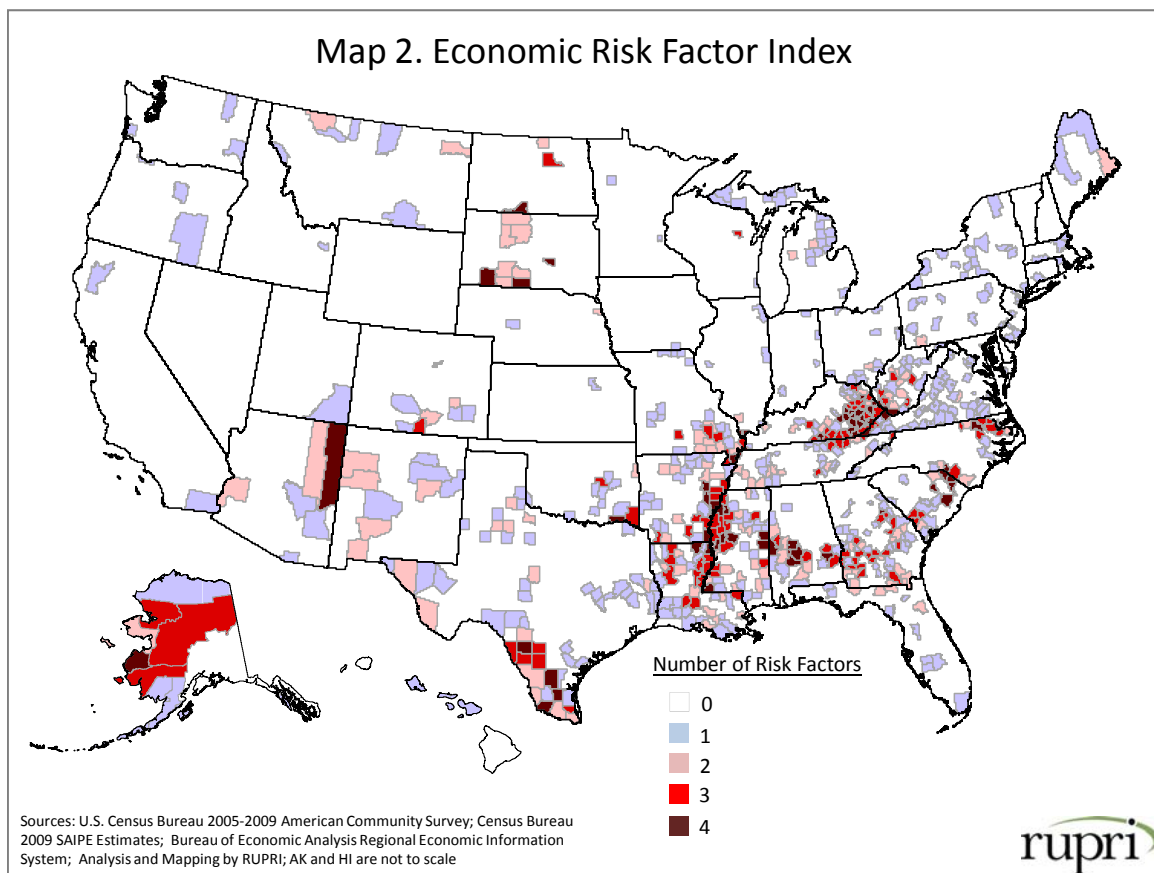
HUMAN SERVICE NEEDS PROFILE

We then combine our demographic and economic needs profiles to create a human service need profile across our 12 measures (eight demographic plus four economic). Again, these are overrepresented in the micropolitan and noncore categories. Nearly half of all metropolitan counties have no risk factors, while only a quarter of noncore counties have none. The highest number of risk factors co-occurring is nine, which occurs in five counties, all in Texas (Brooks, Hall, Maverick, Starr, and Zavala).

Table 6 summarizes the number of counties experiencing multiple risk factors. While just under half of metropolitan counties experience any risk factors, nearly three-quarters of noncore counties do.

