CELEBRATING FIFTY YEARS OF EXCELLENCE

The Economic Impact of
The University of Texas Permian Basin

October 2023

Provided as a Public Service by

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Contents

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Executive Summary

- While the primary role of The University of Texas Permian Basin (UTPB or UT Permian Basin) is to provide excellent educational opportunities to its students, the fulfillment of this mission yields notable gains in business activity.

- The Perryman Group measured the overall economic benefits associated with major categories of activity. The University provides well-paying jobs and purchases resources in the local area. Students spend money for housing, food, and living expenses, while visitors lead to an influx of funds as they attend educational, sporting, and cultural events. Construction projects and research also generate direct economic activity. Multiplier effects also add to these economic benefits, and positive impacts spread across the entire economy.

- **Operations** of UT Permian Basin lead to an increase in business activity in the region including an estimated **$173.2 million** in gross product each year and **2,231** jobs (including multiplier effects). When student and visitor spending are included, the total ongoing impact on the region rises to **$240.8 million** in gross product and **2,998** jobs. (Other parts of Texas also see increased business activity due to UTPB as described in the full report.)

- **Construction** projects at UT Permian Basin generate a significant, though transitory, economic stimulus. The Perryman Group estimates that the construction projects undertaken since 2010 have led to gains of more than **$485.9 million** in gross product and **4,798** job-years (including multiplier effects) in the Permian Basin. A job-year is one person working for one year, though it could be multiple individuals working partial years.

- The **Wagner Noël Performing Arts Center** has transformed the performing arts in the Permian Basin since it opened in 2011, hosting a variety of internationally renowned performers, symphonies, ballets, performances by the UT Permian Basin music department, and Broadway touring companies. The economic impact of visitor spending at the Wagner Noël Performing Arts Center in the Permian Basin is estimated to include **$27.5 million** in gross product each year and **324** job-years (including multiplier effects.)

- **Research** is a vital function and output of universities, and the projects undertaken at UTPB have a direct impact on the region and beyond. The estimated economic impact of research operations during fiscal years 2020-2022 includes gross product gains of nearly **$17.0 million** as well as **219** job-years in the Permian Basin.
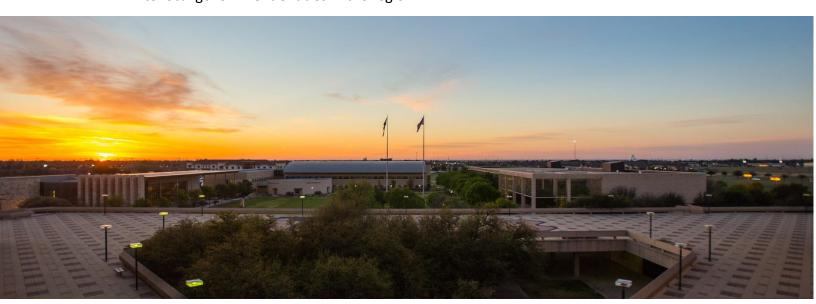
- Many **graduates** of UT Permian Basin continue to live and work in the area after completing their degrees, enhancing the local labor force and providing a significant economic stimulus. While some of these individuals would likely remain in the region even without attending UT Permian Basin, the university plays a crucial role in preparing students for the workforce and increases individual productivity along with the impact on the entire local economy. The Perryman Group estimates that the annual economic benefits generated by employed graduates of UT Permian Basin include over **$8.6 billion** in gross product each year and **59,307** jobs in the Permian Basin Region (including multiplier effects). The activity supported by UTPB graduates is linked to **more than 23.5%** of all jobs in the area.

> The University of Texas Permian Basin continues to expand its role of providing quality higher education to the people of the region. The university is already a crucial aspect of the economy and quality of life in the Permian Basin. In addition, it is on a positive trajectory to further enhance its contributions in the future. After 50 years of sustained excellence, the best is yet to come!

- Business activity generates **tax receipts**. The Perryman Group estimated the fiscal effects of the gains in business activity described in this study. The Perryman Group estimates that UT Permian Basin operations, student spending, and visitor spending leads to an increase in annual tax revenue to the State of **$18.279 million**, with **$13.595 million** to local government entities in the region.

Introduction

The University of Texas Permian Basin (UTPB or UT Permian Basin), now in its 50th year of operation, is the only four-year university in the area and provides the Permian Basin and beyond with qualified graduates and significant economic stimuli. The University serves a diverse student population and provides important cultural and professional resources for students, staff, and the surrounding community. The University prides itself on "thinking large and living local," which has direct economic and societal implications for the local graduates and the surrounding area.

> The University prides itself on "thinking large and living local," which has significant economic implications for the surrounding area and for the local graduates.

Community impact is an important piece of the University's mission and goals, and it supports the Permian Basin in a variety of ways. Well-qualified graduates enhance the local economy, the Wagner Noël Performing Arts Center serves as a premiere venue for live entertainment, and the Small Business Development Center provides resources for community businesses. The institution furthers the "technology and public interests of West Texas" and "cultivates engaged citizens."

An important factor in college and career decision making is the financial impact of the chosen path. UT Permian Basin delivers affordable programs across a spectrum of disciplines, with many students having the opportunity to earn

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their degrees completely debt-free. The Falcon Free program covers tuition and mandatory fees for most students. One initiative within the program, the Hispanic Serving Institution (HSI) – STEM project serves to encourage enrollment, retention, graduation, and career placement among Hispanic and other Pell Grant-eligible students in science, technology, engineering, and mathematics fields. The combination of the emphasized fields and the fact that many graduates are debt free results in a well-prepared workforce with added spending power, ultimately boosting the local, regional, and state economies significantly. These gains complement those provided by the ongoing activities of UTPB and the key role that its graduates play in supporting energy, healthcare, education, and other key sectors throughout the region.

The Perryman Group (TPG) is pleased to provide this assessment of the economic benefits of The University of Texas Permian Basin as well as the associated increase in tax receipts to the State and local governments. While the primary role of UTPB is to provide excellent educational opportunities to its students, the fulfillment of this mission yields notable gains in business activity. The Perryman Group measured the overall economic benefits associated with major categories of activity, including

- ongoing operations, student and visitor spending, and research;
- construction projects;
- contributions of graduates within the region and beyond; and
- the impact of the Wagner Noël Performing Arts Center.

A perspective on future possibilities is also offered. Economic benefits including multiplier effects were measured for the Permian Basin Region and Texas.[1] Note that results for Texas include those within the Permian Basin

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[1] The Permian Basin Region includes Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties.

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Region as well as spillover to other parts of the state. This report and the accompanying Appendices describe The Perryman Group's results as well as the methods and assumptions used in this assessment.

Economic Benefits

The University of Texas Permian Basin provides significant economic benefits to the Permian Basin, along with spillover effects for the state of Texas as a whole. The Perryman Group measured the economic impact of the University using complex and comprehensive models, analyzing economic activities such as ongoing operations impacts, student spending, visitor spending, construction, and research activities. Economic benefits from these activities include jobs and personal income along with expenditures and positive effects on the gross product.

The role of UTPB in the regional economy is multifaceted. The University provides well-paying jobs and purchases resources in the local area. Students spend money for housing, food, and living expenses, while visitors lead to an influx of funds as they attend educational, sporting and cultural events. Construction projects and research also generate direct economic activity. Multiplier effects add to the economic benefits created by the University.

The Perryman Group estimated the total economic benefits (not only direct, but also indirect and induced) associated with The University of Texas Permian Basin. Methods used in this analysis are summarized on the following page, with additional detail in Appendix A.

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Measuring Economic and Fiscal Benefits

Any economic stimulus, whether positive or negative, generates multiplier effects throughout the economy. In this instance, direct business activity associated with The University of Texas Permian Basin such as employment at the university, student and visitor spending, research, and related development lead to a notable economic stimulus. Graduates of the university also provide critical workers in key sectors. Additional economic activity generates tax receipts to the State and local government entities such as cities, counties, school districts, and special districts. Further detail regarding methods and assumptions is provided in Appendix A.

The Perryman Group's dynamic input-output assessment system (the US Multi-Regional Impact Assessment System, which is described in further detail in the Appendices to this report) was developed by the firm more than 40 years ago and has been consistently maintained and updated since that time. The model has been used in thousands of analyses for clients ranging from major corporations to government agencies and has been peer reviewed on multiple occasions. The impact system uses a variety of data (from surveys, industry information, and other sources) to describe the various goods and services (known as resources or inputs) required to produce another good/service. This process allows for estimation of the total economic impact (including not only direct, but also indirect and induced multiplier effects). The models used in the current analysis reflect the specific industrial composition and characteristics of the Permian Basin Region (Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties) and Texas.

