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# The Economic Benefits of Retirement Annuity and Other Payments by Major Public Employee Retirement Systems on Business Activity in Texas


**THE PERRYMAN GROUP**

510 N. Valley Mills Dr., Suite 300

Waco, TX 76710

ph. 254.751.9595, fax 254.751.7855

*info@perrymangroup.com*

*www.perrymangroup.com*

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# INTRODUCTION

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- Retirement plans and pension benefits have long been a means of attracting bright, dedicated people to work for local, state, and federal government entities. These benefits have been an important element of overall compensation, **encouraging talented individuals** to work as teachers, city and county employees, firefighters, policemen, and serve in many more **essential professions important to societal well-being, safety, and convenience**. **The defined benefit structure of these plans provides an important element of security and stability for the public workforce.**

- In addition, the **money paid out to retirees generates economic benefits, both for the individuals receiving annuities and for the communities where they spend their money**. The resulting spending leads to a sizable economic stimulus as well as associated tax receipts. At the same time, the promise of pension benefits can offset a need for higher salary levels for public sector employees.

- Retirement plans thus benefit Texas taxpayers in two ways: once in the form of **high-caliber employees retained at reasonable levels of total compensation** and again in the **ongoing economic benefits that accrue from the investment in retirement plans and subsequent spending of retirement annuities.** The defined benefit structure both promotes the security and attractiveness of careers in public service and provides a substantial future income stream that is largely translated into private-sector spending within the state.

- The Perryman Group (TPG) was asked to perform a comprehensive assessment of the economic benefits associated with the aggregate payments by the Teacher Retirement System of Texas (TRS), the

Employees Retirement System of Texas (ERS), the Texas Municipal Retirement System (TMRS), the Texas County and District Retirement System (TCDRS), and the various members of the Texas Association of Public Employee Retirement Systems (TEXPERS). This report presents the findings from TPG's analysis.

## Highlights of Study Findings

- The large public retirement systems and members of TEXPERS send payments to persons across Texas in the form of retirement annuities and other benefits which lead to a sizable economic stimulus. In 2010, **these plans paid more than $10 billion to hundreds of thousands of individuals**. **More than 95% of these funds are provided to Texas residents.**

- To put these payments in perspective, $10 billion is approximately equivalent to
  - **five times the total payroll in Texas agriculture;**
  - **the total combined payroll of computer and electronics manufacturing in the state;**
  - **four times the payroll petroleum refining and related industries;**
  - **the combined payrolls of air, rail, and truck transportation;**
  - **two times the payroll of the entire insurance sector (including carriers and sales); and**
  - **the total military payroll within Texas.**

- The economic benefits generated when retirement annuities and other payments from the major plans and TEXPERS members are spent are substantial. The Perryman Group estimates that the overall **impact (when multiplier effects are considered) includes**

**$23.158 billion in total expenditures and $11.119 billion in output (gross product) each year, as well as 152,059 permanent jobs in Texas (based on 2010 payment levels)**.

- This economic activity also leads to **additional tax receipts**; The Perryman Group estimated these effects (based on 2010 payments) to include more than **$1.095 billion to the State and $438.281 million to local government entities** each year.

- Public employee retirement systems help **improve the quality of life for all Texans through their positive effects on the public-sector workforce**. In addition, they generate **substantial economic benefits which permeate the entire state**.

## The Perryman Group's Perspective

- TPG is an economic research and analysis firm based in Waco, Texas. The firm has more than 30 years of experience in assessing the economic impact of corporate expansions, regulatory changes, real estate developments, public policy initiatives, and myriad other factors affecting business activity. TPG has conducted hundreds of impact analyses for the US and Texas economies as well as all Texas metro areas and regions. Impact studies have been performed for hundreds of clients including many of the largest corporations in the world, governmental entities at all levels, educational institutions, major health care systems, utilities, and economic development organizations.

- The Perryman Group has significant experience in the analysis of the economic effects of payments from retirement plans. Prior studies include multiple analyses related to the Teacher Retirement System of Texas (TRS) including an assessment of pension benefits

paid by TRS on business activity in Texas as well as a study of health care benefits. A similar study was also conducted for the Texas Municipal Retirement System (TMRS); TPG has also extensively studied the health characteristics of the recipients from the Employees Retirement System (ERS). In addition, Dr. Perryman has addressed national public retirement system conferences and chaired the Compensation Committee of a major corporation.

