

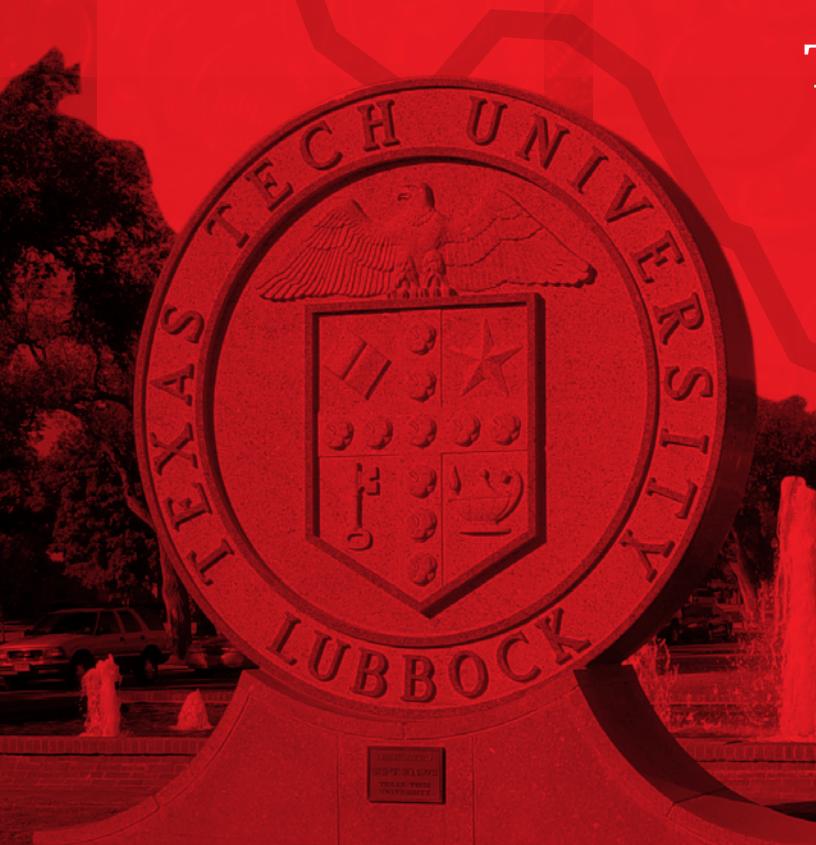


TEXAS TECH UNIVERSITY™



LUBBOCK

The Economic Impacts of Texas Tech University on Lubbock County: Today and in the Year 2020





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Executive Summary

The main campus of Texas Tech University operates in Lubbock, Texas. While the university currently enrolls over 28,000 students, the school has set its sights on attaining an enrollment of 40,000 students by the year 2020.

This study provides estimates of the economic impact of Texas Tech University on Lubbock county today and compares that impact to what it will be when the university achieves the goal of serving 40,000 students in the year 2020. So that direct comparisons can easily be made, all dollar figures presented in this report are expressed in 2008 dollars (i.e., the effect of inflation has been taken out of the future impacts).

The Current Impact of Texas Tech University on the Economy

- Texas Tech University operations, employees and students, currently generate a total economic impact of \$1.15 billion per year for Lubbock county
- Texas Tech University helps sustain around 13,300 jobs in Lubbock county annually
- The economic impact of Texas Tech University includes an annual household earnings impact of nearly \$604 million
- The Texas Tech University students spend money locally and contribute to the economic impact of the university. The share of total impacts attributed to student spending is:
 - \$297.5 million in economic output
 - \$64.5 million in household income
 - 2,054 jobs

- The Texas Tech University students spend money locally and contribute to the economic impact of the university. The share of total impacts attributed to student spending is:
 - \$421 million in economic output
 - \$91.2 million in household income
 - 2,907 jobs

The additional spending from every 1,000 new students leads to annual local impacts of:

- 73 jobs created or sustained in Lubbock county
- \$2.28 million in household income
- \$10.53 million in output

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One Lubbock county job will be created and/or sustained from the spending of every 14 new Texas Tech students

The Impact of Increasing Student Enrollment to 40,000 in 2020 (in 2008 dollars)

- Texas Tech University operations, employees and students, will generate a total economic impact of over \$1.63 billion per year for Lubbock county
- Texas Tech University will help sustain around 18,800 jobs in Lubbock county annually
- The economic impact of Texas Tech University will include an annual household earnings impact of over \$854 million

What will 12,000 more students mean for the Lubbock economy?

