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**The Economic and Fiscal Effects of Expanding
Alcoholic Beverage Sales in the City of Dallas**



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Introduction



Introduction

- A complex set of local laws regulates alcoholic beverage sales in Texas, and areas can be divided into “wet,” where the sales of alcoholic beverages is permitted and “dry,” where they are prohibited.
 - Wet areas can allow different degrees of alcoholic beverage sales varying from sales only on the premises (such as in restaurants) or only off premises (sales in stores for consumption elsewhere).
 - Furthermore, off-premise sales may include only beer, beer and wine, or include distilled spirits.
- Local elections to change the status of particular areas from dry to wet or to expand certain options are quite common. Important considerations in such elections include the notable effects on the economy and local tax receipts.
- In several previous studies, The Perryman Group (TPG) has found that even after fully adjusting for factors such as retail trends, income patterns, and general economic conditions, **there is a statistically significant increase in an area’s total retail sales (and, thus, retail sales tax collections) following a change from dry to wet or an expansion of beverage purchase options.**
- Currently, less than half of the City of Dallas is classified as wet to varying degrees. For example, some areas are completely wet, while others only allow beer sales for off-premise consumption. However, present alcoholic beverage laws in Texas allow the use of a mechanism such as private club membership and special use permits in which some businesses are able to offer alcoholic beverages even when they are located in dry areas of the city.



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- Residents of The City of Dallas will be voting in an upcoming election whether to extend wet areas to allow sales of
 - **wine and beer in retailers such as grocery and convenience stores for off-premise consumption and**
 - **mixed beverages in restaurants in the dry areas of the city.**
 - The Perryman Group was asked to estimate the economic and fiscal impact of the proposed expansion of alcoholic beverage sales in the City of Dallas.

HIGHLIGHTS OF STUDY FINDINGS

- The expansion of wet areas in the City of Dallas would encourage locations of new businesses and relocations of existing businesses to zones that are not currently under consideration because of the dry area conditions. New businesses would, in turn, generate economic activity, provide employment, and increase tax revenues in these areas.
- The Perryman Group estimated that expanding the wet areas in the City of Dallas could
 - **increase output by \$1.9 billion per year, and**
 - **create about 29,054 new jobs in the area.**
- The fiscal impacts for the city would include roughly **\$33.4 million in additional tax revenue each year.**
- The expansion under consideration would clearly generate significant gains in business activity across the area as well as local tax receipts.



THE PERRYMAN GROUP'S PERSPECTIVE

- Dr. M. Ray Perryman, founder and president of the firm, developed the US Multi-Regional Impact Assessment System about 30 years ago and has maintained, expanded, and updated it on an ongoing basis. The model has been used in hundreds of applications across a broad spectrum and has an excellent reputation for reliability. The submodel used in this analysis reflects the unique industrial composition of the City of Dallas/Dallas County.
- The model has played a key role in numerous major policy initiatives in Texas (including, among others, judicial reforms, trucking deregulation, electric competition, tax policy, economic development incentives, telecommunications deregulation, and transportation funding mechanisms).
- TPG has conducted hundreds of impact analyses for the US, Texas, and Dallas-Fort Worth economies as well as all Texas metropolitan areas, regions, and counties.
- TPG also has extensive experience in analyzing the Dallas economy. Dr. Perryman developed and maintains the Dallas Econometric Model and has prepared forecasts of the area on an ongoing basis for about 30 years. Additionally, the firm has completed dozens of studies specifically related to the Dallas area. Representative examples include projects for Dallas Area Rapid Transit, Vought Aerospace, the Dallas Regional Chamber of Commerce, the City of Dallas, Fujitsu, the North Central Texas Council of Governments, and Texas Instruments.
- The firm has also completed a number of projects specifically related to the distribution and sale of alcoholic beverages. These studies include a comprehensive analysis of the three-tiered



beverage system in the state, as well as several projects related to distribution issues and the overall consequences of expanding sales. In particular, TPG has estimated economic and fiscal effects of allowing or expanding alcoholic beverages sales in studies involving Irving, Lubbock County, Smith County, and Weatherford.



