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Labor Force Implications of Population Decline in Non-Metropolitan Nebraska

By Dr. Randy Cantrell, University of Nebraska Rural Initiative

The most recent release of population estimates from the Census Bureau indicates that 70 Nebraska counties lost population between 2000 and 2005. These counties included 52 of the 53 that recorded population losses between 1990 and 2000, joined by 18 counties that had grown through the 1990s.

While those counties estimated to have lost population over the last five years included three of 11 micropolitan core counties, eight of ten outlying microplitan counties, and even one of seven outlying metropolitan counties, the great majority were non-metropolitan. Of the 43 Nebraska counties containing no community of 2,500 or more residents, 42 are estimated to have declined in total population since the 2000 Census.

These numbers clearly indicate a continuing concentration of Nebraskans in metropolitan centers and their suburbs. Even allowing for the possibility that inter-Census estimates for small counties may be something less than perfect, the continuing loss of population in rural portions of our state, which in some counties has continued for more than 100 years, does not inspire much optimism for their economic and social future.

As is often the case with things statistical, these aggregate data tell a story that is incomplete. Depopulation is certainly occurring, but not in the uniform way that one might imagine. In order to fully understand the likely impact of population change, one must ask not only how many people are involved, but who those people are. The answers sometimes can be counterintuitive and surprising, as is the case of changes in Nebraska's non-metropolitan labor force.

Of the 53 Nebraska counties that lost population between 1990 and 2000, Census results indicate that 31 saw actual increases in the size of their labor force. Of those same counties, 43 saw an increase in their labor force participation rate[1] and 45 experienced an increase in the proportion of the labor force with full-time work.[2]

Disaggregating Population Change

The explanation for this seeming anomaly (population loss and labor force growth) is found in the four components of population change: birth, death, in-migration, and out-migration. If a population grows, it is because more people are born than die and/or because more people move to the area than out of the area. If a population declines, the reverse must be true.

In general, non-metropolitan Nebraska is losing population due to declining birth rates and high death rates resulting from a disproportionately large population of elderly residents. While 43% of the state's population resides in a non-metropolitan county,

[1] The proportion of the population over the age of 16 years that was either employed or unemployed and looking for work.

[2] Full-time is defined here as working for an average of 35 or more hours per week for at least 50-weeks of the year preceding the Census.

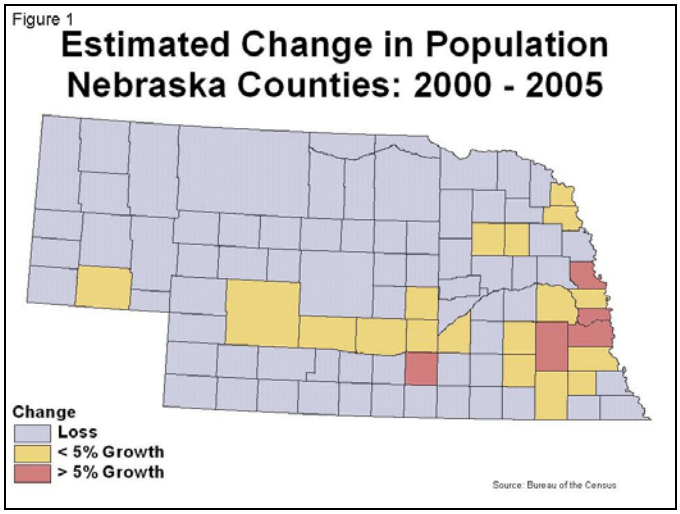
Table 1

Estimated Population Change for Nebraska Counties Classified by Modified Urban Influence Code: 2000 - 2005

Area	Estimated Population: July 1, 2005	Census Population: April 1, 2000	Estimated Change	Estimated Percent Change
Nebraska	1,758,787	1,711,265	47,522	2.8
2 Metropolitan core counties	751,743	713,876	37,867	5.3
7 Metropolitan outlying counties	248,578	228,627	19,951	8.7
10 Micropolitan core counties	354,885	348,839	6,046	1.7
10 Micropolitan outlying Counties	46,415	47,273	-858	-1.8
21 Counties with towns of 2,500 to 9,999 residents	210,661	217,384	-6,723	-3.1
43 Counties with no town . 2,500 residents	146,505	155,266	-8,761	-5.6

source: Bureau of the Census

Figure 1



55% of the population over 65 years of age does so, as does 61% of the population age 85 years and over. In part as the result of this skewed age distribution, deaths exceeded births in 41 Nebraska counties between 1990 and 2000. It is estimated that 46 Nebraska counties experienced such natural population losses over the last five years.