- It means total output will increase by nearly \$500 million annually (in 2008 dollars)
- It means total household income will increase by more than \$250 million annually (in 2008 dollars)
- It means total employment will increase by 5,500

Introduction

Texas Tech University is one of the largest universities in Texas and enrolls over 28,000 students at its main campus in Lubbock. The campus is also the largest employer in Lubbock county with nearly 5,800 employees. Taken together, the Texas Tech University enterprise is a powerful and substantial economic force. Specifically, university expenditures on educational and administrative services, building supplies, equipment, maintenance, repair and construction as well as spending by Texas Tech University employees and students generates enormous economic impacts in the local area.

Under the leadership of Chancellor Kent Hance, Texas Tech is committed to the vision of increasing enrollment to 40,000 students by the year 2020. Student enrollment is planned to grow by nearly 12,000 students (i.e., over 40 percent) in the next 12 years. Accordingly, more faculty and staff will be needed to keep pace, and to continue to provide the same quality educational and living experiences that TTU students have come to know. Moreover, with a larger student body, more will be spent on supplies, equipment, maintenance, repair and construction. The increased expenditures and additional spending by new Texas Tech University employees and students will add to the impact the university has on the Lubbock economy.

History

Texas Tech University was created by legislative action in 1923 and has the distinction of being the largest comprehensive higher education institution in the western two-thirds of the state of Texas. The university is the major institution of higher education in a region larger than 46 of the nation's 50 states and is the only campus in Texas that is home to a major university, law school and medical school.

6 | Originally named Texas Technological College, the college opened in 1925 with six buildings and an enrollment of 914. Graduate instruction did not begin until 1927 within the school of Liberal Arts. A "Division of Graduate Studies" was established in 1935 and eventually became known as the Graduate School in 1954. By action of the Texas State Legislature, Texas Technological College formally became Texas Tech University on September 1, 1969. At that time the schools of Agricultural Sciences, Arts and Sciences, Business Administration, Education, Engineering and Home Economics also became known as "colleges." Architecture became a college in 1986. Two colleges changed their names in 1993 to reflect the broadening fields each serves: the College of Agricultural Sciences became the College of Agricultural Sciences and Natural Resources and the College of Home Economics became the College of Human Sciences. The Honors College was established in 1998, and the College of Visual and Performing Arts opened in 2002. Mass Communications became a college in 2004.

The Texas State Legislature authorized funds in 1965 for establishing the Texas Tech University School of Law, and the Law School's first dean was appointed in 1966. The first class of 72 students enrolled in 1967. The Law School was approved by the American Bar Association in 1970 and is fully accredited by the Supreme Court of Texas (1968) and the Association of American Law Schools (1969).

As a member of the National Collegiate Athletic Association, Texas Tech began competing in the Big 12 Conference in 1996 after a 35-year membership in the former Southwest Conference.

Purpose of this Study

The purpose of this study is to estimate the economic impact of Texas Tech University's main campus on the Lubbock economy. In particular, this study will shed light on how the growth plans of the university will impact the Lubbock economy in the years to come, specifically, when student enrollment reaches 40,000 in the year 2020.

This study proceeds in two phases. The first phase provides estimates of the university's impact on the Lubbock economy in the current year of 2008. The second phase examines the impacts of enrolling 40,000 students in the year 2020.

A comparison of the outcomes highlighted in the two phases provides important information as to how the Lubbock economy will be affected by a substantially larger student body. Moreover, direct comparisons between Texas Tech University's current impact and its' future impact are made possible by reporting all results in 2008 dollars (i.e., inflation effects have been removed).

For purposes of determining the economic impact of Texas Tech University on the Lubbock area, we limit the study to Lubbock county. To the extent that Texas Tech University operates (i.e., hires employees from Austin or Dallas, etc.) and purchases goods and services outside this region, the results of this analysis may be understated.

Lubbock County

Lubbock county is situated in West Texas in an area commonly referred to as the South Plains. The county covers approximately 900 square miles. The county has an estimated 2008 population of 256,900. The county is comprised of over 105,000 households and the median household income is nearly \$37,000 (est. 2008) although roughly 17 percent of the residents live below the poverty line. Total personal income is nearly \$7.8 billion (est. 2008).

The population of Lubbock county is fairly well-educated, which is not surprising given it is home to a major teaching and research university as well as several other small 2- and 4-year colleges. In fact, 78 percent of the population over the age of 25 are high school graduates, while over 24 percent of the population holds a Bachelor's degree or higher.