Total economic effects are quantified for key measures of business activity (further explained in Appendix A). Note that these measures are not additive; they represent different ways of expressing the overall impact on business activity.

- **Total expenditures** (or total spending) measure the dollars changing hands as a result of the economic stimulus.
- **Gross product** (or output) is production of goods and services that will come about in the area as a result of the activity. This measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures.
- **Personal income** is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included.
- **Job gains** are expressed as job-years of employment for temporary stimuli such as construction and jobs for ongoing effects.

Monetary values were quantified on a constant (2023) basis to eliminate the effects of inflation.

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Economic Benefits of Current Operations and Student and Visitor Spending

The operations of UT Permian Basin lead to a significant increase in business activity in the region including an estimated **$173.2 million** in gross product each year and **2,231** jobs (including multiplier effects). When student and visitor spending are included, the total ongoing impact on the region rises to **$240.8 million** in gross product and **2,998** jobs. Economic benefits are spread across the entire economy, as indicated in Appendix B.

The Annual Impact of The University of Texas Permian Basin Operations, Student Spending, and Visitor Spending (Excluding the Wagner Noël Performing Arts Center): Permian Basin Region				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Jobs)
Operations	$318.902	$173.182	$124.211	2,231
Student Spending	$108.175	$53.372	$33.286	600
Visitor Spending	$25.220	$14.217	$8.676	167
Total Ongoing	**$452.298**	**$240.771**	**$166.173**	**2,998**

Note: Based on current employment/operational spending (including research operations) and The Perryman Group's estimates of student and visitor spending as well as related multiplier effects. Student Spending is net incremental spending and includes spending by out-of-area students as well as an estimate of those who would leave the area for education in the absence of UT Permian Basin. Visitor Spending includes estimated spending for athletic and cultural events, conferences, and other on-campus activities; visits to students and personnel; and tourism spending at university venues (excluding the Wagner Noël Performing Arts Center, which is discussed in a subsequent section). The study area includes Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties. Components may not sum to totals due to rounding. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B.
Source: US Multi-Regional Impact Assessment System, The Perryman Group

For Texas, The Perryman Group estimates that operations generate an increase in business activity of **$204.9 million** in gross product each year and **2,457** jobs (including multiplier effects and effects within the Permian Basin Region). The total ongoing impact of operations, student spending, and

visitor spending includes approximately **$284.3 million** in gross product and **3,311** jobs.

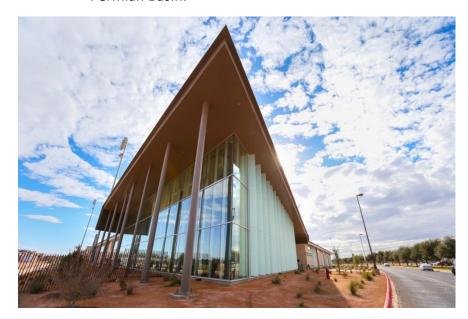|	Total Expenditures (Millions of 2023 Dollars)	Gross Product (Millions of 2023 Dollars)	Personal Income (Millions of 2023 Dollars)	Employment (Jobs)
The Annual Impact of The University of Texas Permian Basin Operations, Student Spending, and Visitor Spending (Excluding the Wagner Noël Performing Arts Center): Texas				
Operations	$394.531	$204.850	$141.915	2,457
Student Spending	$130.796	$62.800	$38.793	670
Visitor Spending	$31.029	$16.640	$10.071	185
Total Ongoing	**$556.357**	**$284.290**	**$190.780**	**3,311**

Note: Based on current employment/operational spending (including research operations) and The Perryman Group's estimates of student and visitor spending as well as related multiplier effects. Student Spending is net incremental spending and includes spending by out-of-area students as well as an estimate of those who would leave the area for education in the absence of UTPB. Visitor Spending includes estimated spending for athletic and cultural events, conferences, and other on-campus activities; visits to students and personnel; and tourism spending at university venues (excluding the Wagner Noël Performing Arts Center, which is discussed in a subsequent section). The study area includes Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties. Components may not sum to totals due to rounding. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B.
Source: US Multi-Regional Impact Assessment System, The Perryman Group

Construction

Construction projects at UT Permian Basin since 2010 have generated a significant, though transitory, economic stimulus. Projects have included, among others, residence halls and a student center, the Wagner Noël Performing Arts Center, a new engineering building and human performance center, expansion of the Center for Energy and Economic Diversification (CEED) Building (including food service, lab renovations, a new maker space, and space for new companies), and a library.

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Continual investment in facility upgrades and new buildings enables the university to continue to attract and serve students as enrollment grows and needs evolve, both for students and for other groups impacted by UT Permian Basin.

The Perryman Group estimates that the construction projects undertaken since 2010 have led to gains of more than **$486.9 million** in gross product and **4,798** job-years (including multiplier effects) in the Permian Basin. A job-year is one person working for one year, though it could be multiple individuals working partial years. For Texas, the impact of recent, ongoing, and planned construction projects includes an estimated **$765.8 million** in gross product and **7,276** job-years (including multiplier effects).

The Economic Impact of Construction of Facilities Associated with The University of Texas Permian Basin Since 2010				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Job-Years)
Permian Basin Region	$1,015.291	$485.926	$334.655	4,798
Texas	$1,637.121	$765.834	$516.898	7,276

Note: Based on construction costs and The Perryman Group's estimates of related multiplier effects. A job-year is one person working for one year, though it could be multiple individuals working partial years. The Permian Basin Region includes Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties. Results for Texas include effects in the Permian Basin Region as well as spillover to other parts of the state. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B.
Source: US Multi-Regional Impact Assessment System, The Perryman Group

Wagner Noël Performing Arts Center

The Wagner Noël Performing Arts Center attracts a variety of arts and cultural events to the Permian Basin. These performances and events draw community members and visitors from outside the area, and beyond the cultural enrichment it provides, the Performing Arts Center generates significant benefits for the local and state economies.

The Wagner Noël Performing Arts Center has transformed the performing arts in the Permian Basin since it opened in 2011. It hosts a variety of shows, including, among many others, internationally renowned entertainers, symphonies, ballets, performances by the UT Permian Basin music department, and Broadway touring companies. The performing arts in the area saw overall growth of 437% during the Center's first 10 years of operation, and The Perryman Group estimates that the Performing Arts Center was directly responsible for 34.2% of the increase. When synergistic effects on other venues are considered, the impact increases to 85.7%.

The economic impact of visitor spending at the Wagner Noël Performing Arts Center in the Permian Basin is estimated to include **$27.5 million** in gross product each year and **324** jobs (including multiplier effects.) For Texas, the impact is estimated to be **$32.2 million** in annual gross product along with **358** jobs.

The Annual Economic Impact of Visitor Spending Associated with the Wagner Noël Performing Arts Center				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Jobs)
Permian Basin Region	$48.861	$27.544	$16.808	324
Texas	$60.115	$32.237	$19.511	358
Note: Visitor Spending includes tourism spending at the Wagner Noël Performing Arts Center. The study area includes Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, and Winkler counties. Results for Texas include effects in the Permian Basin Region as well as spillover to other parts of the state. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B. Source: US Multi-Regional Impact Assessment System, The Perryman Group				

Since it opened, the estimated cumulative economic impact of visitor spending associated with the Performing Arts Center totals **$170.2 million** in gross product with **1,999** job-years in the Permian Basin and **$199.2 million** in gross product and **2,212** job-years in Texas (including multiplier effects).

The Cumulative Economic Impact of Visitor Spending Associated with the Wagner Noël Performing Arts Center since its Opening				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Job-Years)
Permian Basin Region	$301.847	$170.157	$103.834	1,999
Texas	$371.372	$199.153	$120.534	2,212
Note: Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B. Source: US Multi-Regional Impact Assessment System, The Perryman Group				

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Research

Research is a vital function and output of universities, and the projects undertaken at UTPB have a direct impact on the region and beyond. Technological advances and new discoveries can fuel significant economic activity, and recent developments at UT Permian Basin will facilitate continued growth in research at the University. The value of research grants has almost doubled in the past two years.

UT Permian Basin recently integrated a new knowledge management system

into the research process, allowing researchers to track and follow technology disclosures throughout the intellectual property and commercialization process. The system will allow the university to better report on technology disclosures and advancements. Since the integration of the system, the university has received four technology disclosures, a process that will eventually lead to patent applications, licensing, and revenue generation.