- The firm has also been active in key public policy initiatives concerning economic development and policy in Texas and provided detailed regional forecasts for the state for the past 25 years. Numerous other reports have been completed regarding consumption patterns and their effects on the economy.

# THE MAJOR PUBLIC RETIREMENT SYSTEMS OF TEXAS AND THE ECONOMIC IMPACT OF THEIR BENEFIT PAYMENTS

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- The Teacher Retirement System is the largest public retirement system in Texas, with almost 1,301,000 participants.

- The Employees Retirement System of Texas includes more than 220,000 participants who are current or former state employees, law enforcement officers, or judges.

- About 850 cities participate in the Texas Municipal Retirement System, which paid almost $744 million in benefits in 2010. More than 140,000 employees receive benefits through TMRS.

- Almost all Texas' counties and 366 other types of districts are part of the Texas County and District Retirement System. Some 220,000 employees are provided benefits through TCDRS, with $698 million in benefits paid in 2010.

- The members of The Texas Association of Public Employee Retirement Systems include about 84 retirement systems and nine employee groups as well as consultants, actuaries, and others. Together, **more than 420,000 individuals are represented by the members of TEXPERS**. Most members are local government plans of active and retired public employees such as police officers and firefighters as well as transit system, water district, utility, and other local public workers.

- TEXPERS provides support to plan members for benefit administration and investment selection. In addition, TEXPERS has developed a Certified Trustee Training Program of in-depth education related to fiduciary duties, governance, investing, and other cogent topics. Other educational programs and workshops related to topics of interest are also provided.

## Public Retirement System Payments

- The large public retirement systems and the members of TEXPERS send payments to persons across Texas in the form of retirement annuities from defined benefit programs and other benefits which lead to a sizable economic stimulus.

- In 2010, **these plans paid more than $10 billion to hundreds of thousands of individuals**. **More than 95% of these funds are provided to Texas residents.** The Perryman Group quantified the total economic impact of these injections into the economy.

- To put these payments in perspective, $10 billion is approximately equivalent to
  - **five times the total payroll in Texas agriculture;**
  - **the total combined payroll of computer and electronics manufacturing in the state;**
  - **four times the payroll petroleum refining and related industries;**
  - **the combined payrolls of air, rail, and truck transportation;**
  - **two times the payroll of the entire insurance sector (including carriers and sales); and**
  - **the total military payroll within Texas.**

# Measuring Economic Impacts

- When annuities and other benefits paid by the various retirement systems are spent, like any economic activity, they generate multiplier or **ripple effects through the economy**. As noted earlier, The Perryman Group developed a model some 30 years ago (with continual updates and refinements since that time) to describe these interactions. This dynamic input-output assessment model 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. The submodel used in the current analysis reflects the specific industrial composition and characteristics of the Texas economy.

- In this case, for example, **recipients of annuity payments regularly purchase various goods and services from a number of businesses**. These companies, in turn, purchase the items necessary to produce and provide the goods and services from other companies. In this way, the effect of spending annuity payments ripples out through a variety of firms across a spectrum of industries.

- The overall economic effects are driven by the individuals receiving annuity benefits. As each of the recipients spends their payment from a retirement plan, local businesses see a positive effect on their sales. The following examples illustrate how this process works.
    - A retired teacher living in San Angelo, Texas receives a benefit payment. She then spends a portion of that money at a local grocery store, hair salon, gas station, restaurant, and many other businesses.
        - These businesses, in turn, buy various products and services from other companies. The grocery store pays a

local landscape company to install and maintain plantings in front of the store; the restaurant pays a local paper goods distributor for cups and napkins; and the salon owner buys advertising on a local radio station.
        - All of these companies—from the grocery store to the radio station—are employers in San Angelo, paying taxes as well as payrolls.
    - A former firefighter living in Dallas, like the teacher, also spends his annuity payment at local businesses; he also enjoys local arts. He spends a portion of his annuity payment for season tickets to the civic theater. These ticket sales support the theater's productions and increase its revenues. The theater pays local businesses for various maintenance projects, janitorial services, and supplies.
    - A retired bus driver in Houston buys necessities for daily living and is also an avid gardener. He pays a local tree-trimming service to prune his trees and shops regularly at the local garden center. These businesses, in turn, utilize other area companies for vehicle maintenance and other services as well as all necessary supplies.