There are nearly 150,000 persons employed in the county and 247 different industrial sectors (NAICS) are represented in the economy. In 2002, there were nearly 21,000 firms in the county of which 10.4 percent were Hispanic-owned and 26.2 percent were women-owned. Retail sales amount to \$3.8 billion in the county, accommodation and foodservice sales are \$481 million, and there are \$1.3 billion of manufacturers shipments (est. 2008). 17



The Ongoing Operations of Texas Tech University

The organization's operating budget was examined in order to determine the economic impact of Texas Tech University. These expenses included payroll and employee benefits as well as expenditures on supplies, purchased services, and other items. Moreover, Texas Tech University is an enterprise that is continuously maintaining, renovating, and adding new facilities and physical capital on a yearly basis. In any given year, Texas Tech University has significant capital needs and spends accordingly. The economic impact analysis is premised on both standard operating expenses, including payroll, and capital spending. The University divides the operating budget into four main categories or funds: educational & general, auxiliary, current restricted, and designated. According to the Texas Tech University, Summary Operating Budget for Fiscal Year 2008, these funds total \$582,291,427. Of this amount, approximately \$259.3 million constitutes the payroll (i.e., wages and salaries) for faculty and staff.

Texas Tech Employees

Texas Tech University's main campus employs nearly 5,800 people. In fact, in 2007 there were 1,441 faculty and 4,346 staff. The expenditures made by Texas Tech University faculty and staff on goods and services, housing, and other items provide a significant contribution to the Lubbock economy. Information obtained from the Bureau of Economic Analysis combined with Texas Tech payroll data provides an estimate of the amount of spending by Texas Tech University employees out of wages and salaries. Overall, based on a disposable income factor, consumer expenditures associated with the Texas Tech University (gross) payroll for faculty and staff are estimated to be over \$91 million and nearly \$136 million, respectively, in 2008.