The estimated economic impact of research operations during fiscal years 2020-2022 includes gross product gains of nearly **$17.0 million** as well as **219** job-years in the Permian Basin. For Texas, the impact is an estimated **$20.1 million** in gross product and **241** job-years. These research effects are a subset of the overall operations impacts discussed earlier in the report.

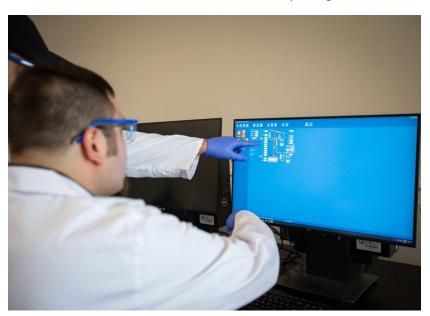| The Cumulative Impact of Research Operations (FY 2020-2022) at The University of Texas Permian Basin				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Jobs)
Permian Basin Region	$31.275	$16.984	$12.181	219
Texas	$38.692	$20.090	$13.918	241
Note: Based on research employment and The Perryman Group's estimates of related multiplier effects. These economic benefits are a subset of the overall UT Permian Basin operations effects previously described. Results for Texas include effects within the Permian Basin Region as well as spillover to other parts of the state. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B. Source: US Multi-Regional Impact Assessment System, The Perryman Group				

Discoveries also lead to additional economic and social benefits which are global in nature. The Perryman Group estimates that UT Permian Basin research thus far leads to an increase of **$1.8 million** in US annual gross product and **22** jobs, with **$2.8 million** in annual gross product and **33** jobs globally (including multiplier effects). These effects recur year after year and increase markedly over time.

The Annual Economic and Social Benefits of Research at The University of Texas Permian Basin				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Jobs)
United States	$3.516	$1.826	$1.265	22
Global	$5.335	$2.770	$1.919	33
Note: Based on FY2020 through FY2022 research, typical patterns, and The Perryman Group's estimates of related multiplier effects. Results for each geographic area include effects within smaller study areas as well as spillover to other parts of the area. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B. Source: US Multi-Regional Impact Assessment System, The Perryman Group				

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Graduates

Many graduates of UT Permian Basin continue to live and work in the area after completing their degrees, enhancing the local labor force and providing a significant economic stimulus. While some of these individuals would likely remain in the region even without attending UT Permian Basin, the university plays a crucial role in preparing students for the workforce and increases individual productivity along with the impact on the entire local economy.

With the particular focus on STEM fields (for example, within the HSI-STEM scholarship program), UT Permian Basin graduates are well suited to take on roles in health care, the oil and gas industry, education, and other key sectors of the regional economy.

The Perryman Group estimates that the annual economic benefits generated by employed graduates of UT Permian Basin include over **$8.6 billion** in gross product each year and **59,307** jobs in the Permian Basin Region (including multiplier effects). The activity supported by UTPB graduates is linked to **more than 23.5%** of all jobs in the area. For Texas, the annual benefits include nearly **$12.9 billion** in gross product and **90,803** jobs. These estimates are fully adjusted for labor force participation patterns and other relevant economic and demographic patterns.

The Annual Economic Impact Associated with Graduates of The University of Texas Permian Basin on Business Activity				
	Total Expenditures (Millions of 2023 Dollars)	**Gross Product** (Millions of 2023 Dollars)	**Personal Income** (Millions of 2023 Dollars)	**Employment** (Jobs)
Permian Basin	$24,227.153	$8,632.673	$4,791.077	59,307
Texas	$34,020.807	$12,867.204	$7,215.145	90,803

Note: Based on estimated numbers of graduates remaining in the area adjusted for industrial employment patterns, retirees, unemployment, and labor force participation and The Perryman Group's estimates of related multiplier effects. Results for Texas include effects within the region as well as spillover to other parts of the state. Additional explanation of terms and methods may be found elsewhere in this report and in Appendix A. Results by industry are included in Appendix B.
Source: US Multi-Regional Impact Assessment System, The Perryman Group

Fiscal Benefits

Business activity generates tax receipts. For example, the retail sales and hotel occupancy effects of the economic stimulus measured in this study were quantified. A portion of the retail sales is taxable, and receipts to the State and local taxing entities are affected by the direct stimulus. Moreover,

> The University of Texas Permian Basin leads to an increase in annual tax revenue to the State of an estimated **$18.279 million**, with **$13.595 million** to local government entities in the region.

additional room nights provide occupancy tax resources. Economic benefits also affect property tax values. Higher incomes enhance housing demand, leading to higher taxable values as well as additional need for houses. Increased retail sales and incomes enhance the need for commercial space such as restaurants, retail outlets, and personal service facilities. Higher property values increase taxes to counties, cities, school districts, and other local taxing entities. The Perryman Group estimated the fiscal effects of the gains in business activity described in this study. The Perryman Group estimates that UT Permian Basin operations, student spending, and visitor spending leads to an increase in annual tax revenue to the State of **$18.279 million**, with **$13.595 million** to local government entities in the region. In addition, the activity associated with the Wagner Noël Performing Arts Center generates annual fiscal revenues of **$3.159 million** to the State government and **$1.666 million** to local taxing authorities. The contributions facilitated by UTPB graduates result in **$599.686 million** in State fiscal revenues and **$493.210 million** to various local governments.

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The Ongoing Fiscal Benefits Associated with The University of Texas Permian Basin		
	State of Texas (Millions of 2023 Dollars)	**Local Government Entities** (Millions of 2023 Dollars)
Operations	$10.462	$9.442
Student Spending	$6.196	$3.293
Visitor Spending	$1.631	$0.860
Total Ongoing	**$18.279**	**$13.595**

Note: Based on the economic benefits measured in this study and the related fiscal effects for the State of Texas and local government entities. Components may not sum to totals due to rounding.
Source: The Perryman Group

Occupational Profile

A robust workforce with appropriate training is critical for the Permian Basin's continued growth. The Perryman Group developed a forecast of employment need by industry and occupation using the firm's US Multi-Regional Industry-Occupation System, which utilizes standard data on employment by industry into estimates of the need for workers in occupational categories at a highly detailed level. The occupational needs in the Permian Basin area from 2022-2040 for roles requiring a bachelor's degree or above are outlined below, along with the total employment demand over the period.

Total employment demand is comprised of both (1) the workers needed for new jobs created due to economic growth and (2) the demand for workers to replace those who retire or change jobs. UT Permian Basin graduates can help meet the demand for highly educated and skilled workers in the area, another important contribution of the University. The business school, the engineering school, STEM programs, healthcare training, and the school of education (among other degree programs) will each play a critical role in producing graduates for the most in-demand jobs needed to support the growth in the region.

The Perryman Group projects that the total number of workers needed from 2022-2040 will be **190,913,** with **38,284** of those jobs requiring at least a bachelor's degree. The highest demand occupations, along with the totals, are shown in the table below.

Projected Demand for Permian Basin Workers with at Least a Bachelor's Degree	
	2022-2040 Demand
TOTAL: All Jobs	**190,913**
TOTAL: Jobs Requiring At Least a Bachelor's Degree	**38,284**
Top 15 Jobs Requiring At Least a Bachelor's Degree	
General and Operations Managers	4,996
Accountants and Auditors	1,768
Registered Nurses	1,467
Software Developers	1,141
Business Operations Specialists, All Other	1,037
Petroleum Engineers	978
Financial Managers	948
Project Management Specialists	880
Market Research Analysts and Marketing Specialists	833
Construction Managers	758
Human Resources Specialists	720
Managers, All Other	665
Management Analysts	663
Sales Managers	567
Elementary School Teachers, Except Special Education	551
Note: Demand from economic growth and replacement needs. Source: The Perryman Group	

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Looking Ahead

The University of Texas Permian Basin continues to grow – from a few trailers and temporary buildings 50 years ago to a thriving four-year university producing well-prepared, qualified graduates in 2023. The Perryman Group conducted a thought experiment about what the university could look like in the future.

If UT Permian Basin were to continue to see a high degree of commitment and support, and it were to grow to the current size and stature of the largest university presently operating in West Texas (Texas Tech University)…

- University academic operations would generate over **$650 million** in gross product in the region and be responsible for over **8,300** jobs.
- Student spending would lead to **$433 million** in gross product gains, along with **4,800** jobs.
- Tourism for programs and activities would result in **$132 million** in gross product and **1,500** jobs.
- The athletics program would spur a **$186 million** gross product gain and **2,400** jobs.
- Research would generate **$380 million** in gross product and **4,872** jobs.