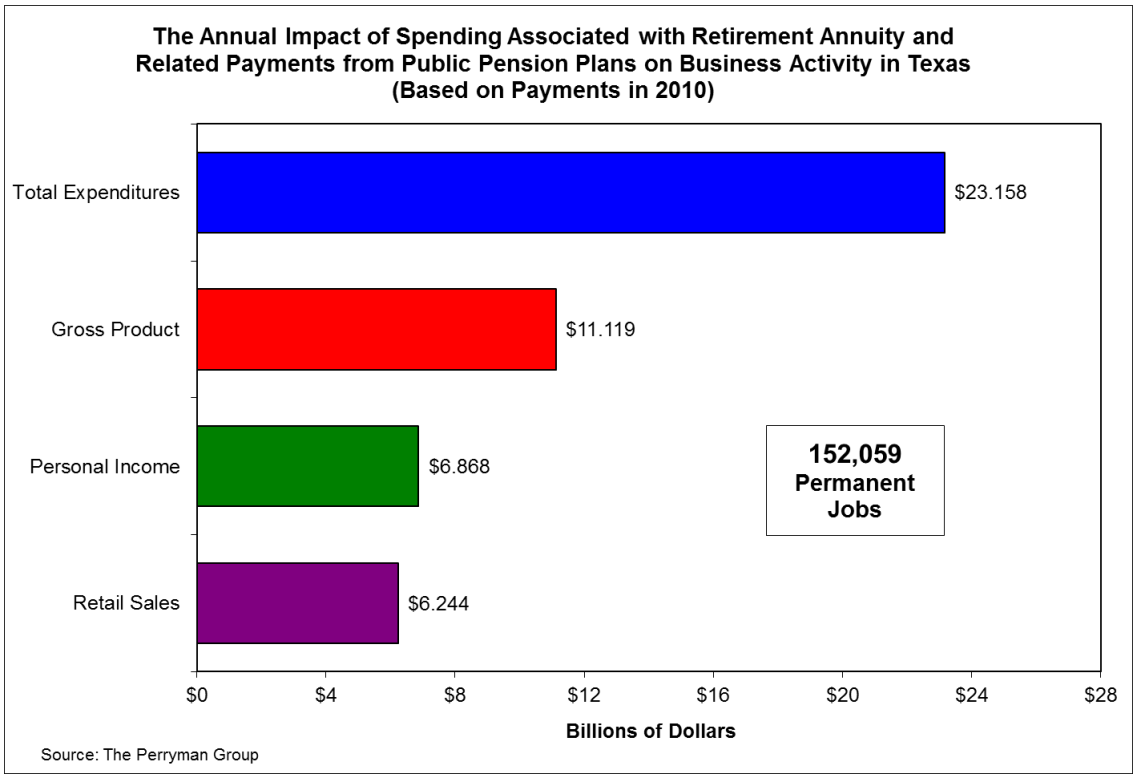
- Data regarding payments were provided by the various entities and served as inputs to the impact assessment process (a few small plans did not respond, but well over 99% of the total outlays were captured). The net (after-tax) benefits paid to Texas residents were adjusted to account for (1) typical out-of-state spending leakages and (2) savings rates within the relevant demographic categories. The remaining funds were assumed to be spent in accordance with the standard consumer patterns as determined by the *ACCRA Cost of Living Survey* and the *Consumer Expenditure Survey* of the US Department of Labor.

- Impacts are expressed in terms of several different indicators of overall business activity.
    - **Total expenditures** (or total spending) measures the dollars changing hands in the state as a result of the economic stimulus.
    - **Gross product** (or output) is production of goods and services that will come about in Texas 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 permanent jobs (in the case of an ongoing impact) or person-years of employment (for transitory effects such as construction). In the present instance, retirement benefits and other payments represent an ongoing stream of activity; thus, the reported employment effects reflect **permanent jobs**.

- All results are expressed on an annual basis in constant dollars and reflect payments in 2010. Additional information regarding the methods used in this report may be found in Appendix A.

