Rural Definitions in the U.S.: Concept and Practice

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Rural researchers in the United States continually grapple with a long-standing methodological competition between two very different definitions of "rural." The Census Bureau's urban-rural classification—the only federal classification system that uses the term "rural" in an official, statistical capacity—distinguishes more densely-settled and less densely-settled territory, using very small census blocks and block groups as units of analysis. Rural areas comprise open countryside and settlements with fewer than 2,500 residents. The Office of Management and Budget (OMB) uses much larger geographical units (counties) to define metropolitan areas as urban commuter sheds extending far beyond densely-settled urban cores (Fig. 1).

Nonmetropolitan (nonmetro) counties represent territory outside the primary labor market zones of urbanized areas of 50,000 or more. Tension prevails because the former is widely viewed as the "correct" definition of rural while the latter is employed as the de facto definition of rural for almost all empirical research.

A strong tendency prevails among experts and policymakers alike to view the nonmetro classification as a useful proxy for rural, rather than a legitimate frame of reference itself, an approximation adopted out of necessity rather than a deliberate and appropriate choice (Isserman, 2007). This requires accepting the proposition that rural and nonmetro populations overlap enough to make substitution legitimate. Results from the 2000 decennial census vividly illustrate the increasingly tenuous nature of this assumption: The two definitions have diverged to the point that, by 2000, a majority of the population designated as rural by the Census Bureau lived in metro counties (table 1).

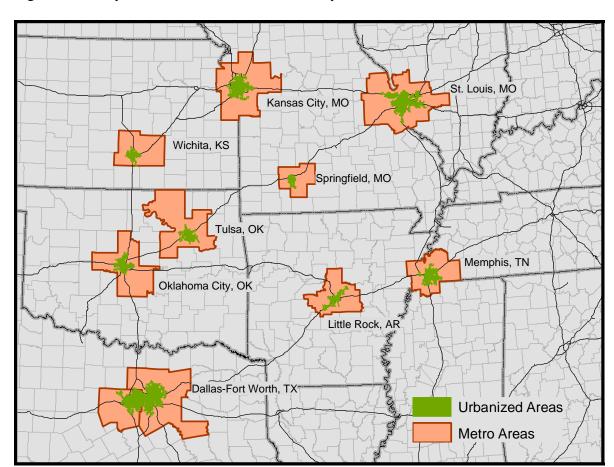


Figure 1. County-based metro areas extend far beyond urbanized areas.

We describe how rural and nonmetro concepts differ and trace the evolution of their use in rural research to answer: Where did the methodological tension originate and why does it continue to be a source of confusion and frustration? Given that nonmetro has been the *de facto* rural definition for an extensive literature going back to at least the 1970s, we address a second question: How does the practice of using nonmetro to study "rural" economic and social change affect rural research findings?

Table 1. Population overlap of urban-rural and metro-nonmetro definitions, 2000

	Rural		Urban		Total	
	Number	Percent	Number	Percent	Number	Percent
Nonmetro	29,001,246	49.2	20,157,427	9.0	49,158,673	17.4
Metro	30,060,121	50.8	202,203,104	91.0	232,263,225	82.6
Total	59,061,367	100	222,360,531	100	281,421,898	100

Other delineations of U.S. "rural" territory are widely used throughout the federal government and beyond (Cromartie and Bucholtz, 2007). For example, several rural development programs in the U.S. Department of Agriculture (USDA) define eligibility based on residence outside incorporated or unincorporated places of a given size, with cut-offs ranging from 5,000 to 50,000 population. Our "rural or nonmetro" question reflects a focus here on research applications. However, we believe lessons may be drawn that apply to current debates in the U.S. Congress and among USDA policymakers regarding program definitions, as well as to debates taking place outside the U.S.

A comparison of rural and nonmetro definitions

The Census Bureau and OMB both define what is "urban." That is, they delineate boundaries for, and identify by name, individual entities centered on areas of concentrated population. Part of the confusion in discussions of rural definitions comes from having to mentally "flip" definitions to focus on what is not described. We begin by comparing these two very different types of urban

entities and how they, in turn, determine the characteristics of rural definitions derived from them.