This level of performance, if achieved, would be a major factor in supporting the energy sector in the Permian Basin among other critical growth and replacement needs in public education, healthcare, and other occupations. While it is an ambitious goal, the university has a proven track record of significant growth and achievement over the past 50 years, and with a high level of commitment and resources, this vision is achievable.

Conclusion

The University of Texas Permian Basin continues to expand its already crucial role of providing quality higher education to the people of the region. The university serves a growing student population through a variety of degree plans, offering affordable educational opportunities for local students. Through fulfilling its role, the university also generates substantial economic benefits.

> The University of Texas Permian Basin is a crucial aspect of the economy and quality of life in the region. In addition, it is on a positive trajectory to further enhance its contributions in the future. After 50 years of sustained excellence, the best is yet to come!

The Perryman Group estimates that university operations, student spending, and visitor spending generate **$240.8 million** in gross product each year and **2,998** jobs in the Permian Basin Region (including multiplier effects). Beyond these ongoing effects, construction projects offer a notable stimulus. Moreover, the university helps prepare local students for future jobs, enhancing their opportunities, developing the workforce of the area, and enhancing the competitiveness and growth prospects of the Permian Basin. The graduates of UTPB also support a substantial segment of the regional economy.

The university is already a crucial aspect of the economy and quality of life in the Permian Basin. In addition, it is on a positive trajectory to further enhance its contributions in the future. After 50 years of sustained excellence, the best is yet to come!

Appendix A: Methods Used

US Multi-Regional Impact Assessment System

The US Multi-Regional Impact Assessment System (USMRIAS) measures multiplier effects of economic stimuli. The USMRIAS was developed and is maintained by The Perryman Group. This model has been used in thousands of diverse applications across the country and has an excellent reputation for accuracy and credibility; it has also been peer reviewed on multiple occasions and has been a key factor in major national and international policy simulations.

The basic modeling technique is known as dynamic input-output analysis, which essentially uses extensive survey data, industry information, and a variety of corroborative source materials to create a matrix describing the various goods and services (known as resources or inputs) required to produce one unit (a dollar's worth) of output for a given sector. Once the base information is compiled, it can be mathematically simulated to generate evaluations of the magnitude of successive rounds of activity involved in the overall production process.

There are two essential steps in conducting an input-output analysis once the system is operational. The first major endeavor is to accurately define the levels of direct activity to be evaluated. In this case, input data regarding employment, enrollment, research grants, attendance at events, construction budget estimates, and other needed information was provided by The University of Texas Permian Basin, with supplementary research by The Perryman Group. Commercialization of research estimates were based on typical patterns from funded basic research as provided by the Association of University Technology Managers[2] localized to the relevant geographic area and adjusted for the specifics of UT Permian Basin's research programs. Societal and economic benefits were estimated on a global and national scale and were determined based on detailed academic studies related to the relevant returns to investments in basic medical research.[3] These inputs were then implemented in a series of simulations of the

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[2] Association of University Technology Managers®, *AUTM U.S. Licensing Activity Survey: FY2021*, editors Shawn Hawkins, Yiorgos Kostoulas, Alice Li, Nichole R. Mercier, Matthew A. Mroz, Olivia Novac, Ragan Robertson, Nate Ruey, Ashley J. Stevens, April Turley and Karen White, with research assistance by Chrys Gwellem.

[3] See, in particular, Hall Bronwyn, Jacques Mairesse, and Pierre Mohnen; *Measuring the Returns to R&D*; chapter prepared for the *Handbook of the Economics of Innovation*, editors B.H. Hall and N. Rosenberg, December 2009. Frontier Economics, Rates of return to investment in science and innovation, report prepared for the Department for Business Innovation and Skills, July 2014.

USMRIAS to measure total overall economic effects of the direct stimulus. The systems used reflect the unique industrial structure of the Permian Basin Region and Texas.

Model Structure

The USMRIAS is somewhat similar in format to the Input-Output Model of the United States which is maintained by the US Department of Commerce. The model developed by TPG, however, incorporates several important enhancements and refinements. Specifically, the expanded system includes (1) comprehensive 500-sector coverage for any county, multi-county, or urban region; (2) calculation of both total expenditures and value-added by industry and region; (3) direct estimation of expenditures for multiple basic input choices (expenditures, output, income, or employment); (4) extensive parameter localization; (5) price adjustments for real and nominal assessments by sectors and areas; (6) comprehensive measurement of the induced impacts associated with payrolls and consumer spending; (7) embedded modules to estimate multi-sectoral direct spending effects; (8) estimation of retail spending activity by consumers; and (9) comprehensive linkage and integration capabilities with a wide variety of econometric, real estate, occupational, and fiscal impact models.

The impact assessment (input-output) process essentially estimates the amounts of all types of goods and services required to produce one unit (a dollar's worth) of a specific type of output. For purposes of illustrating the nature of the system, it is useful to think of inputs and outputs in dollar (rather than physical) terms. As an example, the construction of a new building will require specific dollar amounts of lumber, glass, concrete, hand tools, architectural services, interior design services, paint, plumbing, and numerous other elements. Each of these suppliers must, in turn, purchase additional dollar amounts of inputs. This process continues through multiple rounds of production, thus generating subsequent increments to business activity. The initial process of building the facility is known as the *direct effect*. The ensuing transactions in the output chain constitute the *indirect effect*.

Another pattern that arises in response to any direct economic activity comes from the payroll dollars received by employees at each stage of the production cycle. As workers are compensated, they use some of their income for taxes, savings, and purchases from external markets. A substantial portion, however, is spent locally on food, clothing, health care services, utilities, housing, recreation, and other items. Typical purchasing patterns in the relevant areas are obtained from the Center for Community and Economic Research *Cost of Living Index*, a privately compiled inter-regional measure which has been widely used for several decades, and the *Consumer Expenditure Survey* of the US Department of Labor. These initial outlays by area residents generate further secondary activity as local providers acquire inputs to meet this consumer demand.

These consumer spending impacts are known as the *induced effect*. The USMRIAS is designed to provide realistic, yet conservative, estimates of these phenomena.

Sources for information used in this process include the Bureau of the Census, the Bureau of Labor Statistics, the Regional Economic Information System of the US Department of Commerce, and other public and private sources. The pricing data are compiled from the US Department of Labor and the US Department of Commerce. The verification and testing procedures make use of extensive public and private sources.

Impacts are typically measured in constant (2023) dollars to eliminate the effects of inflation.

The USMRIAS is also integrated with a comprehensive fiscal model, which links the tax payments by industry to the specific rates and structures associated with the relevant State and local governmental authorities.

Measures of Business Activity

The USMRIAS generates estimates of total economic effects on several measures of business activity. Note that these are different ways of measuring the same impacts; they are not additive.

The most comprehensive measure of economic activity is **Total Expenditures**. This measure incorporates every dollar that changes hands in any transaction. For example, suppose a farmer sells wheat to a miller for $0.50; the miller then sells flour to a baker for $0.75; the baker, in turn, sells bread to a customer for $1.25. The Total Expenditures recorded in this instance would be $2.50, that is, $0.50 + $0.75 + $1.25. This measure is quite broad but is useful in that (1) it reflects the overall interplay of all industries in the economy, and (2) some key fiscal variables such as sales taxes are linked to aggregate spending.

A second measure of business activity is **Gross Product**. This indicator represents the regional equivalent of Gross Domestic Product, the most commonly reported statistic regarding national economic performance. In other words, the Gross Product of Texas is the amount of US output that is produced in that state; it is defined as the value of all final goods produced in a given region for a specific period of time. Stated differently, it captures the amount of value-added (gross area product) over intermediate goods and services at each stage of the production process, that is, it eliminates the double counting in the Total Expenditures concept. Using the example above, the Gross Product is $1.25 (the value of the bread) rather than $2.50. Alternatively, it may be viewed as the sum of the value-added by the farmer, $0.50; the miller, $0.25 ($0.75 - $0.50); and the baker, $0.50 ($1.25 - $0.75). The total value-added is, therefore, $1.25, which is

equivalent to the final value of the bread. In many industries, the primary component of value-added is the wage and salary payments to employees.

The third gauge of economic activity used in this evaluation is **Personal Income**. As the name implies, Personal Income is simply the income received by individuals, whether in the form of wages, salaries, interest, dividends, proprietors' profits, or other sources. It may thus be viewed as the segment of overall impacts which flows directly to the citizenry.