Alcoholic Beverage Sales in the City of Dallas

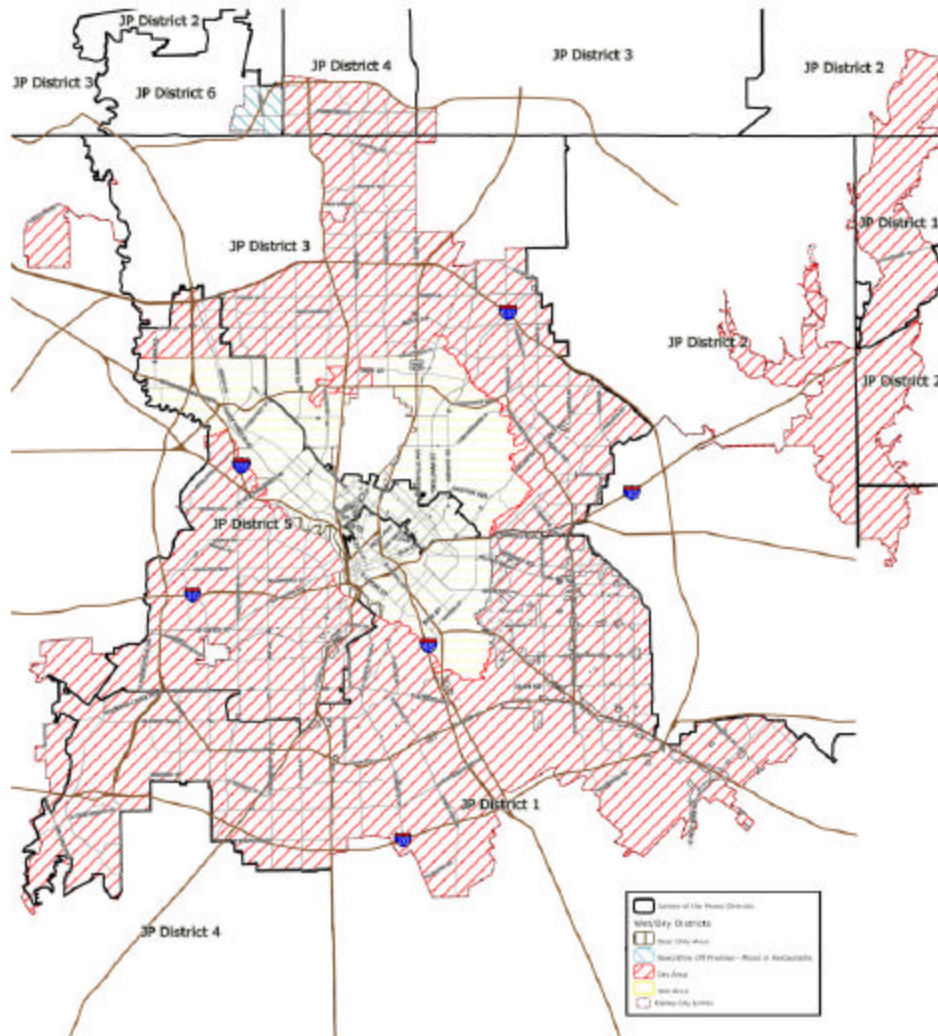


Alcoholic Beverage Sales in the City of Dallas

- As noted, Texas law allows local determination of the types of alcoholic beverages that can be sold as well as how they can be sold. Local elections at county, city or individual justice of the peace precincts can be held to decide these conditions.
- Within the City of Dallas, about one-third of the area is wet for all alcohol for both on- and off-premise sales. Other wet areas vary, with some allowing the sale of beer only, others beer and wine for off-premise consumption and mixed beverages in restaurants.



