THE RISING INCIDENCE OF NATURAL DECREASE IN RURAL AMERICAN COUNTIES

Kenneth M. Johnson

Department of Sociology

Loyola University of Chicago

Chicago, Illinois 60626

ABSTRACT: In 2002, more American counties (988) experienced natural decrease than at any time in the nation's history. Natural decrease is most common in rural areas remote from metropolitan centers. Regional concentrations exist in the Great Plains, Corn Belt and East Texas, with scattered pockets in the Ozark-Ouachita Uplands, Upper Great Lakes and Florida. Natural decrease is the consequence of a complex interaction between fertility, mortality and migration over a protracted period and is symptomatic of fundamental changes in the demographic structure of an area. Age structure distortion resulting from protracted, age-specific migration is the primary cause of most natural decrease. Temporal variations in fertility also contribute, but it is not due to below average fertility in an area.

Natural decrease occurs when deaths in an area exceed births. It has been unusual in the American experience, with few instances of county level natural decrease reported prior to the middle of this century. However, it is no longer rare. By 2002, nearly half of all U.S. counties had experienced at least one year of it. And, the pace of natural decrease is accelerating from 483 counties in 1990 to a record 988 in 2002. Ironically, natural decrease is widespread at the county level at a time when the annual number of births in the U.S. is relatively high. That natural decrease can occur when births are abundant underscores the subtle and complex dynamics of the demographic system. Concern about natural decrease is already widespread in Europe and its incidence in the United States needs to be fully understood as well.

Natural decrease has received little attention in the U.S. because at the national level natural increase has long been the predominate force fueling the growth of the American population. Such natural increase has nearly always been supplemented by immigration. Absolute gains from natural increase were greatest between 1946 and 1964, the period of the post-war baby boom, after which they diminished rapidly as births dropped in the early 1970s. Since 1980, annual births have rebounded and by the early 1990s natural increase in the U.S. was some 44 percent higher than in the early 1970s, despite a modest increase in mortality. Such renewed growth at the national level masks the rising incidence of natural decrease in many American counties.

What is of concern here is the extent and geographic distribution of natural decrease and its causes. Of particular interest is the longitudinal interaction between migration, fertility, mortality and the age structure. In a rising number of American counties, the demographic change fostered by this interplay over an extended period has led to natural decrease. Natural decrease is of interest because of its uneven geographic distribution; because it is a function of protracted and complex interactions among demographic, economic and social factors; and because it is unique historically. Protracted natural

decrease may also be symptomatic of fundamental changes in the local demographic structure because it eventually drains the demographic resilience from an area. It also places an enormous strain on the local infrastructure that must continue to provide services to the remaining population with dwindling human and economic resources. This research contributes to demography by enhancing our understanding of the dynamics that underlie population redistribution and by providing new information about an emergent demographic phenomenon.

Since 1990, the incidence of natural decrease has continued to rise and at an accelerating pace. In 1990, 483 counties experienced natural decrease and this rose to a record 988 counties in 2002, an increase of more than 100 percent in just 12 years. Some 458 counties with no history of natural decrease experienced it for the first time between 1990 and 1999. Most of these new natural decrease counties were located near existing concentrations of natural decrease. However, a significant number of new natural decrease counties emerged in the interior of the Southeast, in New York and Pennsylvania, in the Upper Great Lakes and in portions of the West. By 2002, 1536 counties had experienced at least one year of natural decrease. This represents nearly 50 percent of all U.S. counties.

The occurrence of natural decrease is rarely an isolated incident. Once natural decrease occurs in a county, reoccurrences of the phenomenon are likely. Among counties that first experienced natural decrease before 1970, nearly 99 percent had a reoccurrence and more than 72 percent had at least ten years of it by 1999. A similar pattern exists among counties that first experienced natural decrease during the 1970s and 1980s. Approximately 90 percent of these counties have had at least one reoccurrence. And, by the end of the 1990s nearly two-thirds of the counties that first experienced natural decrease in the 1990s have had repeat occurrences of it.

More than 90 percent of the counties with episodes of natural decrease are nonmetropolitan. Although

several prominent metropolitan counties have experienced it, most metropolitan natural decrease counties lie on the metropolitan fringe and behave like their nonmetropolitan counterparts. Metropolitan adjacency and the presence of urban concentrations exert a substantial influence on the incidence and severity of natural decrease. Counties not adjacent to a metropolitan area had a greater probability of experiencing natural decrease than those adjacent to a metropolitan area. And, counties that are entirely rural are much more prone to natural decrease than those with an urban population, whether adjacent to a metropolitan area or not. The joint impact of these variables is reflected in the nearly 80 percent of the nonadjacent, totally rural counties that experienced natural decrease in the 1990s, compared to only 42 percent of the adjacent counties with an urban population.

The heavy concentrations of natural decrease counties on the Great Plains and in the Corn Belt reflect the linkage between dependence on agriculture and natural decrease. Farming counties are the most likely to suffer natural decrease, more than 76 percent have experienced it and more than half had more than five years of it. Many agricultural counties have sustained decades of outmigration by young adults leaving them with few individuals of childbearing age. In contrast, counties with substantial manufacturing employment were the least likely to experience natural decrease. This reflects the effect of regional restructuring which has shifted some routine manufacturing to nonmetropolitan areas in recent decades. Manufacturing growth enhances a nonmetropolitan county's ability to retain the young adults, who will produce the next generation. This, in part, explains the absence of natural decrease from large areas of the Southeast, where many of the new nonmetropolitan manufacturing jobs are concentrated. The levels of natural decrease in the other ERS economic types are intermediate between those of the farming and manufacturing.