# Economic Impact of Spending Retirement Payments

- The economic benefits generated when retirement annuities and other payments from the major plans and TEXPERS members are spent are substantial. The Perryman Group estimates that the **total impact includes $23.158 billion in total expenditures and $11.119 billion in output (gross product) each year, as well as 152,059 permanent jobs in Texas**.




- This economic activity also leads to **additional tax receipts**; The Perryman Group estimated these effects (based on 2010 payments) to include more than **$1.095 billion to the State and $438.281 million to local government entities** each year.

# CONCLUSION

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- Retirement plans are an **important component of the overall compensation** for many workers. These plans enhance the attractiveness of jobs and **help attract bright and dedicated individuals** to public employee positions as teachers, police officers, firefighters, city workers, and others.

- When retirement annuities and other **payments are made and subsequently spent, economic benefits and additional tax receipts are generated**.

- The major retirement systems provide resources to hundreds of thousands of beneficiaries, while TEXPERS members include scores of retirement systems representing groups from across the state. The payments to recipients totaled more than $10 billion in 2010, which is about five times the total payroll in Texas agriculture, approximately equal to the total combined payroll of computer and electronics manufacturing in the state, and about the same as the total military payroll within Texas.

- These payments lead to multiple rounds of additional economic activity. The Perryman Group estimates that the **total economic benefits (including multiplier or spinoff effects) include $23.158 billion in total expenditures and $11.119 billion in output (gross product) each year as well as 152,059 jobs**.

- Public employee retirement systems help **improve the quality of life for all Texans through their positive effects on the public-sector workforce**. In addition, they generate **substantial economic benefits which permeate the entire state**.

# APPENDICES

# APPENDIX A: Methods Used

## US Multi-Regional Impact Assessment System

- The basic modeling technique employed in this study is known as input-output analysis. This methodology 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, estimates of current payments to recipients in Texas were provided by the major retirement systems and TEXPERS members. Well over 99% of all outlays were captured in a manner that permitted adjustments for taxes and out-of-state beneficiaries. The remaining amount was adjusted for leakages from the expenditure stream and typical spending patterns (as described within the report).
- Once the direct input values were determined, the present study was conducted within the context of the US Multi-Regional Impact Assessment System (USMRIAS) which was developed and is maintained by The Perryman Group. This model has been used in hundreds of diverse applications across the country and has an excellent reputation for accuracy and credibility. In addition, the model has been in operation and continually updated for over two decades. The system used in the current simulations reflects the unique industrial structures of the Texas economy.
- The USMRIAS is somewhat similar in format to the Input-Output Model of the United States and the Regional Input-Output Modeling System, both of which are 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) 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 models used for the present investigation have been thoroughly tested for reasonableness and historical reliability.
- As noted earlier, 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 *ACCRA 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. Note that all monetary values, unless otherwise noted, are given in constant (2011) dollars to eliminate the effects of inflation.
- The USMRIAS generates estimates of the effect on several measures of business activity. The most comprehensive measure of economic activity used in this study 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 frequently employed in this analysis is that of **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, say, Amarillo is the

amount of US output that is produced in that area. 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 fourth measure, **Retail Sales**, represents the component of Total Expenditures which occurs in retail outlets (general merchandise stores, automobile dealers and service stations, building materials stores, food stores, drugstores, restaurants, and so forth). Retail Sales is a commonly used measure of consumer activity.
- The final aggregates used are **Permanent Jobs** and **Person-Years of Employment**. The Person-Years of Employment measure reveals the full-time equivalent jobs generated by an activity. A person-year is simply the equivalent of a person working for a year. As an example, it could be a carpenter employed for five months, a mason for three months, and a painter for four months. In the case of a construction project, these are typically spread over the course of the construction and development phase. It should be noted that, unlike the dollar values described above, Permanent Jobs is a "stock" rather than a "flow." In other words, if an area produces $1 million in output in 2009 and $1 million in 2010, it is appropriate to say that $2 million was achieved in the 2009-2010 period. If the same area has 100 people working in 2009 and 100 in 2010, it only has 100 Permanent 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 Person-Years (a person working for a year). This concept is distinct from Permanent Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