Wet and Dry Areas Within the City of Dallas



Source: City of Dallas



POTENTIAL ECONOMIC GAINS FROM THE EXPANSION OF WET AREAS IN THE CITY OF DALLAS

- The expansion of wet areas in the City of Dallas would encourage locations of new businesses and relocations of existing businesses to zones that are not currently under consideration because of the dry area conditions. New businesses would, in turn, generate economic activity, provide employment, and increase tax revenues in these areas.
- A recent study by the City of Dallas Office of Economic Development offered some preliminary estimates of the mixed beverage and retail gross sales and city revenue associated with expanded purchase opportunities within the city. This analysis is quite useful and the resulting data proved beneficial to the present study. The current investigation is more comprehensive in that it accounts for factors such as (1) cannibalization of existing sales, (2) the induced spending on other items resulting from both greater efficiency for consumers and the additional locations of retail outlets, and (3) the multiplier effects of the enhanced direct activity.¹

¹ City of Dallas. Office of Economic Development. Revenue Implications of a Wet Dallas: Office of Economic Development Research Note. (2010, February 9).



Economic Impact Results



Economic Impact Results

- The Perryman Group quantified the magnitude of the potential gains in business activity if the City of Dallas expands allowable sales of alcoholic beverages.

METHODOLOGY

- The methods used in this study include dynamic input-output assessment, 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.
- Impacts are expressed in terms of key measures of business activity (described more fully in the methodological appendices). In essence, total expenditures (or total spending) is a measure of every dollar that changes hands in the local area as a result of the stimulus. Gross product (or output) is the amount of new production of goods and services that will come about locally as a result of the activity. 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 in either person-years of employment (for a temporary effect such as construction) or permanent jobs (for an ongoing impact).

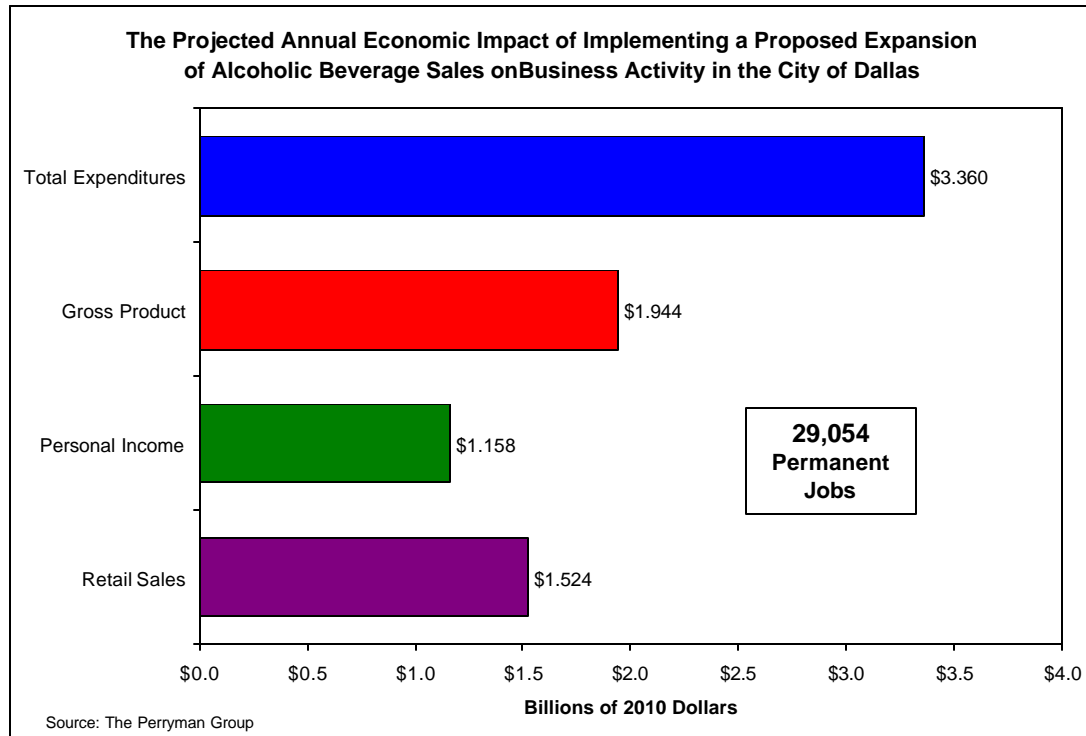


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- The first phase of the analysis involves estimating the potential gains in sales of alcoholic beverages and associated business development. A complex modeling process and a variety of information sources were utilized in this endeavor including the Texas Comptroller of Public Accounts, the Texas Alcoholic Beverage Commission, the Dallas Office of Economic Development, and various industry groups. The process for determining direct inputs is described more fully in the Appendices, which also contain a detailed explanation of the methods and terms used in this study (including the pertinent input-output system).