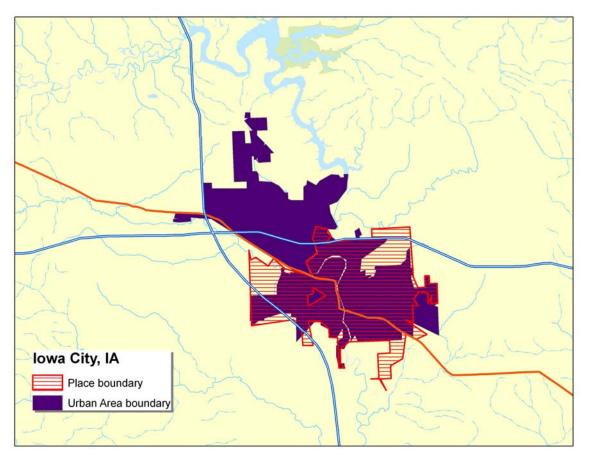
Urban areas

The Census Bureau's *urban areas* consist of densely settled territory grouped into *urban clusters* (if the population is between 2,500 and 49,999) or *urbanized areas* (if the population is 50,000 or higher). Census block groups, very small units of territory averaging 1,500 people, are used as the primary geographical building blocks for urban areas, but even smaller census blocks are included under certain conditions. Urban areas consist of at least one block group with 1,000 people or more per square mile and block groups or blocks along the fringe with 500 people or more per square mile.

Early census definitions, dating back to the 1874, used place boundaries to define urban (Truesdell, 1994). The 2,500 population threshold was set in 1910, so that rural was defined as open countryside and any municipality with fewer than 2,500 people. Today's statistically-derived urban areas are the products of two major changes made by the Census Bureau to account for the widespread "spillover" of suburban populations beyond place boundaries. In 1950, urbanized areas were defined to include spillover populations for entities with 50,000 or more people. In 2000, the same concept was extended to entities of at least 2,500 but less than 50,000 people. This two-stage evolution explains why we have two types of urban areas—urbanized areas and urban clusters—different in size but identical in concept and criteria.

The 1950 rules simply added territory with spillover populations to existing place boundaries. In 2000, both types of urban areas were defined strictly on the basis of population density, with no reference whatsoever to municipal boundaries. As a result, in addition to capturing the ever expanding suburbs, urbanized areas and urban clusters now exclude any low-density territory within places. Thus, the configuration of urban areas often diverges sharply from the places around which they are built (fig. 2).

Figure 2 **Iowa City's municipal boundary compared with its urban area delineation**



In addition to removing the connection to place boundaries, the new rules in 2000 lowered the density criteria to 500 people per square mile for blocks or block groups along the urban periphery. This change added to the outward shift in the edge threshold between rural and urban.

Metro areas

In the 1940s, the value of data produced by Federal agencies was greatly enhanced with the development of a standard metropolitan definition, as agencies began using a single set of geographic definitions for the Nation's largest population centers. Prior to that time, Federal agencies defined a variety of statistical geographic areas at the metropolitan level (metropolitan districts, industrial areas, labor market areas) resulting in incompatible statistics. Metropolitan areas were first issued in 1949, in time for their use in 1950 census reports. The general concept—an area containing a population nucleus of 50,000 or more people, together with adjacent areas that are economically integrated with that nucleus—has not changed despite significant modifications to the rules.

Currently, OMB defines metro areas as (1) central counties with one or more urbanized areas, and (2) outlying counties that are economically tied to the core counties as measured by work commuting. Outlying counties are included if 25 percent of workers living in the county commute to the central counties, or if 25 percent of the employment in the county consists of workers coming out from the central counties—the so-called "reverse" commuting pattern. In this way, metro areas represent labor market areas that extend well beyond the built-up urbanized area cores. Metro areas include 83 percent of the U.S. population living in 1,091 counties that collectively cover 23 percent of the Nation's land area. Nonmetro territory consists of 2,050 counties lying outside metro boundaries, with 77 percent of the land area but just 17 percent of the population.