# APPENDIX B: Detailed Sectoral Results

## The Annual Impact of Spending Associated with Retirement Annuity and Related Payments from Public Pension Plans on Business Activity in Texas (Based on Payments in 2010) Detailed Industrial Category

| Category | Total Expenditures | Gross Product | Personal Income | Employment (Permanent Jobs) |
|---|---|---|---|---|
| Agricultural Products & Services | $428,122,444 | $116,403,588 | $79,277,351 | 1,327 |
| Forestry & Fishery Products | $10,811,577 | $11,338,155 | $4,205,133 | 57 |
| Coal Mining | $57,857,118 | $16,711,209 | $17,609,674 | 125 |
| Crude Petroleum & Natural Gas | $309,747,554 | $67,662,516 | $31,205,883 | 161 |
| Miscellaneous Mining | $7,451,972 | $3,202,768 | $1,882,716 | 20 |
| New Construction | $0 | $0 | $0 | 0 |
| Maintenance & Repair Construction | $559,766,568 | $286,858,143 | $236,388,972 | 3,491 |
| Food Products & Tobacco | $875,399,066 | $225,167,952 | $115,026,562 | 2,012 |
| Textile Mill Products | $11,510,555 | $2,624,905 | $2,220,936 | 54 |
| Apparel | $159,580,588 | $88,238,674 | $44,711,871 | 1,277 |
| Paper & Allied Products | $138,058,915 | $61,095,461 | $27,620,808 | 442 |
| Printing & Publishing | $194,326,435 | $98,398,349 | $64,226,824 | 1,141 |
| Chemicals & Petroleum Refining | $726,167,799 | $109,962,939 | $51,634,004 | 401 |
| Rubber & Leather Products | $105,477,641 | $45,357,821 | $26,515,971 | 554 |
| Lumber Products & Furniture | $43,595,765 | $15,291,137 | $10,901,773 | 238 |
| Stone, Clay, & Glass Products | $56,628,277 | $31,385,316 | $16,414,649 | 280 |
| Primary Metal | $45,602,484 | $12,616,449 | $9,391,076 | 147 |
| Fabricated Metal Products | $115,353,487 | $41,421,012 | $26,741,448 | 480 |
| Machinery, Except Electrical | $71,295,499 | $28,578,848 | $20,416,844 | 228 |
| Electric & Electronic Equipment | $69,119,657 | $36,395,424 | $21,758,427 | 190 |
| Motor Vehicles & Equipment | $55,647,469 | $12,529,043 | $8,139,680 | 121 |
| Transp. Equip., Exc. Motor Vehicles | $24,182,301 | $10,351,451 | $6,764,288 | 86 |
| Instruments & Related Products | $19,458,582 | $7,979,713 | $6,065,286 | 81 |
| Miscellaneous Manufacturing | $44,621,684 | $17,604,315 | $12,141,875 | 203 |
| Transportation | $654,917,418 | $450,209,134 | $297,752,246 | 4,310 |
| Communication | $682,989,155 | $422,002,809 | $180,166,546 | 1,670 |
| Electric, Gas, Water, Sanitary Services | $1,663,392,354 | $373,396,325 | $162,940,210 | 722 |
| Wholesale Trade | $703,022,695 | $475,736,725 | $274,314,024 | 3,215 |
| Retail Trade | $4,354,763,345 | $3,608,524,368 | $2,157,782,183 | 59,250 |
| Finance | $296,230,288 | $156,453,890 | $91,103,545 | 850 |
| Insurance | $406,938,974 | $243,564,354 | $145,612,368 | 1,834 |
| Real Estate | $4,061,858,830 | $398,972,907 | $64,283,179 | 598 |
| Hotels, Lodging Places, Amusements | $345,586,985 | $182,020,969 | $119,412,045 | 3,049 |
| Personal Services | $963,424,854 | $599,252,142 | $466,227,871 | 8,229 |
| Business Services | $908,634,207 | $534,871,997 | $436,318,478 | 5,562 |
| Eating & Drinking Places | $1,889,454,543 | $1,106,543,520 | $588,740,237 | 27,878 |
| Health Services | $1,206,431,555 | $855,092,471 | $722,988,601 | 12,508 |
| Miscellaneous Services | $862,761,119 | $337,570,170 | $292,645,222 | 7,321 |
| Households | $27,492,281 | $27,492,281 | $26,910,562 | 1,949 |
| **Total** | **$23,157,682,042** | **$11,118,879,253** | **$6,868,459,370** | **152,059** |

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