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Is This a Rural Brain Gain? A Cohort Examination of Migration in Nebraska

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CORNHUSKER ECONOMICS

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Market Report	Yr Ago	4 Wks Ago	2/28/14
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$129.97	\$145.83	\$151.27
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.....	169.12	217.81	222.50
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.....	141.70	171.74	176.11
Choice Boxed Beef, 600-750 lb. Carcass.....	185.49	231.98	219.60
Western Corn Belt Base Hog Price Carcass, Negotiated.....	74.55	80.74	100.63
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	81.47	89.15	100.75
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct.....	107.50	163.00	159.25
National Carcass Lamb Cutout, FOB.....	290.07	360.68	366.03
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Imperial, bu.....	6.96	5.85	6.36
Corn, No. 2, Yellow Nebraska City, bu.....	7.36	4.19	4.41
Soybeans, No. 1, Yellow Nebraska City, bu.....	14.57	12.65	13.85
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	12.21	7.39	7.73
Oats, No. 2, Heavy Minneapolis, MN, bu.....	4.15	4.60	4.97
<u>Feed</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	+	+	162.50
Alfalfa, Large Rounds, Good Platte Valley, ton.....	227.50	130.00	127.50
Grass Hay, Large Rounds, Good Nebraska, ton.....	212.50	152.50	107.50
Dried Distillers Grains, 10% Moisture, Nebraska Average.....	269.00	185.00	222.50
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.....	104.00	59.00	66.50
+ No Market			

There is no doubt that Nebraska's rural population has, in most cases, been in decline. Between the Census years of 2000 and 2010 the state saw a population increase of 6.7 percent, led by growth of 13.7 percent in nine Metropolitan counties. Over the same period, Nebraska's 84 Non-Metropolitan counties saw their populations decline by 1.8 percent, led by an 8.5 percent population decline in the 28 most rural counties (labeled here as 'Frontier' counties; Table 1 on next page).

The accepted explanation for this trend is the out-migration of young residents, and to a lesser extent deaths among the relatively larger population of senior citizens found in rural areas. The movement of young people from rural to urban areas is indeed significant. It is not unusual for more than half of the graduates of rural secondary schools to leave rural communities soon after graduation; with college, employment and military service being their primary motivation for moving. This out-migration of rural youth has popularly been termed the "brain drain" in such popular books as *"Hollowing Out the Middle: The Rural Brain Drain and What it Means for America"* (Carr and Kefalas, 2009). As a result, it has become more or less accepted wisdom that the loss of young residents leaves rural places at a disadvantage in terms of productivity and innovation.

Recently, however, a countervailing interpretation has begun to emerge among researchers such as Minnesota's Benjamin Winchester, who has been writing about what he sees as a rural brain gain. That work is based on documented growth in the rural population cohort age 30 to 49 years. Such growth is not limited to Minnesota, but rather reflects a national trend spanning most of the last 20 years.

In this paper, we will examine population change by age cohort for Nebraska counties of various sizes to deter-

Table 1. Change in Total Population by County Type, 2000-2010

County Type (#)*	Total Population: 2010	Total Population: 2000	Population Change	Percent Change
Nebraska (93)	1,826,341	1,711,263	115,078	6.7
Metropolitan (9)	1,071,368	942,503	128,865	13.7
Non-Metropolitan (84)	754,973	768,760	-13,787	-1.8
Micropolitan Core (10)	359,772	348,933	10,839	3.1
Small Trade (24)	222,132	232,374	-10,242	-4.4
Small Town (22)	121,072	130,641	-9,569	-7.3
Frontier (28)	51,997	56,812	-4,815	-8.5

Source: Bureau of the Census

mine whether similar trends can be found in our state. In order to do this, we will use a simplified cohort analysis of migration patterns, comparing “expected” and “observed” populations for five-year age groups. Using 2000 Census counts as a baseline, we start with the assumption that nothing changed over the next decade. That is, if one found 100 residents age 20 to 24 years in a given location in the year 2000, and neither death nor migration affected that population, we would expect to find 100 residents age 30 to 34 in that same location in the year 2010. Any variation from that expected outcome (for residents who were more than 10 years old in 2000) can only be explained by migration or death. Cohorts in 2010 that are smaller than expected are explained as net out-migration (and to a lesser extent death), while cohorts that are larger than expected are explained as net in-migration.

These data are most easily represented in graphic form, taking the shape of something much like the population pyramids with which most readers will be familiar. Bars to the right of these graphs represent larger

than expected cohort numbers, while bars to the left represent numbers that are smaller than expected.