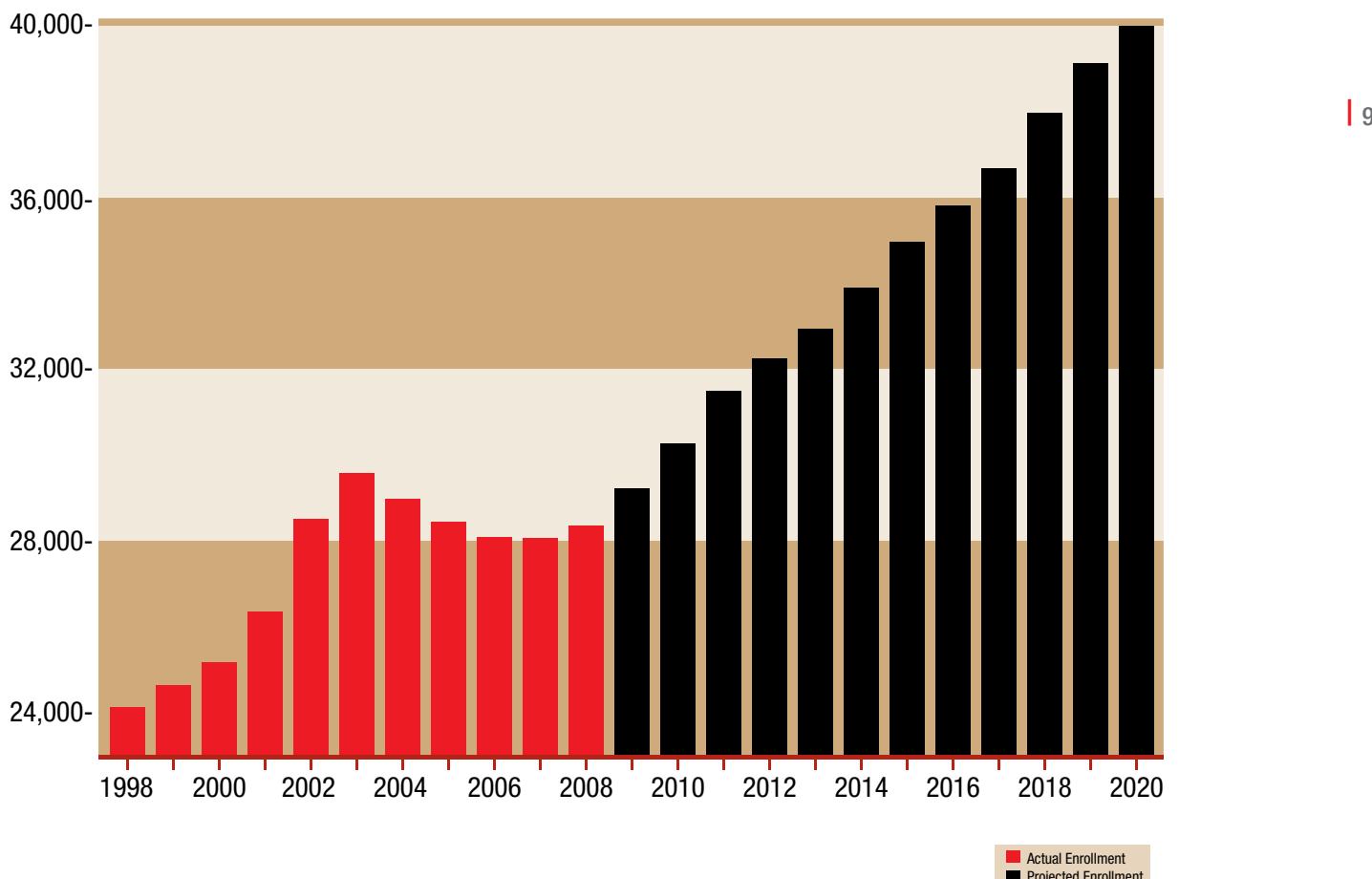
Texas Tech Students and Local Spending

Texas Tech University's main campus enrolls over 28,000 students. Of this amount 6,566 live on-campus while 21,694 live off-campus. Moreover, 5,704 students list their permanent residence within a 100 mile radius of Lubbock (referred to as "within region" students) and 22,556 are from outside the local region. In terms of the latter group, 1,560 are from foreign countries.

Historically, enrollment grew from 24,158 students in 1998 to 28,260 in 2007, for an average growth rate of 1.76 percent per year. Attaining an enrollment of 40,000 students by 2020 will require an average increase of about 2.7 percent. This high growth in the student body will lead to unprecedented yearly increases in the amount of new student spending in Lubbock and has the potential to dramatically change the economic landscape.

In terms of local economic impact, only the spending by non-local students adds directly to the economic base of Lubbock county. This is because local students would presumably live and spend their money here anyway. Of course, to the extent that local students remain in the area and attend Texas Tech instead of another out-of-region college (e.g., Texas A&M University, University of Texas, University of Houston), then their not leaving the county reduces the "leakage" of income to other areas and effectively works in favor of the Lubbock economy. Furthermore, only expenses on such things as room and board, transportation, books and supplies, and other personal expenses are included in the economic impact of student spending (i.e., tuition and fees, a significant cost of obtaining an education, are already included in the education and general funds of the operating budget of the university).

Student Enrollment 1998–2020



The College Board provides estimates of expenses for students at public 4-year colleges in the Southwest. Over the typical school year, the average student spends \$13,127 (est. 2008) beyond tuition and fees. Texas Tech students are projected to spend nearly \$230 million in Lubbock during the 2008-09 school year. In the year 2020, when there are

40,000 students attending the main campus, this will amount to about \$322 million in 2008 dollars.

The additional spending from every 1,000 new students leads to local impacts of (a) 73 jobs (b) \$2.28 million in household income and (c) \$10.53 million of output.



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Economic Impact Analysis - Methodology

In order to support Texas Tech University's mission of providing higher education and related services to the citizens of Texas and beyond, a number of expenditures are made that impact the local economy. The economic impact of Texas Tech University is measured from spending on payrolls, operating expenses, and capital spending (e.g., construction projects), which in turn generate jobs and income in the Lubbock regional economy. Additionally, a large number of students from outside the immediate region attend Texas Tech University. While attending school, these students live and spend money in Lubbock which generates jobs and income in the Lubbock regional economy. This report provides a measure of the contribution that Texas Tech University has on the local economy. Results from this study should be of interest to state and local policymakers, citizens, and business people and may be used to further the economic development of Lubbock.