Substitution of metro for rural

Though their respective shares of the Nation's total population have tracked quite closely during recent decades, nonmetro and rural are quite different geographic configurations, both in concept and execution, and always have been. A large proportion of nonmetro population is urban (41 percent in 2000, up from 38 percent in 1980), and a large proportion of the rural population lives in metro areas (50 percent in 2000, up from 39 percent in 1980). The growing divergence of rural and nonmetro populations has intensified a long-standing methodological inconsistency. How this inconsistency translated into vigorous academic debate among scholars—and confusion and frustration among users—involves the interplay of theory, practice, and real-world changes. Specifically, practice shifted from defining rural as a land-use concept to using a labor-market concept, with little or no debate about their relative merits as theoretical concepts, including their ability to portray and explain a rapidly-changing settlement system. At the same time, the Census rural definition maintained its position as the "correct" way to define rural in the minds of experts and users.

Nonmetro becomes rural

With few exceptions, data on rural areas as defined by the Census Bureau have been available only from the decennial census. The American Community Survey began publishing complete U.S. data in 2005 and marks the first opportunity to track rural conditions and trends on an annual basis. However, crucial, firm-based Federal income and employment data will continue to be available only at the county level for the foreseeable future.

Metro areas were enthusiastically adopted for research and policy applications from their inception in 1949, serving (as intended) as a standard definition for large cities and their rapidly-expanding hinterlands. Special census reports beginning in 1950 demonstrated the range of socioeconomic conditions among metro areas. In almost all census summary reports beginning in 1960, tables were included that reported metro and nonmetro data. A substantial urban economics literature emerged early on, but two data developments mark the 1970s as the period of transition for rural scholars:

- the initiation of annual county data series by several federal agencies: intercensal
 population estimates by the Census Bureau; employment data by the Bureau of Labor
 Statistics; and earnings and income data by the Bureau of Economic Analysis;
- the inclusion of the metro-nonmetro classification on the individual and household records of the Current Population Survey in 1974;

One of the most influential and surprising demographic findings in that decade came from an analysis of the 1974 county population estimates. The finding was announced on the cover of a June, 1975 ERS publication, as follows: "...the huge rural-to-urban trend, the common pattern to U.S. population migration since World War II, has been reversed." This quote appears below the title: *The Revival of Population Growth in Nonmetropolitan America* (Beale, 1975). Like so much subsequent literature, the terms rural and nonmetro were used interchangeably throughout the article, with just a small footnote briefly explaining how metro is defined. However, in the opening paragraph and elsewhere, the author shows his awareness of the rural-nonmetro difference (and his characteristic diligence) by referring to nonmetro not as simply "rural" but as

"rural and small town," a practice that shows up regularly in his many publications, including in the title of a major 1980 Census monograph (Fuguitt, et al., 1989).

More typical of the unintended confusion that developed are the 1st two sentences of an article in a popular business magazine, *American Demographics*, in 1995: "The revival of growth in rural America is one of the biggest demographic stories of the 1990s. Three in four nonmetropolitan counties gained population between 1990 and 1994, a stunning reversal following a decade of rural decline (Johnson and Beale, 1995)." A box at the end of the article contains the now widely-used caveat: "In this article, the words "rural" and "nonmetropolitan" are used interchangeably."

As the practice extended into the policy arena, the explanatory caveats were often dropped, so that nonmetro simply replaced rural without explanation. The very common but confusing phrase "rural counties" that shows up on web sites and in publications aimed at affecting rural development policy is a sure sign that the writer means nonmetro, whether he or she knows it or not. Policymakers and researchers alike inevitably face confusing and frustrating discussions at the point of needing to explain that the "rural" they are talking about is not at all the same as the official rural definition maintained by the Census Bureau.

Competing concepts of rural: labor market vs. land-use

Given that researchers made this switch for practical rather than theoretical reasons, with little or no pondering of the theoretical consequences, the natural reaction to this conundrum has been to assume that Census rural is still the "correct" definition; after all, it possesses the label by government sanction. The nonmetro classification came to be seen as an approximation of rural, either useful or misleading, rather than a legitimate way itself of representing rural. Recent contributions to this debate begin with the premise that rural is a structural concept based on population density and land-use (such as the Census Bureau's definition) and that broader, economic-functional definitions combine rural and urban territory (Isserman, 2007, Slifkin, et al., 2004; Waldorf, 2007).