In the figures that follow, we will examine the population ages 10 to 69 years. At the low end, this eliminates births from the analysis, and at the high end the effects of death are minimized (although not eliminated).

Nebraska as a whole experienced net out-migration for all age cohorts between 25 and 69 years; with net in-migration being found only among residents age 10 to 24 years (Figure 1).

The younger cohorts will, in most cases be the children of in-migrants; even though the age cohorts representing their parents saw net out-migration. It is important to remember that net loss among a given cohort does not mean that migration was entirely one way, only that the net effect was negative. The reader may at this point ask how the state managed to grow

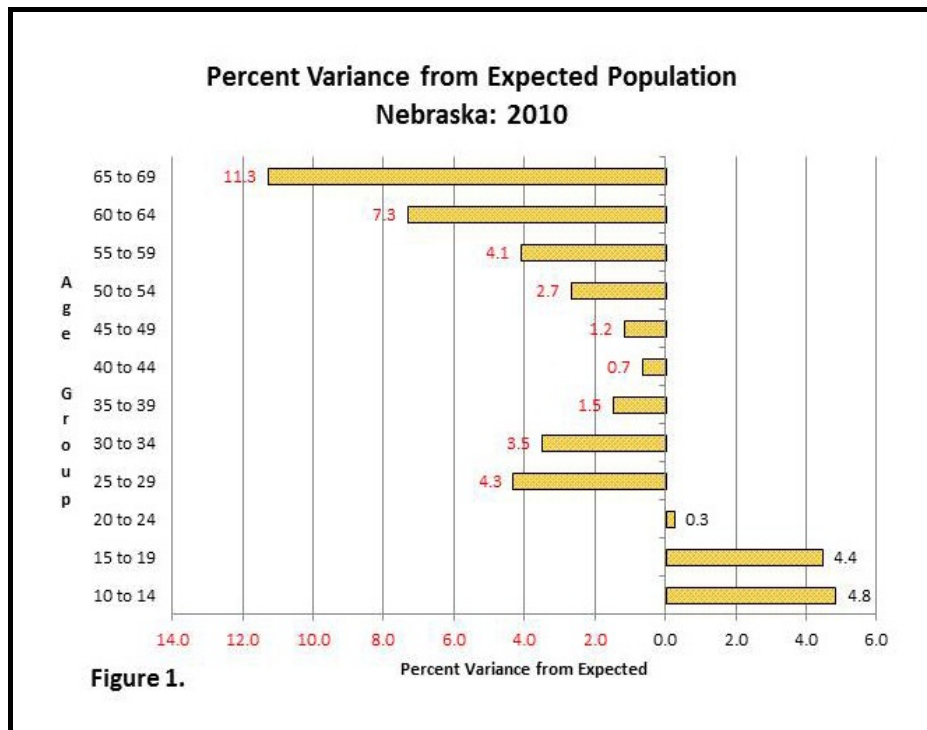


Figure 1.

by over six percent, while losing population from among all age cohorts age 25 years and over. This is because younger age cohorts tend to be much larger than older

cohorts. As seen today, even Nebraska's baby boom cohort, long the state's largest, is outnumbered by our youngest cohorts.

In Figure 2 we turn our attention to Nebraska's nine Metropolitan counties, which are home to roughly 60 percent of the state's population. For many young rural Nebraskans, it is their destination after High School, as they migrate in search of education and employment.

As one would expect, the Metropolitan counties saw net in-migration for all cohorts under the age of 30 years, with the greatest rate of in-migration being found among the cohort age 20 to 24 years. These young Nebraskans would have been age 10 to 14 years during the 2000 Census and moved to a Metropolitan county over the next decade, either from Non-Metropolitan Nebraska, from another state or from another nation.

For purposes of comparison, we'll turn next to Nebraska's smallest counties, labeled here as "Small Town" counties, which have no population center of 2,500 or more, and "Frontier" counties which not only lack a center of 2,500, but also have a population density of less than six per square mile.