A regional economic model, referred to as an input-output (I-O) model by economists, was constructed to measure the economic impact that Texas Tech University has on the Lubbock economy. The basis of the model is the spending patterns of individuals and businesses in the region. In particular, expenditures by Texas Tech University on equipment and supplies occur within the region and elsewhere, while Texas Tech University faculty and staff tend to spend the majority of their income locally. Economists generally categorize the economic impacts from these expenditures into two types of effects: direct and secondary. Direct effects represent those expenditures within the region of the institution, that is, Texas Tech University. Direct effects lead to secondary effects in the form of business-to-business transactions in the region (e.g., to restore inventory) and also to new income in the form of wages and salaries, rent and interest payments, payments to proprietors and stockholders for investment, etc.

The regional economic model identifies the "linkages" within the economy that exist between businesses (or enterprises) and other businesses, and businesses (or enterprises) and final consumers. From the regional economic model, a set of industrial sector "economic multipliers" unique to the regional economy are calculated. These multipliers are used to provide a comprehensive assessment of the local economic impact of Texas Tech University. Specifically, the economic impact analysis provides information as to the number of jobs created and sustained by the ongoing operation of Texas Tech University, the income added to the local economy from Texas Tech University's operations, which includes household income or earnings, and the total output (in dollars) that Texas Tech University contributes to the local economy.

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Summary of Economic Impacts of Texas Tech University on Lubbock County Economy, 2008

Primary Impacts of Texas Tech University Operations and Employees	
TTU Employees (faculty and staff)	5,787
TTU Faculty Payroll	\$104,051,058
TTU Staff Payroll	\$155,256,193
TTU Expenditures (non-payroll)	\$322,984,176

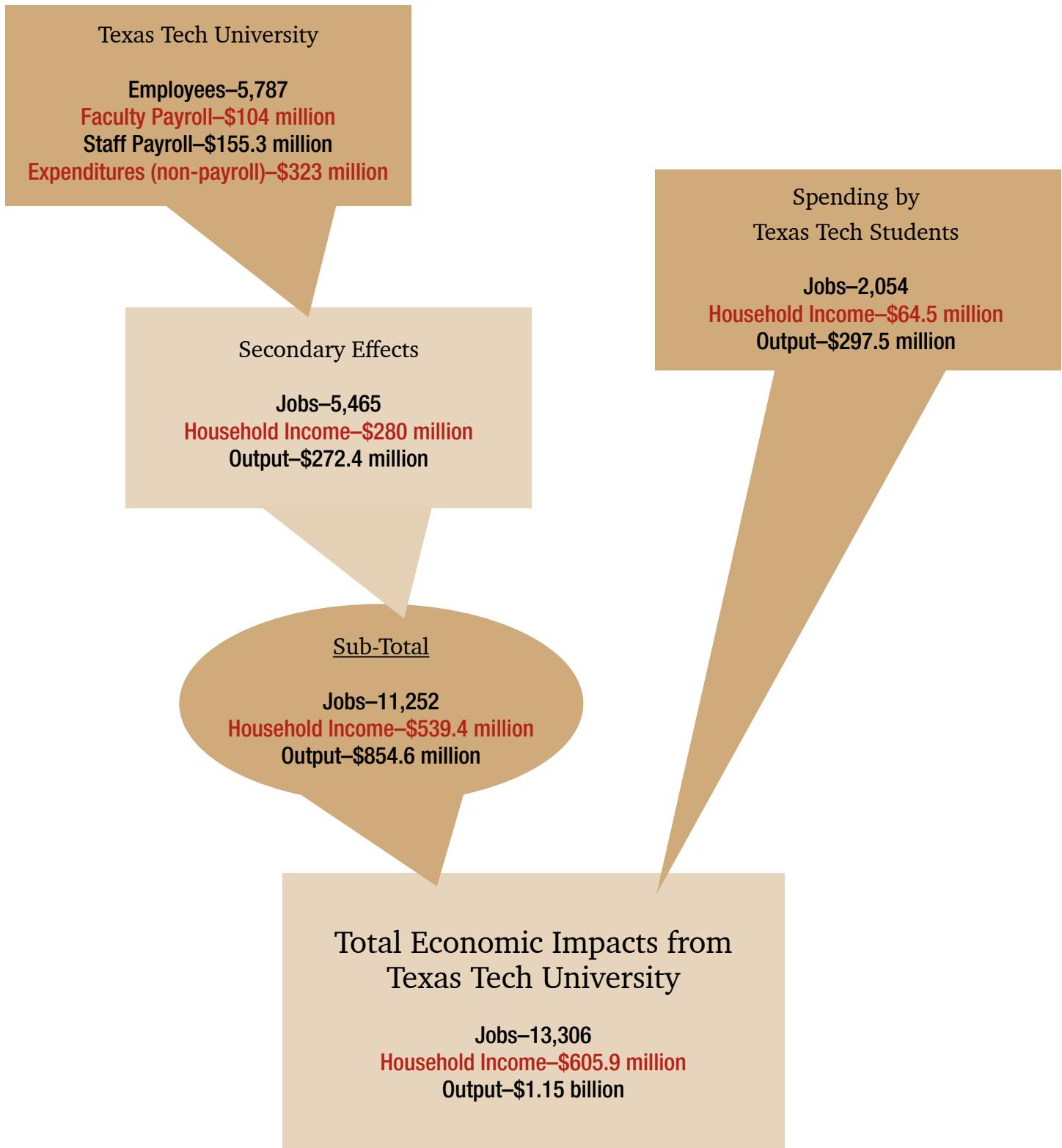
Secondary Impacts from Texas Tech University Operations and Employees	
Jobs	5,465
Household Income	\$280,087,021
Output	\$272,352,510