This perspective is certainly understandable given the existence of an official, federal definition of rural. However, it requires not only ignoring 40 years of practice, but accepting that the Census Bureau's land-use method of defining rural is the only "correct" method of defining rural. A serious debate could conclude that the land-use perspective is superior to the labor-market concept for depicting what is typically considered rural, and that the 2,500 urban population threshold is more reasonable than the 50,000 population cut-off assumed by the nonmetro classification. This might lead to calls for more comprehensive and timely rural data than is currently available.

Conversely, a consensus conclusion could emerge that the substitution of nonmetro for rural was theoretically sound given the settlement transformation that occurred during the past 100 years. The latter perspective has many strengths. Relentless urbanization characterized settlement change throughout the last century. This caused not only a massive and on-going *outward* shift of the urban-rural boundary through suburbanization, but an *upward* shift as well. That is, economic and social space became increasingly organized around larger cities. Towns of 2,500 people typically have not maintained the levels and diversity of employment, goods, and services

that existed in 1910. Visits to the dentist, refrigerator or car purchases, attendance at music concerts or touring Broadway productions, and similar central-place activities once available in county-seat towns now often require longer trips to nearby regional centers. While the Census Bureau modified its urban-rural definition to keep up with suburban expansion, it did not change the 2,500 population threshold set in 1910 as the minimum size for urban places.

Defacto adoption of nonmetro for rural pushed the urban boundary outward by including, as urban, not just the spillover population living in densely-settled territory but any suburban population as measured by commuting. The practice also automatically moved the urban population threshold from 2,500 to 50,000. Those who argue that the switch to a nonmetro perspective moved the goalposts too far may, upon reflection, at least agree the move was in the right direction.

An empirical comparison of rural and nonmetro

Our second question represents a logical first step out of this dilemma: How does the practice of using nonmetro to study "rural" economic and social change affect our findings? The bottom line for applied research is whether the near-universal use of nonmetro captures the distinctive socioeconomic character of rural places. The decennial census provides the only means for comparing rural and nonmetro, but gives us a large number of indicators that provide some clue to the relative performance of the two constructs under consideration. Some of these would show substantial differences across space in accordance with theoretical expectations, but would not necessarily show rural-urban distinctions due to strong regional effects. Nonetheless, if our

ideas about the relative advantages of each construct are correct, we should be able to draw upon basic indicators of labor market performance and land use/access to support our contentions.

In table 2, we report mean values of indicators from the 2000 census for four types of areas, derived by overlapping our two concepts: 1) urban-metro, 2) rural-metropolitan, 3) urban-nonmetro, and 4) rural-nonmetro. Each area type occupies a position along the continua of centrality/access and density that underlie the social and economic distinctions of interest. Our ability to crosstabulate statistics along these two dimensions allows us to show how each area contributes to our interpretation of rural-urban differences.

Urban-metro territory captures the urbanized areas of metro statistical areas, typically the central city and densely settled suburbs. Rural-metro combines areas that lie within the outer reaches of cities' commuting sheds with relatively inaccessible territory in very large metro counties beyond the sheds. These areas are considered "urban" in research that uses the metro-nonmetro classification, and "rural" under the Census definition. Urban-nonmetro areas include small urban centers, sometimes with small amounts of densely populated adjoining territory, that are too small to reach the threshold for metro designation. They typically function as employment and service centers for surrounding areas, although they rarely have more than local influence. Like rural-metro areas, these "switch sides" depending on the definition: they are "urban" for Census definitional purposes, but become "rural" under the metro-nonmetro system. The remaining territory, beyond these smaller centers, typically are the least densely populated and have the least access to services.