In addition, 50 Nebraska counties experienced net migration losses during the 1990s. It is estimated that 77 counties have seen net out-migration since 1990. In terms of total population change, out-migration is a two-edged sword. Migration for work or education is significantly more likely to be attractive to the young, because they stand to benefit more from improved earnings over time. If residents of child-bearing age leave a community, they not only leave older residents to age in place, but they also reduce the number of children born into their community of origin. Coupled with a nationwide (in fact global among industrialized nations) trend of declining fertility rates, this phenomenon tends to result in a rapid reduction in the number of children born in the community.

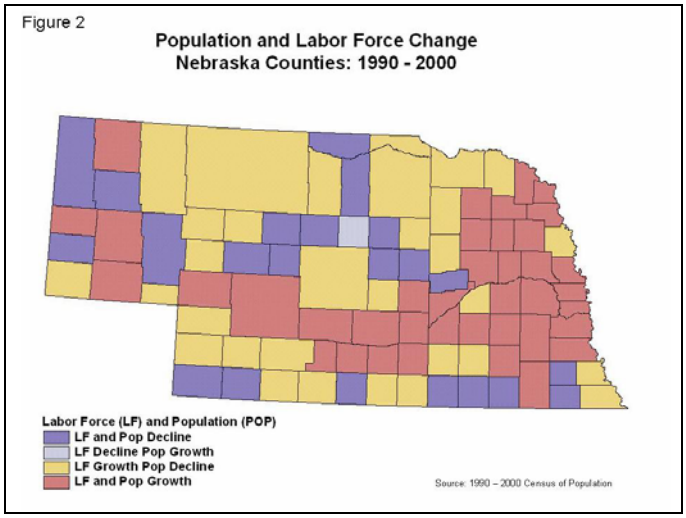
Ultimately, one would expect the two trends to be mutually reinforcing. This has indeed been the case in much of Nebraska, where it is estimated that 42 counties experienced both net out-migration and natural population decreases between 2000 and 2005.[3]

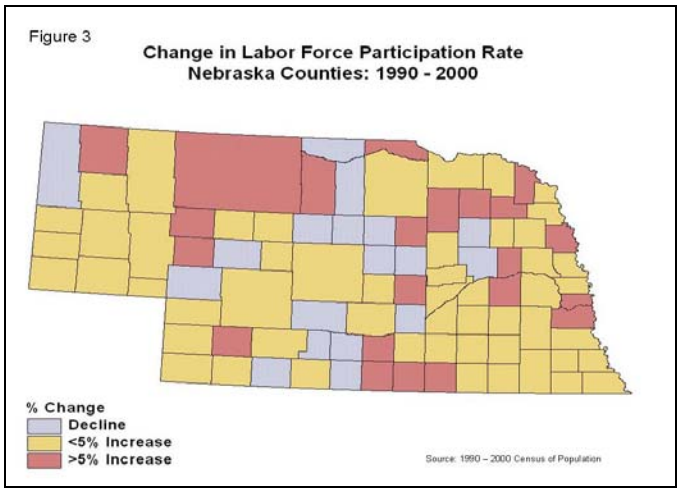
Comparing Rural and Urban Counties

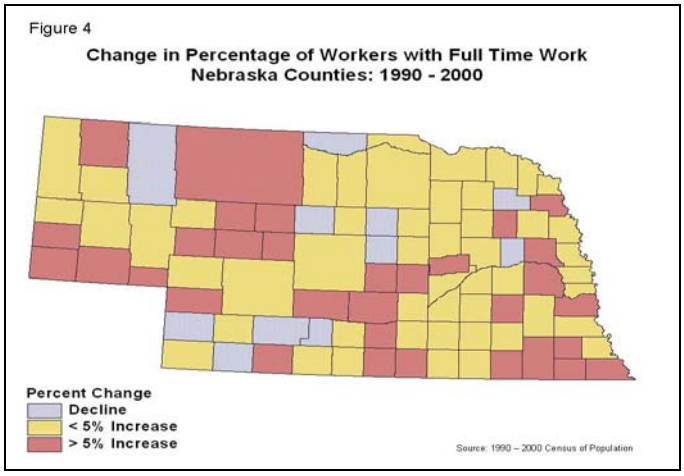
The result of these changes is readily apparent when comparing the population pyramid depicted in Figure 5 for Nebraska's 71 most rural counties with that depicted for metropolitan and large trade center counties.[4] The population distribution for the state's

[3] An excellent report on Nebraska population estimates for 2005 can be found at the University of Nebraska Omaha Center for Public Affairs Web site: http://www.unomaha.edu/~cpar/:

[4] These counties contain a community with a population larger than 7,500. Note that excluding them from the definition of rural eliminates most of migration destinations for Nebraska's growing Latino population and thus provides a conservative estimate of both the birth rate and in-migration rate for non-metropolitan Nebraska.







rural counties demonstrates declining birth numbers, out-migration of young residents, (age 20 to 29) and the presence of a proportionally large senior population. For the 22 metropolitan and large trade center counties, the ability to attract young people is enhanced by the presence of both institutions of higher education and jobs. In those counties, the concentration of young adults contributes to larger birth numbers and a relatively stable birth rate.