Table 6. Combined Human Services Needs Summary by County Type

Number of Risk Factors	Metropolitan		Micropolitan		Noncore		All Counties	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	585	53.2%	335	48.8%	355	26.2%	1,275	40.6%
1	267	24.3%	149	21.7%	315	23.2%	731	23.3%
2	149	13.5%	83	12.1%	263	19.4%	495	15.7%
3	51	4.6%	42	6.1%	174	12.8%	267	8.5%
4	29	2.6%	34	5.0%	120	8.8%	183	5.8%
5	11	1.0%	15	2.2%	74	5.5%	100	3.2%
6	4	0.4%	18	2.6%	27	2.0%	49	1.6%
7	2	0.2%	8	1.2%	15	1.1%	25	0.8%
8	2	0.2%	0	0.0%	11	0.8%	13	0.4%
9	0	0.0%	2	0.3%	3	0.2%	5	0.2%

Map 3 shows the combined risk factor index for all counties. Again the areas with multiple risk factors are concentrated in several geographic areas. Examining alone the counties with multiple risk factors by the metropolitan status is instructive. Maps 4 and 5 show the counties with 3 or more, and 5 or more risk factors, respectively.

On both maps two things are apparent. The first is the geographic concentration of counties with multiple risk factors. While many of the regions are those that are commonly recognized as high in need, there are areas that are interesting and bear further investigation. For example the group of counties in northwest Texas, the large number of counties in the upper Great Plains and eastern Montana, and counties in Northern Michigan. The second point is the overwhelming concentration of nonmetropolitan counties with these conditions, summarized in Table 7. Nearly a third of all noncore counties experience three or more risk factors, and nearly 10 percent of noncore counties experience five or more risk factors. Metropolitan counties, on the other hand, are less likely to have multiple risk factors: only 9 percent have three or more risk factors, and only 2 percent have 5 or more risk factors.

Map 3. Combined Risk Factor Index

Number of Risk Factors
- 0
- 1
- 2
- 3 to 5
- 6 to 9

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Map 4. Counties with Three or More Risk Factors (Combined Index), by CBSA Status

CBSA Status
- Metropolitan
- Micropolitan
- Noncore

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Map 5. Counties with Five or More Risk Factors (Combined Index), by CBSA Status

CBSA Status
- Metropolitan
- Micropolitan
- Noncore

Sources: U.S. Census Bureau 2009 Population Estimates, 2005-2009 American Community Survey, and 2009 SAIPE Estimates; Department of Veterans Affairs; Bureau of Economic Analysis Regional Economic Information System; Analysis and Mapping by RUPRI; AK and HI are not to scale

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Table 7. Counties with Multiple Risk Factors by County Type

Number of Risk Factors	Metropolitan		Micropolitan		Noncore		All Counties	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
3 or more	99	9.0%	119	17.3%	424	31.2%	642	20.4%
5 or more	19	1.7%	43	6.3%	130	9.6%	192	6.1%

HUMAN SERVICE NEED COMBINATIONS BY RURALITY

Metropolitan and non-metropolitan counties differ significantly in terms of the types of human service needs that are present. Figure 1 presents a comparison of human service needs that occur in isolation by county metropolitan status. For example, of all counties with a high share of veterans, 27 percent of nonmetropolitan and 55 percent of metropolitan counties have no other risk factor present. Figure 1 illustrates two points.

First, in each case, the bars are higher for metropolitan counties then they are for non-metropolitan counties, with the lone exception for SNAP receipt. This indicates that human

service needs are less likely to occur in isolation in non-metropolitan areas than they are in metropolitan areas. This is significant because counties with a single human service need can focus more narrowly on meeting the needs of that single population while counties that score in the top decile across multiple categories have a more complex set of issues to address.

Figure 1 also demonstrates how the rankings of human service needs differ in metropolitan and non-metropolitan areas. While high veteran populations, high racial minority populations and high fertility counties are the three most common human service need to occur alone in both metropolitan and non-metropolitan areas, the relative importance of the different human service needs is very different for the other nine human service needs. For example, while having a high percentage of foreign born populations present is ranked ninth for non-metropolitan areas, it is ranked fourth for metropolitan areas. Once again, these differences suggest that approaches that work well in metropolitan areas may not translate well to non-metropolitan counties.