In both cases we see the expected out-migration of young cohorts, with both county types having a cohort of

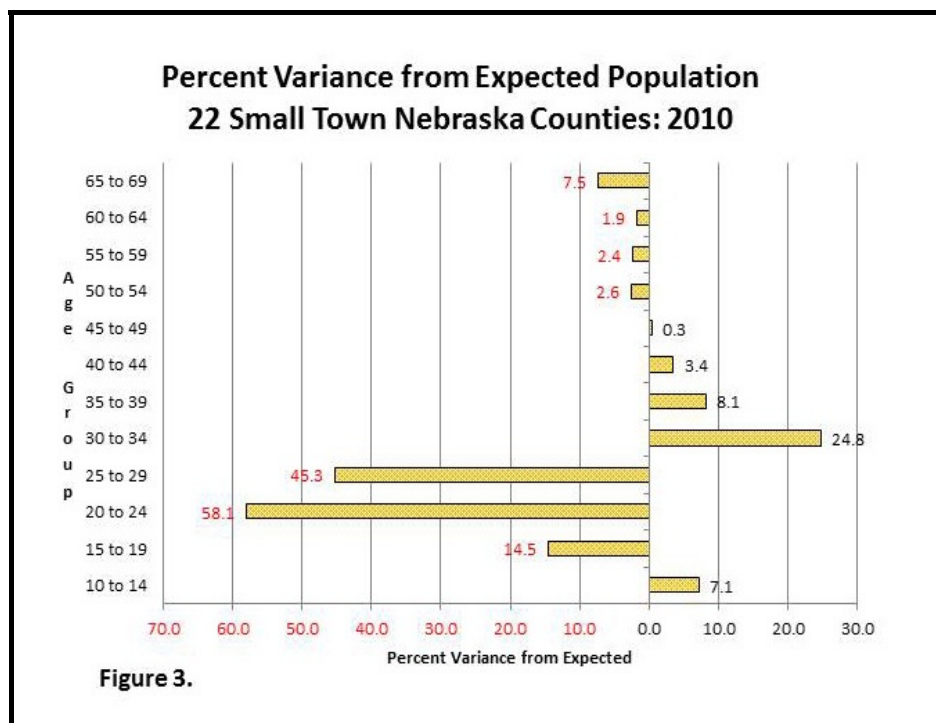
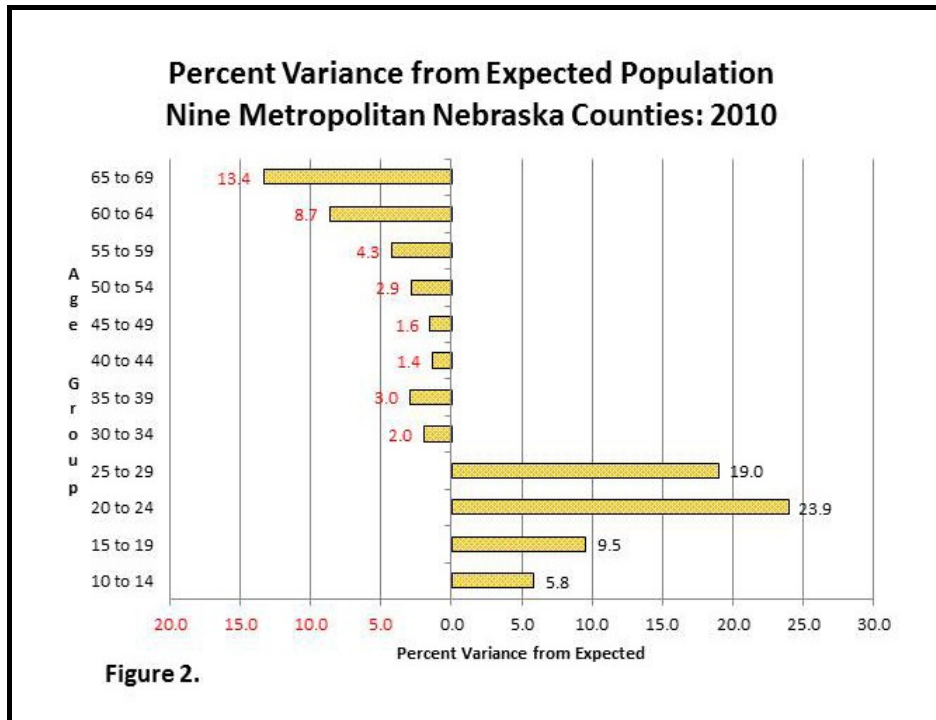
20 to 24 year old residents that is less than half of what would have been found had there been no movement. Remember that these young people would have been age 10 to 14 years in our baseline year of 2000. The data clearly depict members of this cohort moving away from their rural homes at some point during the intervening decade. These young Nebraskans are in large part responsible for the growth in that cohort found in Metropolitan counties.

Where we see something less predictable is in the growth found for the cohorts spanning the ages 30 to 49 years (Figures 3) and (Figure 4, on next page). Here we see growth through in-migration, and in a couple of cases that growth is fairly impressive. Within small town counties the data demonstrate a population age 30 to 34 years that is nearly 25 percent larger than what would have been found if there had been no movement.

