

We're Middle of the Pack on Educational Attainment

By Andrew Brod
Greensboro News & Record, November 6, 2005

When economists talk about a region's "economic drivers," they're often referring to certain strong industries or groups of industries. Such industry clusters arise because companies engaging in similar activities and hiring similar types of people can benefit from proximity to each other. If the cluster is big enough, the region's economic success becomes tied to the cluster's success: the cluster helps drive the economy.

For example, one of the most prominent clusters in the Triad is transportation, shipping, and logistics. This cluster includes such industries as trucking, warehousing, and automotive-parts manufacturing. The jobs found within the cluster range from truck drivers to logistics consultants. The cluster appears set for future growth, in part because it's already well-established but also because the Triad's location and network of highways is such an important asset.

In a way, this underlying geographical and transportation advantage is the real driver. The Triad is well situated between the Southeast and the Northeast, between the Gulf Coast and New England. Few cities have as many separate interstate highways as the Triad will soon have. And soon, the FedEx hub at Piedmont Triad International Airport will add a further asset to the mix.

The underlying drivers of an economy are important because of their infrastructural nature, their capacity to benefit many different industries. No factor has effects that are as far-ranging as the educational system, as represented by a region's public schools, community colleges, and four-year colleges and universities. Every year we creep closer to the so-called New Economy, in which brains matter more than brawn, and human capital is more valuable than physical capital. Good educational outcomes are essential as this economic transformation progresses.

This is reflected in studies that demonstrate the value of a college degree, such as a recent one by Arizona State University. That study found that a four-year college education yields a higher rate of return (in terms of higher lifetime earnings, and net of all costs of obtaining the education) than what one can expect by putting the same amount of money into the stock market. Of course it's possible to do incredibly well in financial markets, but on average one is better off staying in school.

Unfortunately, in recent years the news has not been great on the educational front. Math and science achievement in the U.S. is at a low ebb, and many other countries appear to be passing us by in this arena. On top of that, post-9/11 security restrictions have discouraged some foreign students and researchers from working in the U.S., making the lower achievement by native-born students all the more worrying. In the Triad the news has been mixed, with some high-performing schools but an array of disturbing test scores.

It's only natural to want to know how the Triad stacks up against other parts of North Carolina. We're competitors, after all. Is an educated work force a strong driver for the Triad? Will we be able to depend on it in the same way that we depend on our transportation network?

A region's level of educational attainment provides a simple gauge of its work force. Educational attainment refers to the highest degree obtained, and data about it are collected as part of the U.S. census. I took Census data for selected counties in North Carolina in 1990 and 2000 and devised a simple way to compress the information into an easy-to-understand index. I call it the Educational Attainment Point Average, or EAPA. The name is a bit unwieldy, but it's structured just like the grade-point average, or GPA, that students know so well.

I assigned point values to the following levels of educational attainment:

- Not a high-school graduate: 0 points
- High-school graduate (or equivalent): 1 point
- Associate degree, or some college: 2 points
- Bachelor's degree: 3 points
- Graduate or professional degree: 4 points

I constructed the EAPA by multiplying these values by the proportion of adults in each county that fit into the corresponding educational category. A county with an EAPA of 0.0 would have no high-school graduates. At the other extreme, everyone in a county with an EAPA of 4.0 would have graduate degrees, law degrees, medical degrees, and so on. Of course all real-world counties fall somewhere between these extremes, but the rankings can be informative.

The following table summarizes the EAPAs for nine large counties in North Carolina, which account for nearly 40 percent of the state's population. The data are for both 1990 and 2000.

County	1990	Rank	2000	Rank	Change	Rank
Orange	2.11	1	2.37	1	0.26	8
Wake	1.90	2	2.21	2	0.31	6
Durham	1.79	3	2.13	3	0.34	3
Mecklenburg	1.71	4	2.04	4	0.32	5
New Hanover	1.53	7	1.95	5	0.43	1
Guilford	1.56	5	1.89	6	0.33	4
Forsyth	1.56	6	1.85	7	0.30	7
Buncombe	1.43	9	1.78	8	0.35	2
Cumberland	1.45	8	1.67	9	0.22	9
All 9 counties	1.67		2.01		0.34	
North Carolina	1.33		1.69		0.36	
United States	1.45		1.61		0.16	

Not surprisingly, Chapel Hill's Orange County leads the pack with the highest EAPAs in both 1990 and 2000. Orange's 2000 EAPA of 2.37 implies that the typical adult in the county is somewhere between "some college" and a bachelor's degree. The average among all nine counties is 2.01, while the state and national averages are substantially lower, at 1.69 and 1.61, respectively. If one were to look at all North Carolina counties except these nine, the total EAPA for 2000 would be only 1.49.

Following Orange in the rankings for 2000 are Wake, Durham, and Mecklenburg Counties. Guilford County comes in at a middling sixth. Guilford's EAPA of 1.89 is higher than the state average but somewhat less than the average for these nine important counties. That's not particularly encouraging, nor is the fact that Guilford's ranking fell slightly from 1990.

Fortunately, Guilford has kept pace in educational attainment. From 1990 to 2000, its EAPA rose by a third of a point, roughly the same as for all nine counties taken together. Among the nine counties, the largest gainer was Wilmington's New Hanover County, whose EAPA jumped nearly half a point. New Hanover's improvement explains Guilford's slight fall in the rankings.

On the whole, North Carolina improved its EAPA by about a third of a point, well above the gain of 0.16 points nationwide. In 1990 North Carolina was below the national average in educational attainment. In 2000 the state did slightly better than the U.S.

The second largest increase in EAPA among the nine counties was by Asheville's Buncombe County, and because both New Hanover and Buncombe are big retirement destinations this might suggest that the numbers were driven by influxes of relatively well-educated retirees. But when the figures are broken down by age group, the highest-ranking age group in each county is the 16-19 group. Once again, Orange County ranked first in that category in 2000 with an EAPA of 1.09 (very few 19-year-olds have graduate degrees!), but New Hanover came in second with 0.92 and Buncombe was fourth with 0.69.

In fact, that particular age group provides a measure of good news for Guilford County, because its 2000 EAPA for the 16-19 age group was 0.80, third-best among the nine counties. Forsyth County, which for the most part is right next to Guilford in the EAPA rankings, is well behind in the 16-19 age group, with an EAPA of 0.62, roughly the same as the state average in that age group.

These data sing a familiar refrain for Guilford County: the news is neither wonderful nor horrible. Among our competitor counties in North Carolina, we're merely in the middle of the pack when it comes to educational attainment. And yet there are signs of hope. If we redouble our efforts to produce a highly skilled and educated work force for the future, we might just make it. If we don't, our most successful industry clusters will be those that rely on lower-skilled workers. Fortunately, we have some say as to what kind of economy we'll be when the 2010 and 2020 census results are released.

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