Sub-Total: Impacts of Texas Tech University Operations and Employees	
Jobs	11,252
Household Income	\$539,394,272
Output	\$854,643,937

Impacts from Texas Tech University Student Spending	
Jobs	2,054
Household Income	\$64,459,390
Output	\$297,493,510

Total Impacts of Texas Tech University Operations, Employees, and Students	
Jobs	13,306
Household Income	\$603,853,663
Output	\$1,152,137,447

Economic Impacts–2008



Summary of 2008 Economic Impacts of Texas Tech University

Employment

Texas Tech University's main campus employs nearly 5,800 people. The amount of spending by the University, as well as the spending by Texas Tech University employees and students on goods and services sustains more than 13,300 jobs in the Lubbock economy. All told, this represents nearly 9 percent of the total employment in the county.

Household Income

Of the total economic activity generated by Texas Tech University, nearly \$604 million is in the form of household income to the citizens of Lubbock county. This impact alone accounts for nearly 5 percent of the total personal income in the county. More importantly, this impact is on an annual basis and growing each and every year.

Output

The ongoing operations of Texas Tech University lead to total economic impacts (i.e., output) of nearly \$1.15 billion per year. This large impact on output is distributed across many industries in the area and felt by nearly every Lubbock county household in one way or another. In fact, the economic impact of Texas Tech University is far-reaching and certainly goes beyond the limited area that this study addresses.



The Impact of Enrolling 40,000 Students in the Year 2020

When more students attend Texas Tech University in Lubbock, additional resources will be required to maintain the high quality education and services that students receive. In particular, more faculty and staff will be needed and construction on new buildings, including teaching, research, parking, and living facilities, and other infrastructure (e.g., IT) will be