The small growth found for the cohort of 10 to 14 year old residents can be largely explained as the children of the population of adult in-migrants. Given these data, it appears that the rural growth

found among 30 to 49 year old cohorts in other parts of the country has been replicated in rural Nebraska.

Does this represent a "Brain Gain" for rural Nebraska? From the standpoint of labor force productivity, the an-



swer is probably yes. While out-migration by the very young dominates the overall picture of rural population change, those young people have most probably not completed their education, have not compiled significant work experience and have not settled into a career. Their loss is important, but had they remained they would in all likelihood not have contributed much to the labor force, except perhaps in lowering the wage rate in unskilled positions.

By age 30, education and experience are beginning to bring rewards to workers in the form of increased productivity and accelerated earnings. Moreover, since each cohort tends to be better educated than the cohort that preceded it, those growing cohorts tend to have a greater potential for productivity than does the population that they join.

It is often suggested that rural communities should invest in programs aimed at retaining their young adults. While investing in youth is arguably a valuable strategy for any community development program, it is also an investment in a population with a high likelihood of leaving the community. A similar level of investment in new early and mid-career residents might prove to be even more valuable.

Suggestions for Additional Reading:

Carr, Patrick J. and Maria J. Kefalas, (2009). *Hollowing Out the Middle: The Rural Brain Drain and What it Means for America*. Beacon Press, Boston.

Winchester, Benjamin, (2009). *Rural Migration: The Brain Gain of Newcomers*. University of Minnesota Extension Center for Community Vitality. Retrieved from <http://www.extension.umn.edu/community/research/docs/BrainGain.pdf>

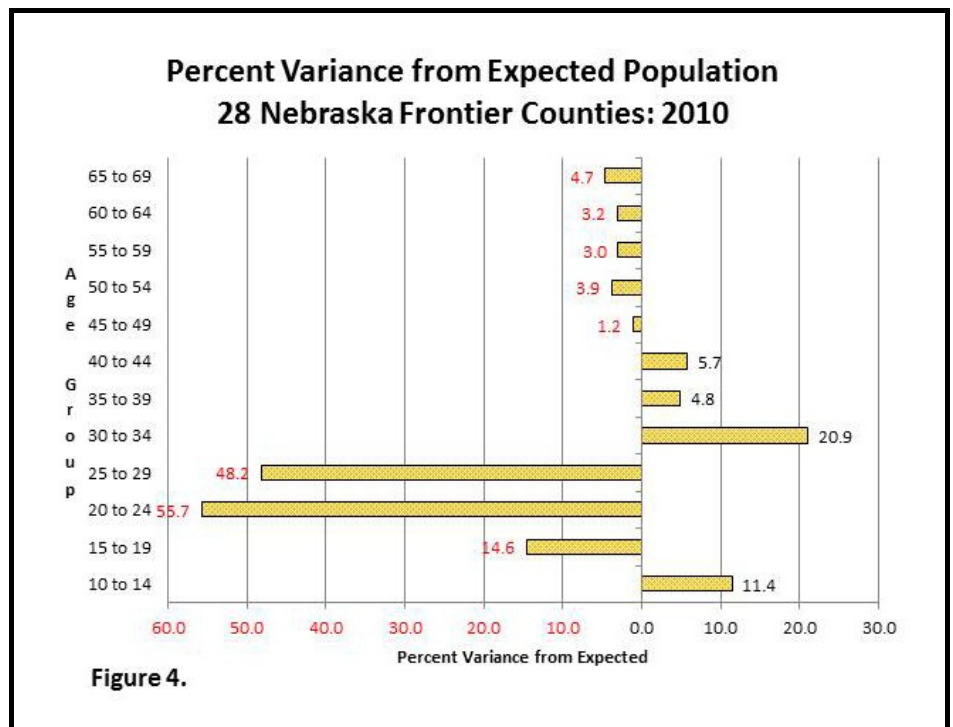


Figure 4.

* **Metropolitan Counties:** Having a population center of 50,000 or more, or a neighboring county sharing 20 percent or more of its labor force with the core county.
Micropolitan Core Counties: Having a population center of 10,000 to 49,999.
Small Trade Center Counties: Having a population center of 2,500 to 9,999.
Small Town Counties: Having no population center as large as 2,500.
Frontier Counties: Having no population center of 2,500 and a population density of less than six per square mile.
 Typology Developed by Sam Cordes and Don Macke

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