The final aggregates used are **Jobs and Job-Years,** which reflect the full-time equivalent jobs generated by an activity. For an economic stimulus expected to endure (such as the ongoing operations of a facility), the Jobs measure is used. It should be noted that, unlike the dollar values described above, Jobs is a "stock" rather than a "flow." In other words, if an area produces $1 million in output in 2021 and $1 million in 2022, it is appropriate to say that $2 million was achieved in the 2021-22 period. If the same area has 100 people working in 2021 and 100 in 2022, it only has 100 Jobs. When a flow of jobs is measured, such as in a construction project or a cumulative assessment over multiple years, it is appropriate to measure employment in Job-Years (a person working for a year, though it could be multiple individuals working for partial years). This concept is distinct from Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

US Multi-Regional Industry-Occupation System

The US Multi-Regional Industry-Occupation System translates detailed data on employment by industry (derived from the US Multi-Regional Impact Assessment System and US Multi-Regional Econometric Model) into estimates of occupational categories at a highly detailed level. The modeling process begins with the industry-occupation coefficients compiled by the US Department of Labor based on extensive surveys of operating patterns in thousands of firms and other secondary sources. As an example, a typical tire plant of a given size requires machinists, mechanics, plant managers, administrative staff, custodial staff, shipping personnel, and numerous other types of workers. By compiling this information across the entire economy, a matrix is created which allows the data on employment by industry (which is regularly reported) to be translated into employment by occupation.

The US Multi-Regional Industry-Occupation System links this basic structure specifically to the economy of every metropolitan area, region, and county in the United States, accounting for productivity patterns and industrial composition in each area. It is also regularly updated to reflect evolving patterns. The system can be fully integrated with

historical employment data or projections obtained from the US Multi-Regional Impact Assessment System or US Multi-Regional Econometric Model. It can also be linked to results from the US Multi-Regional Impact Assessment System.

Thus, the industry-occupation system is a flexible mechanism to allow extensive evaluations of workforce characteristics and patterns. It is highly detailed, providing results for more than 1,000 occupational categories. It also permits assessment of the requisite educational requirements.

US Multi-Regional Econometric Model

Overview

The US Multi-Regional Econometric Model was developed by Dr. M. Ray Perryman, President and CEO of The Perryman Group (TPG), about 40 years ago and has been consistently maintained, expanded, and updated since that time. It is formulated in an internally consistent manner and is designed to permit the integration of relevant global, national, state, and local factors into the projection process. It is the result of four decades of continuing research in econometrics, economic theory, statistical methods, and key policy issues and behavioral patterns, as well as intensive, ongoing study of all aspects of the global, US, state, and metropolitan area economies. It is extensively used by scores of federal and State governmental entities on an ongoing basis, as well as hundreds of major corporations. It can be integrated with The Perryman Group's other models and systems to provide dynamic projections.

This section describes the forecasting process in a comprehensive manner, focusing on both the modeling and the supplemental analysis. The overall methodology, while certainly not ensuring perfect foresight, permits an enormous body of relevant information to impact the economic outlook in a systematic manner.

Model Logic and Structure

The Model revolves around a core system which projects output (real and nominal), income (real and nominal), and employment by industry in a simultaneous manner. For the purposes of illustration, it is useful to initially consider the employment functions. Essentially, employment within the system is a derived demand relationship obtained from a neo-Classical production function. The expressions are augmented to include dynamic temporal adjustments to changes in relative factor input costs, output and (implicitly) productivity, and technological progress over time. Thus, the typical equation includes output, the relative real cost of labor and capital, dynamic lag structures, and a

technological adjustment parameter. The functional form is logarithmic, thus preserving the theoretical consistency with the neo-Classical formulation.

The income segment of the model is divided into wage and non-wage components. The wage equations, like their employment counterparts, are individually estimated at the 3-digit North American Industry Classification System (NAICS) level of aggregation. Hence, income by place of work is measured for approximately 90 production categories. The wage equations measure real compensation, with the form of the variable structure differing between "basic" and "non-basic."

The basic industries, comprised primarily of the various components of Mining, Agriculture, and Manufacturing, are export-oriented, i.e., they bring external dollars into the area and form the core of the economy. The production of these sectors typically flows into national and international markets; hence, the labor markets are influenced by conditions in areas beyond the borders of the particular region. Thus, real (inflation-adjusted) wages in the basic industry are expressed as a function of the corresponding national rates, as well as measures of local labor market conditions (the reciprocal of the unemployment rate), dynamic adjustment parameters, and ongoing trends.

The "non-basic" sectors are somewhat different in nature, as the strength of their labor markets is linked to the health of the local export sectors. Consequently, wages in these industries are related to those in the basic segment of the economy. The relationship also includes the local labor market measures contained in the basic wage equations.

Note that compensation rates in the export or "basic" sectors provide a key element of the interaction of the regional economies with national and international market phenomena, while the "non-basic" or local industries are strongly impacted by area production levels. Given the wage and employment equations, multiplicative identities in each industry provide expressions for total compensation; these totals may then be aggregated to determine aggregate wage and salary income. Simple linkage equations are then estimated for the calculation of personal income by place of work.

The non-labor aspects of personal income are modeled at the regional level using straightforward empirical expressions relating to national performance, dynamic responses, and evolving temporal patterns. In some instances (such as dividends, rents, and others) national variables (for example, interest rates) directly enter the forecasting system. These factors have numerous other implicit linkages into the system resulting from their simultaneous interaction with other phenomena in national and international markets which are explicitly included in various expressions.

The output or gross area product expressions are also developed at the 3-digit NAICS level. Regional output for basic industries is linked to national performance in the relevant industries, local and national production in key related sectors, relative area

and national labor costs in the industry, dynamic adjustment parameters, and ongoing changes in industrial interrelationships (driven by technological changes in production processes).

Output in the non-basic sectors is modeled as a function of basic production levels, output in related local support industries (if applicable), dynamic temporal adjustments, and ongoing patterns. The inter-industry linkages are obtained from the input-output (impact assessment) system which is part of the overall integrated modeling structure maintained by The Perryman Group. Note that the dominant component of the econometric system involves the simultaneous estimation and projection of output (real and nominal), income (real and nominal), and employment at a disaggregated industrial level. This process, of necessity, also produces projections of regional price deflators by industry. These values are affected by both national pricing patterns and local cost variations and permit changes in prices to impact other aspects of economic behavior. Income is converted from real to nominal terms using relevant Consumer Price Indices, which fluctuate in response to national pricing patterns and unique local phenomena.

Several other components of the model are critical to the forecasting process. The demographic module includes (1) a linkage equation between wage and salary (establishment) employment and household employment, (2) a labor force participation rate function, and (3) a complete population system with endogenous migration. Given household employment, labor force participation (which is a function of economic conditions and evolving patterns of worker preferences), and the working-age population, the unemployment rate and level become identities.

The population system uses Census information, fertility rates, and life tables to determine the "natural" changes in population by age group. Migration, the most difficult segment of population dynamics to track, is estimated in relation to relative regional and extra-regional economic conditions over time. Because evolving economic conditions determine migration in the system, population changes are allowed to interact simultaneously with overall economic conditions. Through this process, migration is treated as endogenous to the system, thus allowing population to vary in accordance with relative business performance (particularly employment).

Real retail sales is related to income, interest rates, dynamic adjustments, and patterns in consumer behavior on a store group basis. It is expressed on an inflation-adjusted basis. Inflation at the state level relates to national patterns, indicators of relative economic conditions, and ongoing trends. As noted earlier, prices are endogenous to the system.

A final significant segment of the forecasting system relates to real estate absorption and activity. The short-term demand for various types of property is determined by

underlying economic and demographic factors, with short-term adjustments to reflect the current status of the pertinent building cycle. In some instances, this portion of the forecast requires integration with the US Multi-Regional Industry-Occupation System which is maintained by The Perryman Group. This system also allows any employment simulation or forecast from the econometric model to be translated into a highly detailed occupational profile.

The overall US Multi-Regional Econometric Model contains numerous additional specifications, and individual expressions are modified to reflect alternative lag structures, empirical properties of the estimates, simulation requirements, and similar phenomena. Moreover, it is updated on an ongoing basis as new data releases become available. Nonetheless, the above synopsis offers a basic understanding of the overall structure and underlying logic of the system.

Model Simulation and Multi-Regional Structure

The initial phase of the simulation process is the execution of a standard non-linear algorithm for the state system and that of each of the individual sub-areas. The external assumptions are derived from scenarios developed through national and international models and extensive analysis by The Perryman Group.

