

States Can Reap Rewards by Supporting Research

Tim Foley for The Chronicle

By Art Padilla

At a recent regional conference about jobs for the next generation, several speakers highlighted the economic resilience of North Carolina's Research Triangle region, so named for the three research universities—Duke University, North Carolina State University, and the University of North Carolina at Chapel Hill—that anchor the triangle. The conference was held on North Carolina State's Centennial Campus, one of the country's top university research parks.

Despite the area's economic dynamism, our unemployed neighbors probably don't feel very resilient, and our governor and the first Republican majority in North Carolina's legislature in over a century are considering major budgetary reductions. As political and civic leaders cope with this financial spasm, it is useful to consider that the Research Triangle was not always so resilient.

Several key organizations moved to the Triangle during the 1960s and early 1970s, including IBM, the National Institute of Environmental Health Sciences, and Burroughs-Wellcome, but small tobacco farms and textile plants still filled the region. Science and engineering graduates usually left for high-tech jobs elsewhere. Venture capital was minuscule, and the regional airport wasn't much bigger. The 25-mile trip between Raleigh and Chapel Hill was a two-lane nightmare.

Conditions changed rapidly as the 1970s ended, even as the U.S. economy struggled. The rates of inflation, mortgages, and unemployment reached double digits. Like most states, North Carolina faced staggering budgetary problems and international competition. Japan flooded U.S. markets with cars and electronics, and Japanese managers ridiculed American workers.

Instead of retrenching, however, North Carolina doubled down on its future. The then-governor and General Assembly recognized that filling potholes in streets could be deferred, but limiting educational opportunities and decimating research capabilities would have irretrievably bad consequences.

They chose instead to invest heavily in educational infrastructure to strengthen the state's competitiveness and attract new industry. They started by significantly increasing scientific equipment budgets in engineering, chemistry, physics, materials science, electrical engineering, and computer science, as well as in the basic medical and health sciences. Investments were directed toward campuses with strong science and technology programs and distinguished records of research, particularly those in the Research Triangle.

In addition, the North Carolina School of Science and Mathematics, the nation's first public, residential math-and-science high school, and the Microelectronics Center of North Carolina (a joint venture of the Triangle universities) were established then. The General Assembly placed a high financial priority on elementary and secondary education, as well as on community colleges.

Before long, those projects and other industry recruitment efforts earned attention. In 1982, the Triangle region won its first Best Place to Do Business and Best Place to Live in America honors in national magazines. The Raleigh-Durham International Airport built a new terminal and a 10,000-foot runway in the mid-1980s. American Airlines opened a north-south hub to great fanfare, along with the region's first international flights, in 1987. That summer, the U.S. Olympic Festival held its most successful event ever in the three Triangle cities. Cary, now a tony suburb of Raleigh, became an acronym: Containment Area for Relocated Yankees.

Things are far from perfect, but national rankings continue to give the region high marks. Just last month, *Fortune* magazine again awarded the Best Company in America to Work For honor to SAS—a privately held, 11,000-employee software company in Cary that has its origins in the statistics department at North Carolina State, where its chief executive, Jim Goodnight, studied and taught, and where many of its top managers also studied. And a new, \$600-million, modernistic airport terminal opened in time for last week's National Hockey League All-Star game.

The region's successes and attractiveness are not due to chance. What we see today in the Triangle, including the economic vibrancy and opportunities for young people, reflects choices made decades ago by educational, business, and political leaders. What we will see in the future—and what our grandchildren will inherit—depends on the choices we make now.

America faces serious economic challenges. States are confronting budget shortfalls, underfinanced pension plans, and dilapidated infrastructures. The wise management of decline is not easy, and it is difficult to justify new investments during major recessions.

I am also painfully aware of the criticisms about universities: We are filled with tenured deadwood, we have too many administrators, students take too long to graduate, and corporate-minded regents are too interested in athletics and too quick to raise tuitions. Our athletics programs are reproached for their out-of-control spending, lavishly expensive stadiums used only a few days a year, and selfinterested boosters intent on controlling the institutions they support.

But despite the criticism—much of it valid—universities remain among America's enduring assets. Democratic society could not long survive without places that deal with values, the importance of history, and the relationship between humans and nature. Universities have been historically well-suited for those tasks.

In order to survive and thrive, universities need to answer those criticisms effectively. They must be of beneficial consequence to the communities that have historically nurtured them. Their contributions to society need to be eloquently and courageously affirmed by their leaders. Last week, President Obama himself made a strong case about the importance of university research to the nation's future in his State of the Union address. Later this month, he plans to propose a budget to Congress that will "invest in biomedical research, information technology, and especially clean energy technology ... to strengthen our security, protect our planet, and create countless new jobs."

A brief aside: I am a professor at a land-grant campus, a term referring to those institutions created by the Morrill Act from the sale of federal lands granted to states. The Morrill Act, which led to the creation of universities that have become international treasures of enormous importance, was signed into law by President Lincoln on July 2, 1862, at the depths of the Civil War. Barely 100 miles north of Raleigh, Union and Confederate forces were fighting to the death in southern Virginia.

Our current challenges are considerable, but they don't compare with those of the Civil War. We can attempt to ignore them, or we can invest in our futures, thoughtfully and optimistically, as North Carolina did a few decades ago. For the sake of our children's futures, I hope today's state leaders will act with the same wisdom and audacity as did their predecessors.

Art Padilla is a professor of organizational leadership and head of the department of management, innovation, and entrepreneurship at North Carolina State University. He is finishing a book on leadership for Wiley.

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