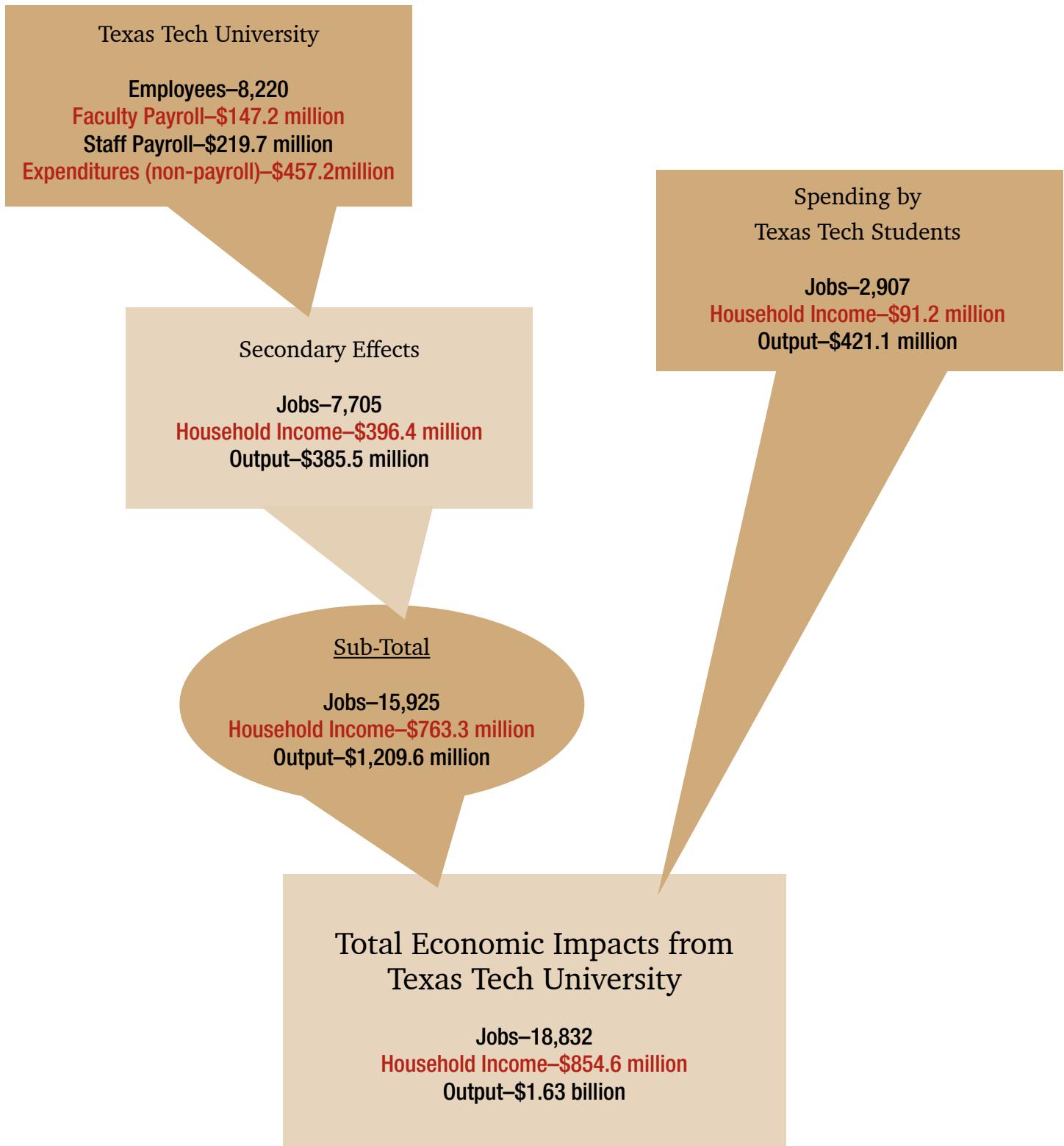
needed. For purposes of this study the historical ratios of employees-to-students and budget-to-students are assumed to remain constant. However, the reported economic impact estimates may be understated if the rate of new construction and spending on information technology accelerates over the period of 2008 through 2020.



Summary of Economic Impacts of Texas Tech University on Lubbock County Economy, 2020

Primary Impacts of Texas Tech University Operations and Employees	
TTU Employees (faculty and staff)	8,220
TTU Faculty Payroll	\$147,232,247
TTU Staff Payroll	\$219,687,513
TTU Expenditures (non-payroll)	\$457,160,000
Secondary Impacts from Texas Tech University Operations and Employees	
Jobs	7,705
Household Income	\$396,415,116
Output	\$385,478,481
Sub-Total: Impacts of Texas Tech University Operations and Employees	
Jobs	15,925
Household Income	\$763,334,876
Output	\$1,209,558,241
Impacts from Texas Tech University Student Spending (enrollment = 40,000)	
Jobs	2,907
Household Income	\$91,243,488
Output	\$421,107,339
Total Impacts of Texas Tech University Operations, Employees, and Students	
Jobs	18,832
Household Income	\$854,578,364
Output	\$1,630,665,580

Economic Impacts–2020



Summary of 2020 Economic Impacts of Texas Tech University

Employment

The increases in the student population, faculty and staff, and spending by Texas Tech University's main campus will sustain more than 18,800 jobs in the Lubbock economy.

Household Income

Of the total economic activity generated by Texas Tech University, over \$854 million will be in the form of household income to the citizens of Lubbock county. More importantly, this impact will be on an annual basis and growing each and every year.

Output

The ongoing operations of Texas Tech University will lead to total economic impacts (i.e., output) of nearly \$1.63 billion per year. This large impact on output will be distributed across many industries in the area and felt by nearly every Lubbock county household in one way or another. In fact, the economic impact of Texas Tech University is far-reaching and certainly goes beyond the limited area that this study addresses.

The addition of nearly 12,000 more Texas Tech students living and spending money in the area will have a profound effect on the Lubbock economy. As Texas Tech grows over time, the impacts from more students spending more money at area establishments will generate local impacts. Economic impacts will be felt by the Lubbock economy even before Texas Tech reaches 40,000 students.