Figure 1. Occurrence of Risk Factors Alone in Metro and Non-Metro Counties
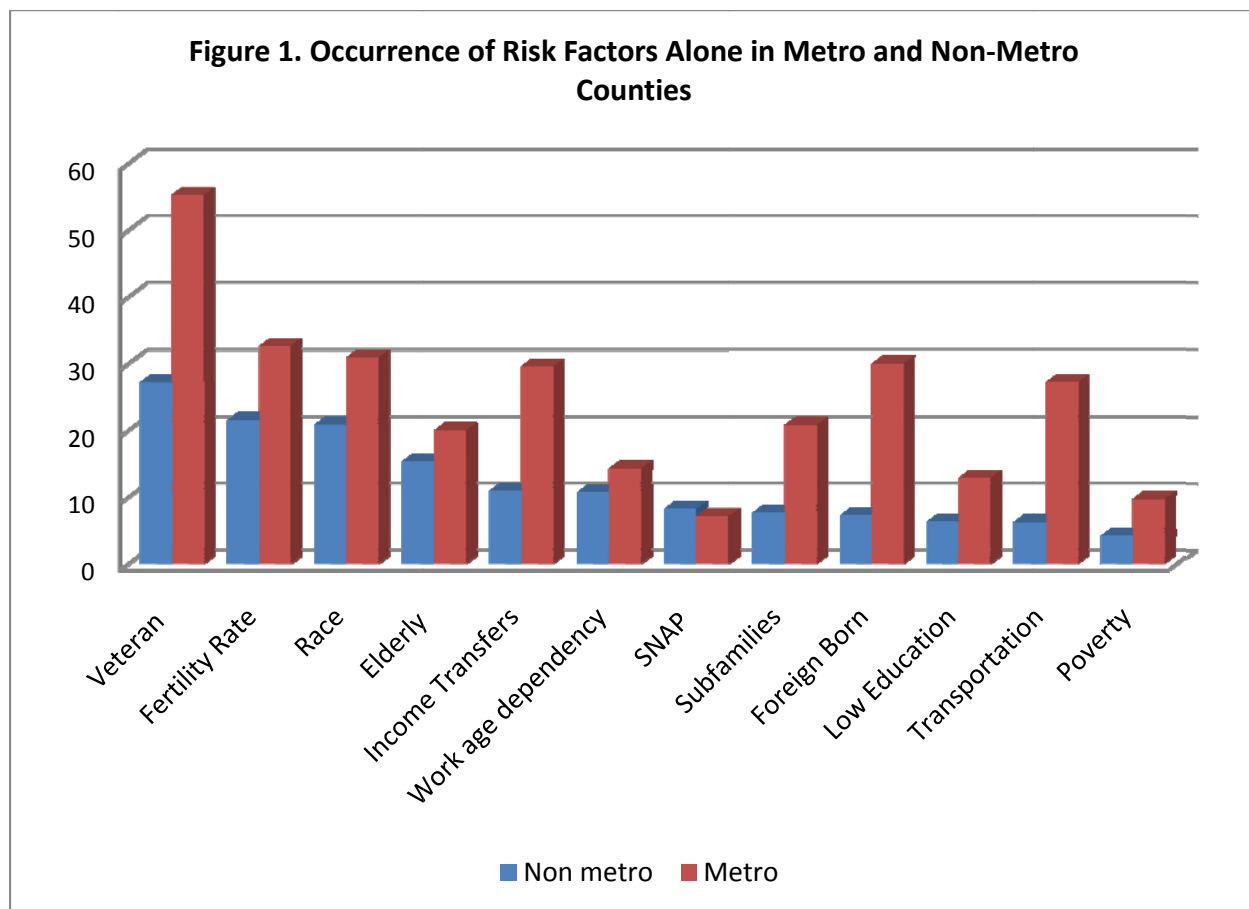
Figure 2 presents a slightly different approach to analyzing the distribution of human service needs across metropolitan and non-metropolitan counties. In figure 2, the focus is on the set of counties that has three or more risk factors present. Among these counties, figure 2 illustrates the extent to which individual risk factors occur in combination with other risk factors. For example, among all counties with three or more risk factors present, 67 percent of all non-metropolitan and

85 percent of all metropolitan counties can be identified by having a high percentage of minority populations present. The proportion of both metropolitan and non-metropolitan counties with multiple risk factors that have high racial minorities in combination with other factors provides strong evidence of the enduring importance of race in this country.