Residents in their prime earning years (35 to 54) account for approximately 28% of the population for both county types. It is the ability of more rural counties to attract in-migrants in this age group along with increases in labor force participation that explains growth in the rural labor force.

Rural Areas Saw In-Migration of Working Age People

Evidence of the in-migration of working age people is found in Figure 6, which represents the difference between the expected and observed populations in various age groups in the year 2000. In this graph, we have started with the assumption that nobody either moved or died over the ten years between the last two Censuses and that births would occur at the average Nebraska rate.[6] If that were in fact true, we would expect the population age 30 to 40 years in the year 2000 to be identical to the population age 20 to 30 years in 1990. Before ten years of age, discrepancies from expectation can be explained as migration, declining fertility, or an error in our birth rate assumption. From the age of ten years on, however, any observed change must be the result of either migration or death.

Figure 6 demonstrates significant out-migration of young people, amounting to a nearly 50% loss in the 20 to 24 year age group. The data also demonstrate substantial population losses among persons age 70 years and over, primarily as the result of death. Surprisingly, the data also demonstrate in-migration for the population age 30 to 49 during the decade of the 1990s. Associated with that movement was an in-migration of school age children (ten to 14 years), who accompanied working age parents.

For these counties, the net result of demographic change was a 1.5% decline in the total population and a 7.7% increase in the economically important group age 30 to 54 years. Coupled with an increase in labor force

[6] Nebraska Health and Human Services reports an annual rate of 72.6 births per 1,000 women age 15 to 44 years.

participation, this resulted in labor force growth of 6.6%.[7]

While labor force growth in this group of counties is encouraging, one cannot be being overly optimistic, because the total Nebraska labor force grew at slightly more than twice that rate (13.6%). Still, it appears from these data that labor force growth in rural portions of Nebraska is possible even in the face of continuing population decline.

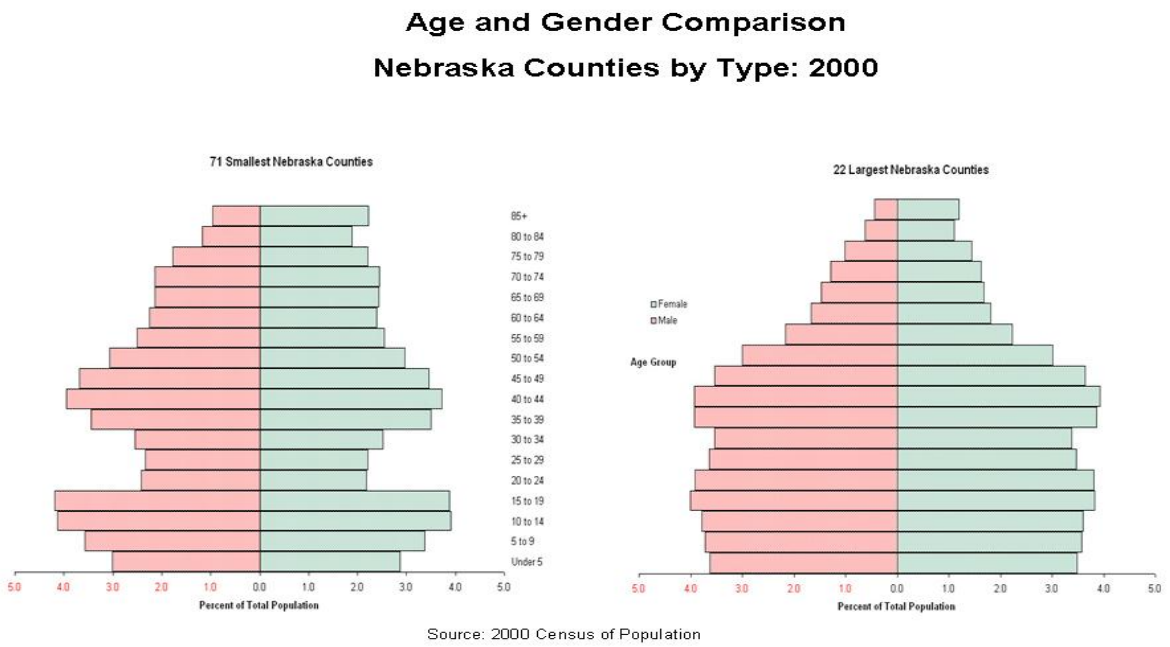
Can We Expect More of the Same?