Once the initial simulations are completed, they are merged into a single system with additive constraints and interregional flows. Using information on minimum regional requirements, import needs, export potential, and locations, it becomes possible to balance the various forecasts into a mathematically consistent set of results. This process is, in effect, a disciplining exercise with regard to the individual regional (including metropolitan and rural) systems. By compelling equilibrium across all regions and sectors, the algorithm ensures that the patterns in state activity are reasonable in light of smaller area dynamics and, conversely, that the regional outlooks are within plausible performance levels for the state as a whole.

The iterative simulation process has the additional property of imposing a global convergence criterion across the entire multi-regional system, with balance being achieved simultaneously on both a sectoral and a geographic basis. This approach is particularly critical on non-linear dynamic systems, as independent simulations of individual systems often yield unstable, non-convergent outcomes.

It should be noted that the underlying data for the modeling and simulation process are frequently updated and revised by the various public and private entities compiling them. Whenever those modifications to the database occur, they bring corresponding changes to the structural parameter estimates of the various systems and the solutions to the simulation and forecasting system. The multi-regional version of the econometric

model is re-estimated and simulated with each such data release, thus providing a constantly evolving and current assessment of state and local business activity.

The Final Forecast

The process described above is followed to produce an initial set of projections. Through the comprehensive multi-regional modeling and simulation process, a systematic analysis is generated which accounts for both historical patterns in economic performance and inter-relationships and the best available information on the future course of pertinent external factors. While the best available techniques and data are employed in this effort, they are not capable of directly capturing "street sense," i.e., the contemporaneous and often non-quantifiable information that can materially affect economic outcomes. In order to provide a comprehensive approach to the prediction of business conditions, it is necessary to compile and assimilate extensive material regarding current events and factors both across the state of Texas and elsewhere.

This critical aspect of the forecasting methodology includes activities such as (1) daily review of hundreds of financial and business publications and electronic information sites; (2) review of major newspapers and online news sources in the state on a daily basis; (3) dozens of hours of direct telephone interviews with key business and political leaders in all parts of the state; (4) face-to-face discussions with representatives of major industry groups; and (5) frequent site visits to the various regions of the state. The insights arising from this "fact finding" are analyzed and evaluated for their effects on the likely course of the future activity.

Another vital information resource stems from the firm's ongoing interaction with key players in the international, domestic, and state economic scenes. Such activities include visiting with corporate groups on a regular basis and being regularly involved in the policy process at all levels. The firm is also an active participant in many major corporate relocations, economic development initiatives, and regulatory proceedings.

Once organized, this information is carefully assessed and, when appropriate, independently verified. The impact on specific communities and sectors that is distinct from what is captured by the econometric system is then factored into the forecast analysis. For example, the opening or closing of a major facility, particularly in a relatively small area, can cause a sudden change in business performance that will not be accounted for by either a modeling system based on historical relationships or expected (primarily national and international) factors.

The final step in the forecasting process is the integration of this material into the results in a logical and mathematically consistent manner. In some instances, this task is accomplished through "constant adjustment factors" which augment relevant equations. In other cases, anticipated changes in industrial structure or regulatory

parameters are initially simulated within the context of the Multi-Regional Impact Assessment System to estimate their ultimate effects by sector. Those findings are then factored into the simulation as constant adjustments on a distributed temporal basis. Once this scenario is formulated, the extended system is again balanced across regions and sectors through an iterative simulation algorithm analogous to that described in the preceding section.

Appendix B: Results by Industry

Operations, Student Spending, Visitor Spending and Tourism

The Annual Economic Impact of Operations Associated with The University of Texas Permian Basin on Business Activity in the Permian Basin Region
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$6.2 m	+$1.8 m	+$1.2 m	+16
Mining	+$5.0 m	+$1.1 m	+$0.6 m	+2
Utilities	+$18.0 m	+$4.1 m	+$1.8 m	+6
Construction	+$8.1 m	+$4.4 m	+$3.6 m	+41
Manufacturing	+$23.2 m	+$6.4 m	+$3.6 m	+43
Wholesale Trade	+$8.9 m	+$6.0 m	+$3.5 m	+32
Retail Trade*	+$50.6 m	+$38.0 m	+$22.1 m	+552
Transportation & Warehousing	+$11.7 m	+$7.7 m	+$5.1 m	+57
Information	+$6.7 m	+$4.1 m	+$1.8 m	+13
Financial Activities*	+$35.3 m	+$8.4 m	+$3.0 m	+24
Business Services	+$7.4 m	+$4.4 m	+$3.6 m	+36
Health Services	+$9.8 m	+$6.8 m	+$5.8 m	+78
Other Services	+$128.0 m	+$79.9 m	+$68.6 m	+1,330
Total, All Industries	**+$318.9 m**	**+$173.2 m**	**+$124.2 m**	**+2,231**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

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The Annual Economic Impact of Operations Associated with The University of Texas Permian Basin on Business Activity in Texas

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$6.5 m	+$1.9 m	+$1.3 m	+16
Mining	+$5.6 m	+$1.3 m	+$0.7 m	+3
Utilities	+$18.9 m	+$4.3 m	+$1.9 m	+7
Construction	+$10.2 m	+$5.5 m	+$4.5 m	+52
Manufacturing	+$46.8 m	+$14.5 m	+$8.1 m	+107
Wholesale Trade	+$11.8 m	+$8.0 m	+$4.6 m	+42
Retail Trade*	+$54.0 m	+$40.5 m	+$23.6 m	+589
Transportation & Warehousing	+$12.1 m	+$8.0 m	+$5.3 m	+59
Information	+$8.4 m	+$5.2 m	+$2.2 m	+16
Financial Activities*	+$63.3 m	+$17.1 m	+$5.7 m	+48
Business Services	+$14.3 m	+$8.8 m	+$7.2 m	+71
Health Services	+$12.5 m	+$8.8 m	+$7.4 m	+100
Other Services	+$130.3 m	+$81.0 m	+$69.5 m	+1,346
Total, All Industries	**+$394.5 m**	**+$204.9 m**	**+$141.9 m**	**+2,457**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

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The Annual Economic Impact of Out-of-Area Student Spending Associated with The University of Texas Permian Basin on Business Activity in the Permian Basin Region
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$2.4 m	+$0.7 m	+$0.4 m	+6
Mining	+$1.8 m	+$0.4 m	+$0.2 m	+1
Utilities	+$9.1 m	+$2.0 m	+$0.9 m	+3
Construction	+$2.5 m	+$1.3 m	+$1.1 m	+12
Manufacturing	+$7.8 m	+$2.1 m	+$1.2 m	+14
Wholesale Trade	+$3.0 m	+$2.0 m	+$1.2 m	+11
Retail Trade*	+$34.2 m	+$25.8 m	+$15.0 m	+372
Transportation & Warehousing	+$3.6 m	+$2.5 m	+$1.6 m	+18
Information	+$3.3 m	+$2.1 m	+$0.9 m	+6
Financial Activities*	+$19.6 m	+$2.4 m	+$0.9 m	+8
Business Services	+$3.1 m	+$1.7 m	+$1.4 m	+14
Health Services	+$6.0 m	+$4.3 m	+$3.6 m	+49
Other Services	+$11.7 m	+$6.1 m	+$4.9 m	+86
Total, All Industries	**+$108.2 m**	**+$53.4 m**	**+$33.3 m**	**+600**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Annual Economic Impact of Out-of-Area Student Spending Associated with The University of Texas Permian Basin on Business Activity in Texas
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$2.5 m	+$0.7 m	+$0.5 m	+6
Mining	+$2.1 m	+$0.5 m	+$0.3 m	+1
Utilities	+$9.4 m	+$2.1 m	+$0.9 m	+3
Construction	+$3.2 m	+$1.6 m	+$1.3 m	+15
Manufacturing	+$15.6 m	+$4.8 m	+$2.7 m	+35
Wholesale Trade	+$4.0 m	+$2.7 m	+$1.5 m	+14
Retail Trade*	+$35.3 m	+$26.6 m	+$15.5 m	+384
Transportation & Warehousing	+$3.7 m	+$2.5 m	+$1.7 m	+19
Information	+$3.9 m	+$2.4 m	+$1.0 m	+7
Financial Activities*	+$26.9 m	+$4.5 m	+$1.7 m	+15
Business Services	+$5.1 m	+$3.0 m	+$2.5 m	+24
Health Services	+$6.8 m	+$4.8 m	+$4.1 m	+55
Other Services	+$12.4 m	+$6.5 m	+$5.1 m	+91
Total, All Industries	**+$130.8 m**	**+$62.8 m**	**+$38.8 m**	**+670**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