Figure 2. Occurrence of 3 or More Risk Factors in Metro and Non-Metro Counties
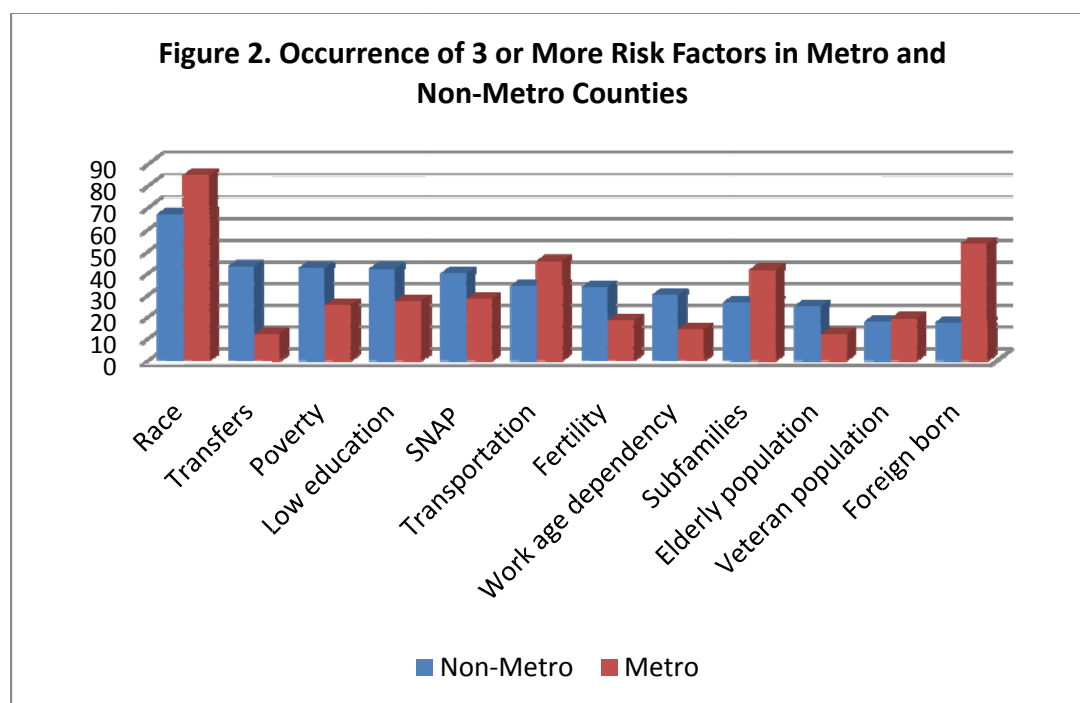
In contrast to Figure 1, the bars for non-metropolitan counties are higher than those for metropolitan counties in seven of the twelve areas. While non-metropolitan counties with three or more risk factors are likely to have high minority populations, high levels of income transfers, high poverty rates, low education levels and high SNAP receipt, metropolitan areas with three or more risk factors are better categorized as having high levels of minority populations, high levels of foreign born populations, high transportation problems, and high levels of subfamilies. This once again supports our contention that human service needs differ significantly in metropolitan and non-metropolitan areas.

HUMAN SERVICE NEEDS BY REGION

Finally, one feature of this conceptual framework is that it can be used to geographically target the human service needs of different regions of the country. Table 8 presents the presence of different human service risk factors in non-metropolitan areas for nine regions and two states (see map below). A risk factor for a region is shown in color when a risk factor is present at levels that are greater than the overall share of counties that region contributes to the total nonmetropolitan share of counties. For example, 11.5 percent of the nation's non-metropolitan counties are found in the Delta region. Therefore, if the total share of counties in the Delta region was above 11.5 for any risk factor, than the area was colored.

Regions

Table 8. Human Service Risk Factors in Rural Areas by Region

	Delta	Black Belt	Appal-achia	North-east	Midwest	Great Plains	Upper West	Four Corners	West	Alaska	Texas
Race	X	X				X		X	X		
Elderly population					X	X					X
Work age dependency						X		X		X	
Subfamilies	X	X				X					X
Fertility	X					X		X			X
Foreign Born						X		X	X		X
Veteran population						X		X	X	X	
Low Education	X	X	X								X
Poverty	X	X	X					X			
Transportation	X	X	X							X	
Transfers	X	X	X							X	X
SNAP	X	X	X							X	

Table 8 can then be read two ways. Firstly, by focusing on a single region, one can identify the greatest human service needs that are present. For example, in the Upper West, high human service needs are focused among the elderly and veterans. Secondly, Table 8 also allows one to focus on a single risk factor and identify the regions that are most relevant. For example, an initiative that was focused on addressing high fertility would want to consider geographically targeting the Delta, the Great Plains, the Four Corners, Alaska and Texas.

SUMMARY AND CONCLUSIONS

Given the rapid transition in both the demand and supply of human services in this country, we have argued that a "one size fits all" approach to human service delivery is no longer appropriate. We have shown the geographic distribution of counties with high levels of human services needs, as defined by the top 10 percentile ranking of all counties for each of our eight demographic and four economic risk factors The type and number of risk factors present in metropolitan and non-metropolitan counties differs substantially with non-metropolitan counties more likely to have multiple risk factors present. This suggests that implementation strategies that are successful in metropolitan areas may not translate well to non-metropolitan areas. For example, a need for integrated human service delivery may be even more critical in non-metropolitan areas than metropolitan areas. Additionally, we have developed a conceptual framework that can be used at a geographic level to target intervention strategies to particular regions or particular human service needs.