The additional spending from every 1,000 new students leads to annual local impacts of:

- 73 jobs created or sustained in Lubbock county
- \$2.28 million in household income
- \$10.53 million in output

What will 12,000 more students mean for the Lubbock economy?

- It means total output will increase by nearly \$500 million annually (in 2008 dollars)
- It means total household income will increase by more than \$250 million annually (in 2008 dollars)
- It means total employment will increase by 5,500



TTU: A Driver for Economic Growth and Sustainability

Texas Tech University is the largest employer in Lubbock county. The volume of spending by Texas Tech University faculty and staff sustains numerous jobs in the area. Moreover, many Texas Tech University employees move to Lubbock specifically to work at the University. This in-migration of individuals from other areas works to strengthen the local economy. While Texas Tech University's main campus operates in Lubbock, nearly 80 percent of the students are from outside the region.

In economic terms, Texas Tech University is referred to as an export industry, that is, Texas Tech University generates revenues from students outside the greater Lubbock region. These students, by choosing the educational services and opportunities provided by Texas Tech University, direct revenues into the Lubbock area instead of, for example, Austin, Dallas, Houston or elsewhere. This new money in the local economy acts to reinforce Texas Tech University's role as a driver of economic growth and helps to sustain the economic activity of the region. Texas Tech students generate substantial economic benefits to the people and business owners who live and work within the Lubbock area.

Adding to the positive economic benefits that students who reside outside of the region provide to the Lubbock area, is that many local college students decide to attend Texas Tech, thus keeping dollars in the area instead of "leaking" out to other cities (e.g., Austin, Dallas, Houston, etc.).

There are many other benefits that Texas Tech University bestows on the Lubbock area and, indeed, on the state of Texas and beyond. Most importantly, economists have documented the relationship between education and earnings, productivity, health, and longevity. By providing higher

educational and related services to persons in West Texas, Texas and beyond, the levels of educational attainment, work force success, overall societal welfare and standard of living are higher than they would be otherwise.

For example, Texas Tech conferred nearly 52,000 degrees from 1998-2007. Data from the United States Census Bureau suggests that the average earnings of college graduates is \$35,000 more than the earnings of those with only a high school degree or equivalent. The ratio of mean college earnings to high school earnings is 2.01 so that college graduates earn double that of high school graduates, on average. Higher education has a dramatic effect on a person's lifetime earnings. As a provider of quality higher education, Texas Tech adds to the value of workers in Texas and beyond by providing a skill set that is rewarded in the marketplace. While estimating the net present value of an education requires a complete cost-benefit analysis, previous economic studies have shown that the benefits significantly outweigh the costs. The earnings gains of graduates is a significant, but often overlooked, economic impact of the University.



Texas Tech research and development efforts create new products and processes that can be used in industry, medicine and public service. R&D of the faculty and students develops new intellectual property, knowledge and innovation. Breakthroughs in science, human and social networks, etc. often lead to knowledge-based industrial clusters that can provide substantial economic opportunity to a region.

Texas Tech also impacts the community and local economy in other ways. For example, Texas Tech University draws spectators for athletic events and audiences for cultural events. The spending

during these campus visits by out of town persons or by people that would otherwise have decided to stay home that night constitute another avenue for generating economic impacts in Lubbock. Additionally, Texas Tech offers a number of cultural and educational programs, as well as facilities, to the public and thus provides intangible benefits that improve the quality of life of those in the local community.



A Final Comment

Clearly, a substantially larger university, with more students, staff and faculty, provides enormous growth potential and will help maintain a sustainable economic environment in which Lubbock area businesses, households, and citizenry can prosper.

This study has focused only on the impacts of Texas Tech's main campus in Lubbock. The Texas Tech University System is comprised of a number of units in addition to the main campus: Texas Tech University Health Sciences Center (which includes campuses in Lubbock, Amarillo, Odessa and El Paso), Texas Tech University at Abilene, Texas Tech University at Amarillo, Texas Tech University at Fredericksburg, Texas Tech University at Highland Lakes, Texas Tech University Center at Junction, Texas Tech University Center at Seville, Spain, and Angelo State University. The economic impact of the Texas Tech University System is now greater than ever, especially given the recent addition of Angelo State University to the system and the new four-year medical school in El Paso. The influence and total economic impact of the Texas Tech University System is certainly much greater and even more far-reaching than that of the main campus alone.



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2008 Statistical Abstract of the United States

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