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The Annual Economic Impact of Out-of-Area Visitor Spending Associated with The University of Texas Permian Basin on Business Activity in the Permian Basin Region
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$0.7 m	+$0.2 m	+$0.1 m	+2
Mining	+$0.4 m	+$0.1 m	+$0.0 m	+0
Utilities	+$1.3 m	+$0.3 m	+$0.1 m	+0
Construction	+$0.4 m	+$0.2 m	+$0.2 m	+2
Manufacturing	+$2.1 m	+$0.6 m	+$0.3 m	+4
Wholesale Trade	+$0.8 m	+$0.5 m	+$0.3 m	+3
Retail Trade*	+$9.9 m	+$7.3 m	+$4.2 m	+109
Transportation & Warehousing	+$2.4 m	+$1.7 m	+$1.2 m	+13
Information	+$0.5 m	+$0.3 m	+$0.1 m	+1
Financial Activities*	+$2.4 m	+$0.5 m	+$0.2 m	+2
Business Services	+$0.6 m	+$0.3 m	+$0.3 m	+3
Health Services	+$0.7 m	+$0.5 m	+$0.4 m	+5
Other Services	+$3.0 m	+$1.6 m	+$1.1 m	+23
Total, All Industries	**+$25.2 m**	**+$14.2 m**	**+$8.7 m**	**+167**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

THE PERRYMAN GROUP

The Annual Economic Impact of Out-of-Area Visitor Spending Associated with The University of Texas Permian Basin on Business Activity in Texas

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$0.8 m	+$0.2 m	+$0.1 m	+2
Mining	+$0.4 m	+$0.1 m	+$0.1 m	+0
Utilities	+$1.3 m	+$0.3 m	+$0.1 m	+0
Construction	+$0.6 m	+$0.3 m	+$0.2 m	+3
Manufacturing	+$4.2 m	+$1.3 m	+$0.7 m	+9
Wholesale Trade	+$1.1 m	+$0.7 m	+$0.4 m	+4
Retail Trade*	+$10.2 m	+$7.5 m	+$4.3 m	+112
Transportation & Warehousing	+$2.5 m	+$1.8 m	+$1.2 m	+13
Information	+$0.7 m	+$0.4 m	+$0.2 m	+1
Financial Activities*	+$4.2 m	+$1.1 m	+$0.4 m	+4
Business Services	+$1.1 m	+$0.7 m	+$0.6 m	+5
Health Services	+$0.9 m	+$0.6 m	+$0.5 m	+7
Other Services	+$3.1 m	+$1.7 m	+$1.2 m	+24
Total, All Industries	**+$31.0 m**	**+$16.6 m**	**+$10.1 m**	**+185**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Annual Economic Impact of Out-of-Area Visitor Spending Associated with the Wagner Noël Performing Arts Center on Business Activity in the Permian Basin Region

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$1.4 m	+$0.4 m	+$0.2 m	+3
Mining	+$0.7 m	+$0.2 m	+$0.1 m	+0
Utilities	+$2.5 m	+$0.6 m	+$0.2 m	+1
Construction	+$0.9 m	+$0.5 m	+$0.4 m	+4
Manufacturing	+$4.1 m	+$1.1 m	+$0.6 m	+8
Wholesale Trade	+$1.6 m	+$1.1 m	+$0.6 m	+6
Retail Trade*	+$19.3 m	+$14.1 m	+$8.2 m	+211
Transportation & Warehousing	+$4.7 m	+$3.4 m	+$2.2 m	+25
Information	+$1.0 m	+$0.6 m	+$0.3 m	+2
Financial Activities*	+$4.6 m	+$1.1 m	+$0.4 m	+4
Business Services	+$1.1 m	+$0.7 m	+$0.5 m	+5
Health Services	+$1.3 m	+$0.9 m	+$0.8 m	+11
Other Services	+$5.8 m	+$3.0 m	+$2.2 m	+44
Total, All Industries	**+$48.9 m**	**+$27.5 m**	**+$16.8 m**	**+324**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Annual Economic Impact of Out-of-Area Visitor Spending Associated with the Wagner Noël Performing Arts Center on Business Activity in Texas
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$1.5 m	+$0.4 m	+$0.3 m	+3
Mining	+$0.8 m	+$0.2 m	+$0.1 m	+1
Utilities	+$2.6 m	+$0.6 m	+$0.3 m	+1
Construction	+$1.1 m	+$0.6 m	+$0.5 m	+6
Manufacturing	+$8.2 m	+$2.5 m	+$1.4 m	+18
Wholesale Trade	+$2.1 m	+$1.4 m	+$0.8 m	+7
Retail Trade*	+$19.8 m	+$14.5 m	+$8.4 m	+217
Transportation & Warehousing	+$4.8 m	+$3.4 m	+$2.3 m	+25
Information	+$1.3 m	+$0.8 m	+$0.3 m	+2
Financial Activities*	+$8.1 m	+$2.1 m	+$0.8 m	+7
Business Services	+$2.1 m	+$1.3 m	+$1.1 m	+11
Health Services	+$1.7 m	+$1.2 m	+$1.0 m	+14
Other Services	+$6.1 m	+$3.2 m	+$2.3 m	+46
Total, All Industries	**+$60.1 m**	**+$32.2 m**	**+$19.5 m**	**+358**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Cumulative Economic Impact Since Inception of Out-of-Area Visitor Spending Associated with the Wagner Noël Performing Arts Center on Business Activity in the Permian Basin Region

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Job Years*
Agriculture	+$8.6 m	+$2.2 m	+$1.5 m	+19
Mining	+$4.6 m	+$1.0 m	+$0.5 m	+2
Utilities	+$15.2 m	+$3.5 m	+$1.5 m	+5
Construction	+$5.3 m	+$2.8 m	+$2.3 m	+27
Manufacturing	+$25.3 m	+$6.8 m	+$3.8 m	+47
Wholesale Trade	+$9.7 m	+$6.6 m	+$3.8 m	+35
Retail Trade*	+$119.1 m	+$87.3 m	+$50.4 m	+1,306
Transportation & Warehousing	+$29.0 m	+$20.9 m	+$13.8 m	+154
Information	+$6.2 m	+$3.8 m	+$1.6 m	+12
Financial Activities*	+$28.4 m	+$6.6 m	+$2.6 m	+22
Business Services	+$6.6 m	+$4.1 m	+$3.3 m	+33
Health Services	+$8.2 m	+$5.8 m	+$4.9 m	+66
Other Services	+$35.5 m	+$18.7 m	+$13.7 m	+271
Total, All Industries	**+$301.8 m**	**+$170.2 m**	**+$103.8 m**	**+1,999**

Source: US Multi-Regional Impact Assessment System, The Perryman Group

Notes: Monetary values given in millions of 2023 US dollars. A job-year is equivalent to one person working for one year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Cumulative Economic Impact Since Inception of Out-of-Area Visitor Spending Associated with the Wagner Noël Performing Arts Center on Business Activity in Texas
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Job Years*
Agriculture	+$9.0 m	+$2.4 m	+$1.6 m	+20
Mining	+$5.2 m	+$1.2 m	+$0.7 m	+3
Utilities	+$16.0 m	+$3.7 m	+$1.6 m	+6
Construction	+$6.8 m	+$3.6 m	+$3.0 m	+34
Manufacturing	+$50.7 m	+$15.3 m	+$8.5 m	+112
Wholesale Trade	+$12.8 m	+$8.7 m	+$5.0 m	+46
Retail Trade*	+$122.3 m	+$89.8 m	+$51.8 m	+1,342
Transportation & Warehousing	+$29.4 m	+$21.2 m	+$14.0 m	+156
Information	+$7.8 m	+$4.8 m	+$2.1 m	+15
Financial Activities*	+$50.0 m	+$13.1 m	+$5.0 m	+42
Business Services	+$12.9 m	+$8.1 m	+$6.6 m	+65
Health Services	+$10.6 m	+$7.5 m	+$6.3 m	+85
Other Services	+$37.6 m	+$19.8 m	+$14.5 m	+286
Total, All Industries	**+$371.4 m**	**+$199.2 m**	**+$120.5 m**	**+2,212**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars. A job-year is equivalent to one person working for one year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