Table 2. Socioeconomic indicators of rural and urban differentiation

	Metro		Nonmetro		
	Census Urban	Census Rural	Census Urban	Census Rural	
	Percent				
Less than high school	18.8	18.8	23.3	23.6	
College graduate	27.5	19.0	17.2	13.7	
		2000 dollars			
Per capita income	22,747	21,552	16,625	16,918	
		Percent			
Poverty rate	12.4	8.7	16.8	13.4	
Farming	0.5	3.3	1.9	6.5	
Ages 0-17	25.6	26.5	24.5	25.6	
Ages 18-24	10.0	7.3	11.7	7.6	
Ages 65 and over	12.0	11.4	15.9	14.3	

Source: 2000 Census of Population, U.S. Census Bureau

The first set of indicators is related primarily to labor market performance, and is expected to differentiate more strongly along metro-nonmetro boundaries than along the Census urban-rural divide. On the whole, these expectations are borne out. Human capital is represented by the share of the adult population without a high school diploma and with a four-year college degree. Nonmetro shares of the population without a high school are about 4 to 5 percentage points lower than metro shares, while there is almost no distinction between the rural and urban shares within metro-nonmetro categories. The share of the population with a college degree exhibits a similar, but more articulated, spatial pattern, with rural metro shares higher than urban nonmetro shares. The two education measures demonstrate the degree to which rural metro workers are linked to the higher job skill requirements of large urban centers.

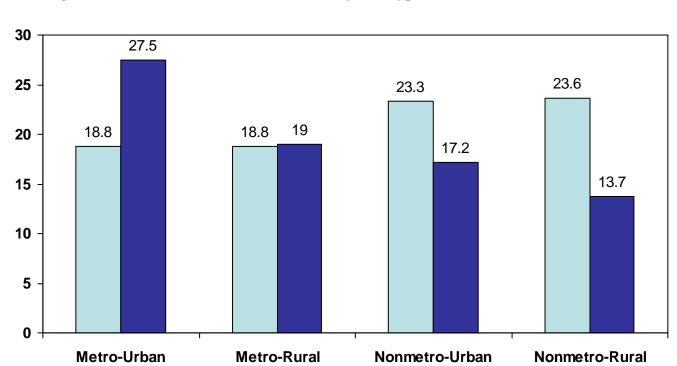
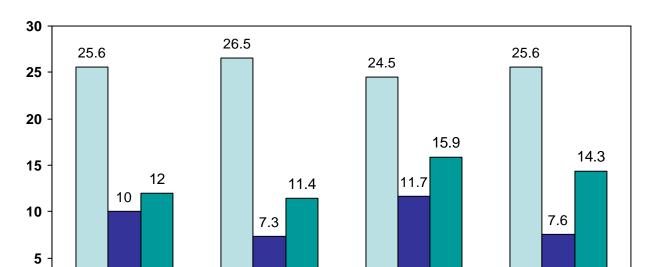


Figure 3. Selected educational attainment by area type

Income measures also bear out the economic consistency of rural and urban portions of metro areas. Per capita income among rural metro residents is 5 percent lower than among urban metro residents, while both urban and rural nonmetro residents experience per capita income nearly 30 percent lower. In many small states of the northeastern U.S., where nearly all the rural metro territory is readily accessible to urban centers, rural metro income is typically higher than urban metro income. High rural metro income is common in many large western states as well, but the West has been distinctive historically for the relatively small rural-urban gap in socioeconomic well-being. Overall, then, these patterns indicate that the metro/nonmetro concept is consistent with the labor market differentials expected to occur between "rural" and "urban"

■ Less than high school
■ College graduate



Metro-Rural

Figure 4. Selected age categories by area type

territory, beyond these smaller centers, typically are the least densely populated and have the least access to services.

□ Children 0-17 ■ Young adults ■ 65 years and over

Nonmetro-Urban

Nonmetro-Rural

In some cases, indicators that should be closely tied to labor markets do not indicate a clear schematic choice. Percentage of the population below the poverty threshold demonstrates that in some cases, both schemes are needed to understand spatial patterns of occurrence and by extension, causality. The higher poverty rates occur in urban-nonmetro places, while the lowest occur in rural metro areas. Meanwhile, poverty rates for urban-metro and rural-nonmetro are quite similar.

0

Metro-Urban

The spatial pattern creates an empirical tension between the two concepts. Using the metrononmetro concept would lead one to conclude that nonmetro areas had higher poverty rates,
while the Census rural-urban concept shows higher urban poverty relative to rural areas. Rural
poverty researchers in the U.S. may not be particularly surprised by the finding that the poor tend
to concentrate in towns with easier physical access to affordable housing and services, and that
jobs pay less and are often harder to find in small towns than in large cities. But the general
conclusion drawn about urban-rural poverty nonetheless depends on the system used.