Because Nebraska's institutions of higher education are in the majority located in larger communities, young people can be expected to continue leaving rural areas in large numbers upon completion of high school. Because the senior and near senior population is relatively large, we can expect to see substantial rural population losses resulting from death. In some localities this will no doubt exceed the birth rate. Thus, depopulation is likely to be a continuing theme in many non-metropolitan counties and communities.

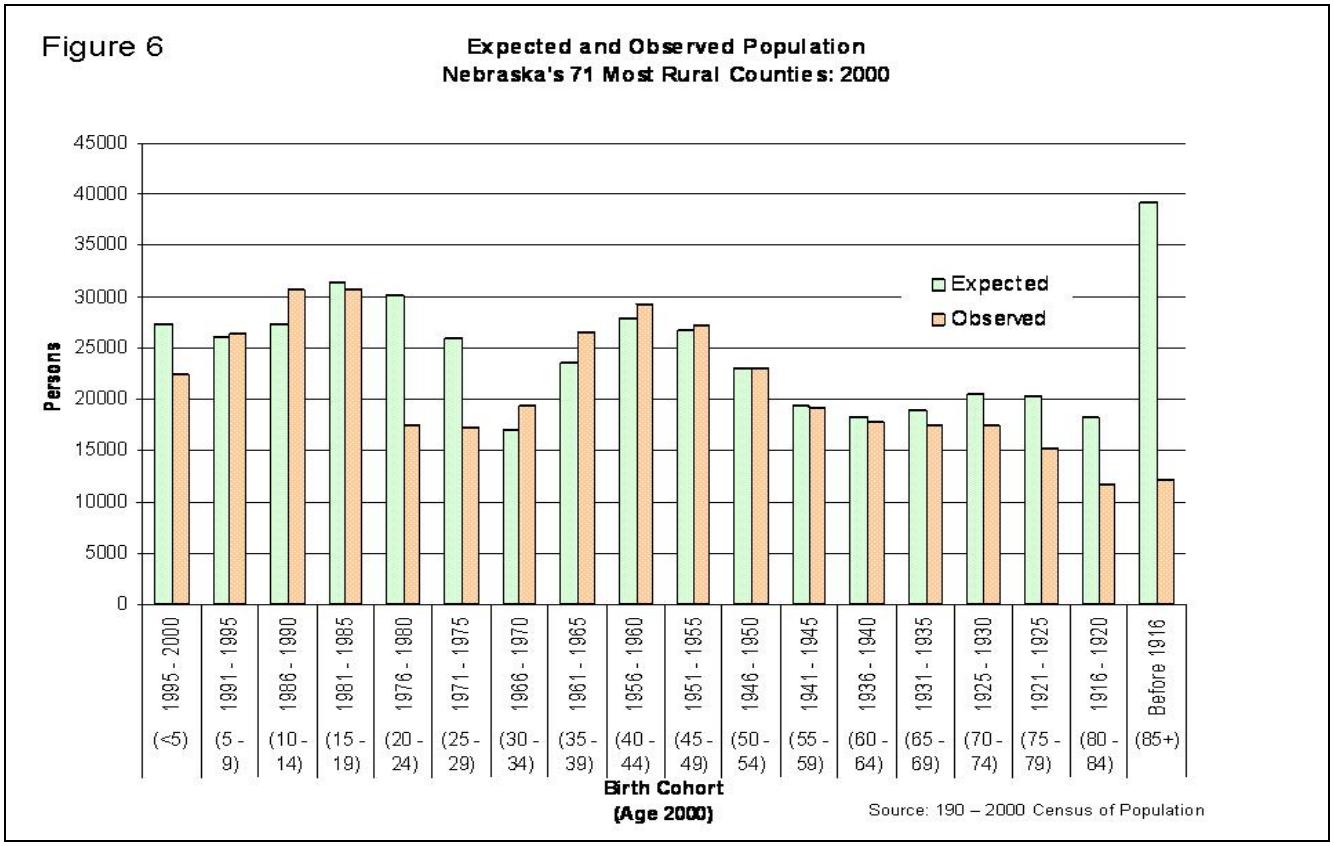
Whether or not we can expect to see a continuation of in-migration by persons of working age is question of critical economic importance. The movement that we saw during the 1990s may reflect lifestyle preferences as much as economic opportunity, but it is certain that such a movement of population to rural areas can not develop in the absence of available employment. Fortunately, non-metropolitan Nebraska has been able to add jobs over time.

Certainly, the odds of economic growth will be improved if the general population of a rural area is growing. The conclusion to be drawn from this examination of the demographics of the last decade is that population change does not necessarily occur in a uniform way. Aggregate population losses do not define an hourglass in which all grains of sand, or in this case people, are the same. At least as far as the labor force is concerned, much of rural Nebraska remains capable of growth, even if that growth falls short of generating a new settlement boom.

Figure 5



[7] It is important to note that labor force participation rates are also influenced by deaths or out-migration among older, retired residents.



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