Construction

The Economic Impact of Construction of Facilities Associated with The University of Texas Permian Basin Since 2010 on Business Activity in the Permian Basin Region
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Job Years*
Agriculture	+$16.4 m	+$4.6 m	+$3.1 m	+40
Mining	+$15.9 m	+$4.1 m	+$2.1 m	+12
Utilities	+$43.5 m	+$9.8 m	+$4.3 m	+15
Construction	+$369.2 m	+$165.0 m	+$136.0 m	+1,558
Manufacturing	+$132.1 m	+$45.2 m	+$26.0 m	+323
Wholesale Trade	+$37.9 m	+$25.6 m	+$14.8 m	+137
Retail Trade*	+$147.1 m	+$111.4 m	+$65.0 m	+1,601
Transportation & Warehousing	+$35.0 m	+$23.3 m	+$15.4 m	+171
Information	+$17.8 m	+$11.0 m	+$4.7 m	+34
Financial Activities*	+$85.0 m	+$18.5 m	+$7.9 m	+66
Business Services	+$31.6 m	+$19.5 m	+$15.9 m	+158
Health Services	+$27.0 m	+$18.9 m	+$16.0 m	+216
Other Services	+$56.8 m	+$29.0 m	+$23.5 m	+467
Total, All Industries	**+$1,015.3 m**	**+$485.9 m**	**+$334.7 m**	**+4,798**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars. A job-year is equivalent to one person working for one year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Economic Impact of Construction of Facilities Associated with The University of Texas Permian Basin Since 2010 on Business Activity in Texas
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Job Years*
Agriculture	+$22.5 m	+$6.6 m	+$4.3 m	+56
Mining	+$22.9 m	+$5.9 m	+$3.3 m	+19
Utilities	+$60.3 m	+$13.6 m	+$5.9 m	+21
Construction	+$474.7 m	+$212.6 m	+$175.2 m	+2,007
Manufacturing	+$311.7 m	+$108.1 m	+$63.5 m	+820
Wholesale Trade	+$63.7 m	+$43.1 m	+$24.9 m	+230
Retail Trade*	+$205.9 m	+$155.9 m	+$90.9 m	+2,241
Transportation & Warehousing	+$46.4 m	+$31.0 m	+$20.5 m	+228
Information	+$29.1 m	+$17.9 m	+$7.6 m	+56
Financial Activities*	+$191.4 m	+$46.8 m	+$18.9 m	+162
Business Services	+$80.1 m	+$50.1 m	+$40.8 m	+405
Health Services	+$45.5 m	+$31.9 m	+$26.9 m	+363
Other Services	+$82.9 m	+$42.4 m	+$34.0 m	+669
Total, All Industries	**+$1,637.1 m**	**+$765.8 m**	**+$516.9 m**	**+7,276**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars. A job-year is equivalent to one person working for one year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Cumulative Impact of Research Operations (FY 2020-2022) Associated with The University of Texas Permian Basin on Business Activity in the Permian Basin Region

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Job Years*
Agriculture	+$0.6 m	+$0.2 m	+$0.1 m	+2
Mining	+$0.5 m	+$0.1 m	+$0.1 m	+0
Utilities	+$1.8 m	+$0.4 m	+$0.2 m	+1
Construction	+$0.8 m	+$0.4 m	+$0.4 m	+4
Manufacturing	+$2.3 m	+$0.6 m	+$0.4 m	+4
Wholesale Trade	+$0.9 m	+$0.6 m	+$0.3 m	+3
Retail Trade*	+$5.0 m	+$3.7 m	+$2.2 m	+54
Transportation & Warehousing	+$1.2 m	+$0.8 m	+$0.5 m	+6
Information	+$0.7 m	+$0.4 m	+$0.2 m	+1
Financial Activities*	+$3.5 m	+$0.8 m	+$0.3 m	+2
Business Services	+$0.7 m	+$0.4 m	+$0.4 m	+4
Health Services	+$1.0 m	+$0.7 m	+$0.6 m	+8
Other Services	+$12.6 m	+$7.8 m	+$6.7 m	+130
Total, All Industries	**+$31.3 m**	**+$17.0 m**	**+$12.2 m**	**+219**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars. A job-year is equivalent to one person working for one year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

The Cumulative Impact of Research Operations (FY 2020-2022) Associated with The University of Texas Permian Basin on Business Activity in Texas

Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Job Years*
Agriculture	+$0.6 m	+$0.2 m	+$0.1 m	+2
Mining	+$0.6 m	+$0.1 m	+$0.1 m	+0
Utilities	+$1.8 m	+$0.4 m	+$0.2 m	+1
Construction	+$1.0 m	+$0.5 m	+$0.4 m	+5
Manufacturing	+$4.6 m	+$1.4 m	+$0.8 m	+10
Wholesale Trade	+$1.2 m	+$0.8 m	+$0.5 m	+4
Retail Trade*	+$5.3 m	+$4.0 m	+$2.3 m	+58
Transportation & Warehousing	+$1.2 m	+$0.8 m	+$0.5 m	+6
Information	+$0.8 m	+$0.5 m	+$0.2 m	+2
Financial Activities*	+$6.2 m	+$1.7 m	+$0.6 m	+5
Business Services	+$1.4 m	+$0.9 m	+$0.7 m	+7
Health Services	+$1.2 m	+$0.9 m	+$0.7 m	+10
Other Services	+$12.8 m	+$7.9 m	+$6.8 m	+132
Total, All Industries	**+$38.7 m**	**+$20.1 m**	**+$13.9 m**	**+241**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars. A job-year is equivalent to one person working for one year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

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Graduates

The Estimated Annual Economic Impact of Associated with Graduates of The University of Texas Permian Basin on Business Activity in the Permian Basin Region
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$262.9 m	+$75.1 m	+$50.7 m	+653
Mining	+$10,784.7 m	+$2,384.0 m	+$1,110.5 m	+4,739
Utilities	+$1,372.4 m	+$300.8 m	+$131.3 m	+464
Construction	+$833.6 m	+$445.8 m	+$367.4 m	+4,209
Manufacturing	+$2,007.2 m	+$609.7 m	+$359.2 m	+3,917
Wholesale Trade	+$477.9 m	+$323.0 m	+$186.2 m	+1,725
Retail Trade*	+$2,042.7 m	+$1,519.9 m	+$881.2 m	+22,345
Transportation & Warehousing	+$491.2 m	+$324.8 m	+$214.8 m	+2,387
Information	+$347.4 m	+$213.7 m	+$91.3 m	+665
Financial Activities*	+$3,425.6 m	+$1,137.3 m	+$326.8 m	+2,553
Business Services	+$676.0 m	+$416.8 m	+$340.0 m	+3,373
Health Services	+$578.2 m	+$401.8 m	+$339.7 m	+4,575
Other Services	+$927.5 m	+$479.9 m	+$392.0 m	+7,701
Total, All Industries	**+$24,227.2 m**	**+$8,632.7 m**	**+$4,791.1 m**	**+59,307**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.

THE PERRYMAN GROUP

The Estimated Annual Economic Impact of Associated with Graduates of The University of Texas Permian Basin on Business Activity in Texas
Results by Industry

Industry	Total Expenditures	Gross Product	Personal Income	Jobs
Agriculture	+$372.0 m	+$108.5 m	+$71.4 m	+917
Mining	+$11,269.5 m	+$2,496.1 m	+$1,170.8 m	+5,025
Utilities	+$1,783.8 m	+$391.2 m	+$170.7 m	+603
Construction	+$1,162.5 m	+$620.4 m	+$511.3 m	+5,857
Manufacturing	+$4,355.4 m	+$1,384.6 m	+$803.1 m	+9,445
Wholesale Trade	+$784.1 m	+$530.0 m	+$305.6 m	+2,831
Retail Trade*	+$2,777.1 m	+$2,068.7 m	+$1,199.9 m	+30,362
Transportation & Warehousing	+$661.0 m	+$436.9 m	+$288.9 m	+3,212
Information	+$587.6 m	+$361.9 m	+$154.5 m	+1,127
Financial Activities*	+$6,459.7 m	+$2,169.0 m	+$647.3 m	+5,219
Business Services	+$1,497.9 m	+$930.5 m	+$759.0 m	+7,533
Health Services	+$971.6 m	+$672.7 m	+$568.8 m	+7,663
Other Services	+$1,338.6 m	+$696.8 m	+$563.8 m	+11,010
Total, All Industries	**+$34,020.8 m**	**+$12,867.2 m**	**+$7,215.1 m**	**+90,803**

Source: US Multi-Regional Impact Assessment System, The Perryman Group
Notes: Monetary values given in millions of 2023 US dollars per year. Components may not sum due to rounding. Retail Trade includes Restaurants, Financial Activities includes Real Estate.