What of indicators more closely tied to population density rather than centrality/access? Two measures traditionally related to settlement density include farming as an occupation and the age distribution of the population. Farming forms a small share of jobs in all four area types, being most important of course in rural-nonmetro areas (6.5 percent), and only 0.5 percent in urban-metro areas. It forms a large share of the workforce in rural-metro (3.3) than in urban-nonmetro (1.6), indicating that the Census rural definition does better capture the economic differentiation arising from differences in settlement.

The age distribution metric is somewhat more complicated. The share of the population less than 18 is nearly uniform across the four areas, a departure from historical patterns where rural households typically had larger families. On the other end, residents 65 years and older were relatively more concentrated in both urban- and rural-nonmetro areas, which offer lower housing costs.

Young adults ages 18-24, which represent the years of greatest mobility and desire for the attractions of cities and larger towns, are disproportionately found in urban areas

Table 3. Change in population and per capita income, 2000-2006, by rural and urban status

	Census Urban	Census Rural	Metro	Nonmetro	
	Percent change				
Population	0.043	0.143	0.072	0.027	
Per capita income	0.162	0.237	0.170	0.163	

Source: 2000 Census of Population and 2006 American Community Survey

regardless of metro status. This group in particular illustrates the risk of not considering the proper geographic system for the research problem at hand. A metro-nonmetro analysis of young adult migration, for example, is likely to mask important flows to college or military installations in nonmetro urban places. A similar use of this system for studying retirement, however, would likely be appropriate.

Lastly, we show that the metro-nonmetro system is preferable for distinguishing changes in key variables. Here we look at population and income change as two fundamental measures of increasing or decreasing well being. Because the geographies change between 2000 and 2006, we were unable to use the data files necessary to crosstabulate the data, so only the four marginals are compared here.

U.S. rural population growth in the first half of this decade was over three times that of urban under the Census definition (table 3). Contrarily, metro population growth was over twice the growth of nonmetro counties during the same period. The proximate causes of this are either that urban places in nonmetro counties are growing particularly slowly, or that rural parts of metro counties are capturing the lion's share of new population among all rural areas. While there may be some elements of both, we also know that most nonmetro growth over the past

decade has occurred either in retirement and recreation areas or in counties immediately adjacent to metro areas that are experiencing spillovers from urban clusters. These spillovers are likely to be even more apparent within the population "fringe" of metro areas most likely to be classified as Census rural.

Similarly, for per capita income, the view of the rural-urban divide depends on the geographical system used. Metro and nonmetro areas experienced quite similar changes in per capita income growth between 2000 and 2006. Yet rural growth was about one-third higher than urban growth. In both population and income change, rural areas within metro counties appear to be driven more by their attachment to urban cores than to the traditional activities that occurred in a sparsely settled landscape.

Discussion

As OMB's nonmetro classification and the Census Bureau's rural classification describe increasingly divergent populations, the near-universal practice of using nonmetro to define "rural" for research purposes is coming under increasing scrutiny. Our aim has been to show that in important ways, the metro system better describes and differentiates "rurality" in a contemporary landscape marked by urban sprawl, convergence in the types of activities performed across different settlement densities, and increasing technological interconnectedness. Far from being merely an approximation of rural, the nonmetro definition incorporates a legitimate and highly useful economic concept of rural that should be explicitly recognized. Local labor markets usually combine employment centers with attendant hinterlands, thus labor market research is often better described within the metro system.

The Census rural category is still an important and viable classification for defining rural from a land-use perspective. Tracking land-use change, defining urban sprawl, or studying the effect of urbanization on farmland prices benefits from a geographically-detailed definition of rural that distinguishes built-up territory from surrounding, less-developed land (Berube, et al., 2006; Galster, et al., 2001; Heimlich and Anderson, 2001).

Problems encountered in using the nonmetro classification scheme to depict rural realities do not come from its inability to mimic the "real" rural, rather they derive in part from its lack of differentiation. ERS recommended as early as 1975 that the nonmetro category be disaggregated according to the degree of urbanization (Hines, et al., 1975). Since then, ERS has created a series of demographic, economic, and social typologies aimed at capturing the diversity of nonmetro counties (Cook and Mizer, 1994; Butler and Beale, 1994; Ghelfi and Parker, 1997; McGranahan, 1999). These classifications are widely used for conducting research, developing public policy, and implementing government programs.