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APPENDIX 1: INDIVIDUAL RISK FACTOR MAPS

Percent of Population Age 65 or Older

Percent Total Population by County, 2009
- 21.0% - 37.2%
- 15.0% - 20.9%
- 10.0% - 14.9%
- 0.0% - 9.9%

Source: U.S. Census Bureau, 2009 County Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

Map created by the Center for Applied Research and Environmental Systems, February 2011.

Population Age 65 and Over

Percent Greater Than or Equal to 21.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

Map created by the Center for Applied Research and Environmental Systems, February 2011.

Percent of Population African American

Percent Total Population African American
- 30.0% - 86.3%
- 10.0% - 29.9%
- 2.0% - 9.9%
- 0.0% - 1.9%

Source: U.S. Census Bureau, 2009 County
Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

Map created by the Center for Applied
Research and Environmental Systems,
February 2011.

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Population African American
Percent Greater Than or Equal to 30.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County
Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

Map created by the Center for Applied
Research and Environmental Systems,
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Percent of Population American Indian and Alaska Native

**Percent Total Population
by County, 2009**

- 3.0% - 90.7%
- 2.0% - 2.9%
- 1.0% - 1.9%
- 0.0% - 0.9%

Source: U.S. Census Bureau, 2009 County
Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

Map created by the Center for Applied
Research and Environmental Systems,
February 2011.

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Population American Indian and Alaska Native
Percent Greater Than or Equal to 3.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County
Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

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Percent of Population Hispanic or Latino

Percent Total Population by County, 2009
- 21.0% - 97.2%
- 10.0% - 20.9%
- 5.0% - 9.9%
- 0.0% - 4.9%

Source: U.S. Census Bureau, 2009 County Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

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Population Hispanic or Latino
Percent Greater Than or Equal to 21.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

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Percent of Population Living in Subfamilies

Percent Total Population Living in Subfamilies

- 5.0% - 17.2%
- 4.0% - 4.9%
- 2.0% - 3.9%
- 0.0% - 1.9%

Source: U.S. Census Bureau, 2005-2009, ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Population Living in Subfamilies
Percent Greater Than or Equal to 5.0% by County Status

County Status

- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2005-2009 ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Work Dependency Ratio

Percent of population Under
20 and 65 and Over divided
by the population age 20-64

- 87.00 - 127.29
- 75.00 - 86.99
- 50.00 - 74.99
- 0.00 - 49.99

Source: U.S. Census Bureau, 2009 County
Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

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Work Dependency Ratio

Ratio of Population Under 20 and Over 64 to the Population Age 20
to 64 where result is greater than or equal to 87.0, by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County
Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

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Percent of women age 15 to 50 that have given birth in the past 12 months

Percent by County
- 8.0% - 22.3%
- 5.0% - 7.9%
- 3.0% - 4.9%
- 0.0% - 2.9%

Source: U.S. Census Bureau, 2005-2009 ACS
5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Women Age 15 to 50 Giving Birth in past 12 months
Percent Greater Than or Equal to 8.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2005-2009
ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Veterans as a Percent of Total Population

Veterans as a Percent of Total Population

- 12.0% - 49.3%
- 10.0% - 11.9%
- 7.5% - 9.9%
- 0.0% - 7.4%

Source: U.S. Census Bureau, 2009 County Estimates and Department of Veterans Affairs.

Note: Alaska and Hawaii not shown to scale

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Veterans as a Percent of the Total Population
Percent Greater Than or Equal to 12.0% by County Status

County Status

- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County Estimates and Department of Veterans Affairs.

Note: Alaska and Hawaii not shown to scale

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Percent of Population Age 25+ with No High School Diploma

Percent of Population Age 25+ with No High School Diploma

- 28.0% - 53.5%
- 20.0% - 27.9%
- 12.0% - 19.9%
- 0.0% - 11.9%

Source: U.S. Census Bureau, 2005-2009,
ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Population Age 25+ with No High School Diploma

Percent Greater Than or Equal to 28.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2005-2009
ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Percent of Population that is Foreign Born

Percent by County
- 10.0% - 63.1%
- 5.0% - 9.9%
- 2.5% - 4.9%
- 0.0% - 2.4%

Source: U.S. Census Bureau, 2005-2009 ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Population Foreign Born

Percent Greater Than or Equal to 10.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2009 County Estimates by Demographic Characteristics.

