

# James Spaniolo: The economic impact of Texas research universities

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Calling for investment in the future when Texas is facing a historically difficult budget may sound like a hard sell. But as lawmakers grapple with how to allocate the precious state revenue available, we must make the compelling case for investing today in Texas' colleges and universities.

The cause is perfectly symbolized by the University of Texas at Arlington's new Engineering Research Building, a landmark center to be dedicated this week that adds 234,000 square feet of state-of-the-art laboratory and classroom space to our campus. The building would not exist except for state lawmakers who had the foresight in 2006 to authorize tuition revenue bonds needed to help fund the project.

The building itself is modern and sustainable by design. But it is the groundbreaking research at work inside the labs that will help propel the Texas economy for decades to come.

In one high-tech lab, bioengineering and social work faculty are collaborating to study brain activity and cognitive functions of veterans to help them recover from brain injuries and post-traumatic stress disorder.

In another, physicists and bioengineers are building drug delivery systems that point cancer-fighting compounds directly to tumors, sparing healthy cells. Down the hall, their colleagues are building new tissues with the potential to promote growth of arteries and blood vessels. They are intent on unlocking the secrets of how to generate life-saving human organs that could help eliminate the need for transplant donors.

Another team of scientists is working to detect genetic mutations that make some of us prone to grave illnesses, including pancreatic and lung cancers. Still others are building advanced systems for connecting robotic prosthetic arms to surviving nerve endings, work that may be able to restore the sense of touch and feel after injury or disease.

These groundbreaking efforts are clearly what state leaders envisioned two years ago when they passed HB 51, the so-called Tier One legislation. The bill made new funds available to encourage research at UTA and six other Texas research institutions, including UT-Dallas and the University of North Texas.

Our region's economy is driven by industries focused on national defense and homeland security, information technologies, energy, bioengineering, biotechnologies, health care and numerous companies

that support those interests. UTA's research — with more than \$63 million in total research expenditures last year — is strategically positioned to supply both the technology and human capital to those key sectors to keep them competitive and thriving.

As Texas Speaker of the House Joe Straus said during a recent campus visit, higher education is economic development. Texas' greatest resource, he said, is human capital. State-supported universities like UTA are the largest pipelines supplying Texas businesses with the highly educated workforce they demand.

Some statewide debate has focused on increasing productivity among universities and directing financial aid to college students most likely to succeed. We hear that call and have enhanced academic and advising help for our students. Already, we have seen improvement, with significant gains in the number of students staying in school and working toward their college degrees.

As a taxpayer-assisted institution, we owe it to everyone to be as efficient with our resources as possible, to do everything we can to help Texans earn their college degrees and to continue to build our research programs.

But anything that hinders our colleges and universities — including reductions of revenue that supports students and faculty or reductions to financial aid for families who cannot afford to pay for college on their own — shortchanges the future of all Texans.

Strong colleges and universities need adequate state funding to support the students who need and deserve to attend them. That investment will keep the Texas economy healthy now and for years to come.

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