OMB added a new micropolitan classification in 2000, using identical rules to apply the metro concept to urban cores of at least 10,000 but less than 50,000 population. Thus, a micro area includes counties containing one or more urban clusters with at least 10,000 people and any adjacent counties with high commuting connections. Micro areas represent a significant development as a means to subdivide previously undifferentiated nonmetro territory, thus providing an important window on the economic and social diversity found in nonmetro America. The availability of micro areas has not yet resulted in any shift away from the practice

of using nonmetro counties to represent rural in empirical research, thus they have not been a focus of this presentation.

Metro and nonmetro definitions also can be problematic because they use geographic building blocks (counties) that are sometimes too large to accurately depict the metro-nonmetro boundary. Thus, along with populations living in open countryside and small towns that are economically tied to cities (as reflected in their commuting levels) metro areas often include territory that is legitimately rural from both land-use and economic perspectives.

ERS helped develop Rural-Urban Commuting Area (RUCA) codes as an alternative to county-based definitions (Morrill, et al., 1999). They are based on the same theoretical concepts used by OMB, but use census tracts instead of counties as building blocks. Rural can be defined in several ways using RUCA codes, but generally consists of open countryside and small towns outside the economic influence of larger cities. OMB's metro, micro, and nonmetro terminology is adopted to highlight the underlying conceptual connectedness between the two classification systems.

Whereas counties are generally too large to delineate labor market areas below the 10,000 population threshold, RUCA codes identify areas surrounding towns with populations as small as 2,500. They have been used to identify rapidly-growing, potentially urbanizing zones around the metro periphery, territory that is often labeled exurban (Berube, et al., 2006). Although relatively new, they have been widely adopted for both research and policy, especially in rural health applications (Hart, et al., 2005).

Conclusions

Competing definitions of rural in the United States have created a lively, but too often confusing and frustrating, debate in academic and policy circles in recent years. The long-standing definition of rural developed by the Census Bureau a century ago continues to provide a common framework for posing research questions and understanding policy needs from a land-use perspective. The demand for a vastly increased range of data in the mid-20th century for research, policy, and program development, coupled with the general availability of county-level data, led to the current research dominance of the nonmetro area as an alternate definition.

The metro-nonmetro division is viewed as too removed from an "actual" rural-urban dichotomy, a version of the proverbial "man who looks for his lost keys under the street lamp only because the light is better." Nonmetro areas are thought to misrepresent commonly understood notions of rural character in many instances and thus misdirect social science research focused on the causes and consequences of rural social and economic trends. These criticisms underplay the enormous employment and lifestyle changes that have occurred within both rural and urban areas in the U.S. that may have altered the usefulness and purpose of the Census rural definition.

We believe the tension can be reduced by viewing "rural" as multi-dimensional, encompassing both land-use and labor-market concepts, together with other administrative, cultural, and institutional perspectives. Rather than simply substituting, the nonmetro classification serves as a valuable construct for "rural" as activity that occurs outside urban commuting sheds. It should be preferred for questions related less to land use, or "how things look," and more to urban

connectedness, or "how people live." The historical divergence of rural and nonmetro populations is the very reason that nonmetro is a viable, often preferable, construct.

Many aspects of the "nonmetro or rural" choice have not been adequately addressed. For instance, the choice of an appropriate population threshold delimiting rural and urban places has never been adequately debated and little or no research exists to aid in choosing an appropriate cut-off. A strong argument can be made that 2,500 is too low. Over the years, criteria for USDA rural development programs were adjusted upward, arguably an appropriate response to rapid urbanization.

Beyond the parochial concerns of rationalizing one or the other rural U.S. definitional system, the dialectic between land use and labor markets highlights the challenge of rapidly changing urban morphology for rural data collection efforts across the industrialized world. The increasing gradualism of the rural-urban interface is perhaps most acute in the U.S., but nonetheless is echoed to some degree in urban-regional systems across North America and Europe. In any national context, on-going settlement transformations and related economic restructuring make modifications to classification systems necessary to maintain a reliable delineation of what is rural.

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