Note: Alaska and Hawaii not shown to scale

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Percent of Population in Poverty

All Ages by County, 2009

Percent in Poverty
- 25.0% - 62.0%
- 15.0% - 24.9%
- 10.0% - 14.9%
- 0.0% - 9.9%

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates, 2009.

Note: Alaska and Hawaii not shown to scale

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Population in Poverty

Percent Greater Than or Equal to 25.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE), 2009.

Note: Alaska and Hawaii not shown to scale

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Percent of Housing Units with No Vehicle Available

Percent of Housing Units with No Vehicle Available

- 10.0% - 83.8%
- 7.5% - 9.9%
- 5.0% - 7.4%
- 0.0% - 4.9%

Source: U.S. Census Bureau, 2005-2009,
ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Housing Units with No Vehicle Available

Percent Greater Than or Equal to 10.0% by County Status

County Status

- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2005-2009
ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Percent of Households Receiving SNAP Benefits

Percent of Households Receiving SNAP Benefits

- 18.0% - 48.6%
- 10.0% - 17.9%
- 5.0% - 9.9%
- 0.0% - 4.9%

Source: U.S. Census Bureau, 2005-2009, ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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Households Receiving SNAP Benefits

Percent Greater Than or Equal to 18.0% by County Status

County Status

- Metropolitan
- Micropolitan
- Non-Core

Source: U.S. Census Bureau, 2005-2009 ACS 5-year Estimates.

Note: Alaska and Hawaii not shown to scale

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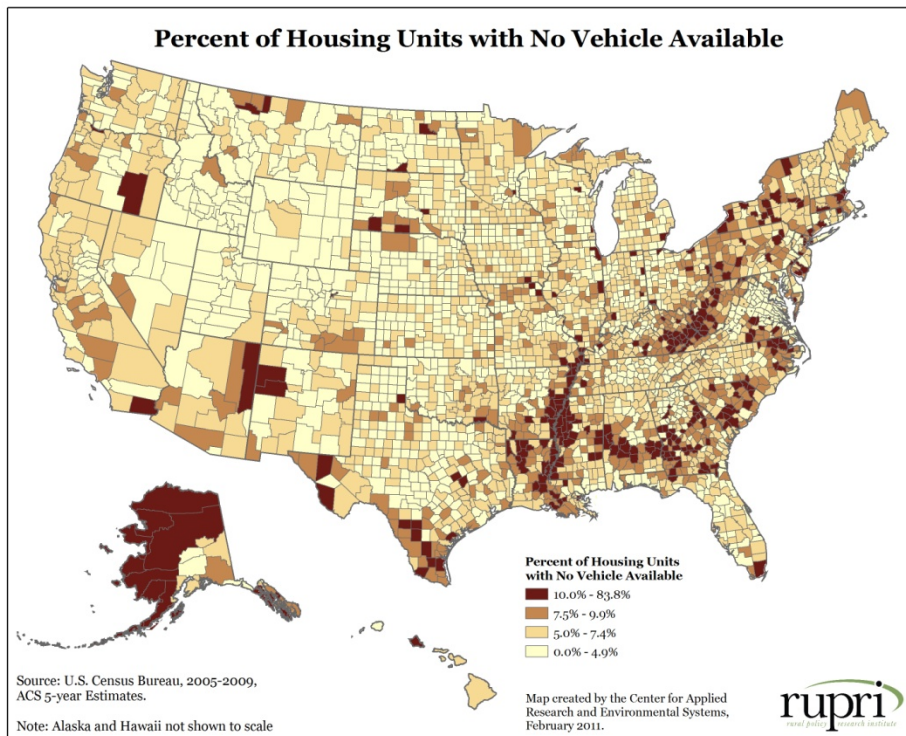
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Percent of Total County Income from Transfer Payments

Percent of Total County Income from Transfer Payments
- 32.0% - 53.4%
- 25.0% - 31.9%
- 15.0% - 24.9%
- 0.0% - 14.9%

Source: Bureau of Economic Analysis Regional Economic Information System, 2008.

Note: Alaska and Hawaii not shown to scale

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Total County Income from Transfer Payments
Percent Greater Than or Equal to 32.0% by County Status

County Status
- Metropolitan
- Micropolitan
- Non-Core

Source: Bureau of Economic Analysis Regional Economic Information System, 2008.

Note: Alaska and Hawaii not shown to scale

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