Past research offers two explanations for how variation in these components manifests itself in natural decrease. First, natural decrease may result from low fertility. This explanation was offered for the

natural decrease he discovered in the mid-1930s during the Great Depression. Age structure distortions caused by protracted age specific migration is the second explanation offered for natural decrease. Beale believed that this accounted for the emergence of natural decrease in the 1950s and 1960s. Noting that it was occurring at a time of record high fertility, Beale argued that the natural decrease was a consequence of the protracted outmigration of young adults coupled with aging in place by older adults. Eventually, such migration patterns resulted in a local population with few young adults and many elderly, a combination leading to few births and many deaths. These two explanations are not mutually exclusive. In fact, low fertility among a population with few young adults maximizes the likelihood of natural decrease.

Natural decrease is a function of a complex interaction between fertility, mortality and migration over a protracted period. Factors which influence any of these elements have implications for natural decrease. The impact may be immediate, as in the case of a sudden drop of birth rates during the Great Depression and again during the early 1970s. However, much more subtle is the gradual impact of age specific migration. Evidence presented here suggests that except under very trying circumstances, the occurrence of natural decrease is a gradual process. Although it is not immune to temporal variations in basic demographic processes, neither is it a slave to them. Witness, for example, the rapid rise in the incidence of natural decrease in the 1990s despite the highest number of births since the Baby Boom.

Where natural decrease is a product of prolonged outmigration of the young, it reflects a loss of human capital due to the lack of proximate opportunities. It also eventually drains the demographic resilience from a community as the steadily dwindling number of young adults produces successively smaller birth cohorts, while the older cohorts age in place. In essence, natural decrease is the ultimate demographic consequence of the longitudinal age specific migration patterns that have characterized a considerable part of nonmetropolitan America for decades. With continuing outmigration and historically low birth

rates, the future for many of these areas is a significant concern. However, not all natural decrease areas face such a bleak future. When natural decrease stems from the evolution of a community into a retirement area, it should probably not be viewed as a problem or as a reflection of one -- at least in the short run. Indeed, many communities and states are competing to entice retirement settlements as a means of economic development. Overall population and business growth almost always accompany such trends. The disproportionate increase in the older population in such cases requires additional medical and social services, but these are expected outcomes, accepted in trade-off for the infusion of transfer payment income. Whether this is a sensible development strategy in the long term remains to be seen.

Though the likelihood of future natural decrease appears high for some areas, recent demographic trends suggest that it may not be a foregone conclusion. Recent research suggesting a significant increase in Hispanic migration into nonmetropolitan areas may have significant implications for future rural fertility trends. The rural rebound of the 1990s may also eventually diminish the incidence of natural decrease, if it stems the loss of young adults from areas prone it. There is precedence for this in that many fewer young adults left nonmetropolitan areas during the population turnaround of the 1970s--a fact that probably contributed to the reduced incidence of natural decrease during the late 1970s. Preliminary evidence suggests that age structure shifts are occurring in nonmetropolitan areas as a result of the rebound. The net flow of those under the age of 65 to nonmetropolitan areas appears to have accelerated in the 1990s. Whether this is a function of inmigration or of increase retention is not known at this time. In contrast, researchers report a distinct slowdown in the growth rate of the older nonmetropolitan population in the first half of the 1990s (Fuguitt, et. al, 1996). As a result, the proportion of the population over the age of 65 has declined in hundreds of nonmetropolitan counties and a significant number of these counties are actually experiencing an absolute decline in the number of older adults. As a consequence of these trends, the growth rate of the older population is now below that of the younger

population for the first time in recent history. If these trends are sustained for an extended period, the incidence of natural decrease in rural America may well diminish.

It is also possible that counties with a long history of natural decrease will eventually reach a new demographic equilibrium where births and deaths again balance. In such areas, the number of deaths may eventually diminish as the larger, older cohorts now in their 70s and 80s pass from the scene. The cohorts that succeed them as the areas most senior are likely to be smaller, due both to the low fertility of the 1930s and to the effects of prior migration which long ago diminished their numbers. It is possible that the deaths from these smaller cohorts may more closely approximate births to the younger cohorts now entering their childbearing years, especially if fewer of the young are now leaving. However, little is known about this phenomenon and more research is needed to ascertain whether and when such a new equilibrium may be achieved.

In sum, the rising incidence of natural decrease together with the demographic structural shifts that underlay it deserves additional attention from scholars. That natural decrease could rise so sharply in an era when annual births nationwide approach the level of the baby boom, underscores the complex set of factors that influence the demographic structure of the nation. And, with falling nonmetropolitan age-specific fertility rates and an age structure much less supportive of fertility, natural decrease is likely to continue to be a concern in the future. This together with the pronounced geographic clustering of natural decrease and its significance to policy-making and planning, make it imperative that researchers continue to monitor this emerging demographic phenomenon and consider its implications for the people and institutions that remain.