ECONOMIC IMPACT FOR THE CITY OF DALLAS

- The Perryman Group quantified the likely economic impact on business activity in the City of Dallas as well as associated tax receipts stemming from the proposed expansion of the city's wet areas currently under consideration.
- **TPG estimated that expanding the wet areas in the City of Dallas will increase annual spending by nearly \$3.4 billion, annual output by \$1.9 billion, and will create about 29,054 new jobs in the area.**





- **The fiscal impacts for the city would be roughly \$33.4 million in additional tax revenue each year.**

OTHER CONSIDERATIONS

- The social costs associated with the consumption of alcohol is the primary reason some areas preclude alcoholic beverage sales. TPG has reviewed numerous studies of this issue and has found the following conclusions to be common.
 - The reduction of alcohol sales in dry areas has little or no effect on the alcohol consumption in those areas. Residents of dry areas can easily drive to a nearby wet neighborhood to buy alcohol. Such a phenomenon is especially apparent in an area like Dallas due to the proximity to numerous “wet” areas.
 - In partly wet counties or cities, residents of dry cities can drive to a neighboring wet community or portion of the city to buy



alcohol. Therefore, while some view restrictions of alcoholic beverage sales as protection from the legitimate social problems that can occur from abuse, others view it as little more than an inconvenience for the residents in dry areas.

- The fact that residents of dry areas drive to neighboring locations to spend their money on alcoholic beverages implies that being dry results in the loss of sales and business activity for an area.
- Although are important issues associated with alcohol abuse such as crime, alcoholism, and drunk driving, the latest statistics from the National Highway Traffic Safety Administration of the US Department of Transportation indicate that the number of fatalities associated with alcohol impaired driving has decreased in Texas and in Dallas County, even when alcohol has become more available all throughout the state.²
- It should be noted that one study found when county characteristics are appropriately accounted for, local access to alcohol results in a 4% reduction in alcohol-related accidents³, whereas another observed that the proportion of the population involved in such crashes was notably higher in dry areas.⁴

² US Department of Transportation. National Highway Traffic Safety Administration. Traffic Safety Facts: Texas 2004-2008. (n.d.).

³ Baughman, Reagan, et al., "Slippery When Wet: The Effects of Local Alcohol Access Laws on Highway Safety," *Journal of Health Economics* 20 (2001):1089-1096.

⁴ Gary, Sarah Lynn Schulte, et al., "Consideration of Driver Home County Prohibition and Alcohol-Related Vehicle Crashes," *Accident Analysis and Prevention* 35 (2003):641-648.



Conclusion



Conclusion

- The proposed expansion of wet areas in the City of Dallas will generate significant economic gains in business activities and local tax receipts of the area.
- **The Perryman Group estimates that economic benefits include increases in total spending of nearly \$3.4 billion, with gains in annual output (gross product) of an estimated \$1.9 billion.**
- **The City of Dallas would also see an important increase in employment and local tax revenues, with 29,054 new jobs created, and a total \$33.4 million expansion in annual tax revenue.**
- Expanding sales of alcoholic beverages would clearly bring a notable stimulus to the economy of the City of Dallas.



APPENDICES



APPENDIX A: US Multi-Regional Impact Assessment System Methodology



US Multi-Regional Impact Assessment System

- The basic modeling technique employed in this study is known as dynamic 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. The second step is the simulation of the input-output system to measure overall economic effects.
- In defining the direct effects, data reflecting "before and after" patterns across several communities of varying size were available to calculate the incremental retail sales occurring as a result of implementation. The resulting gains were adjusted to control for other factors (such as overall economic growth over the relevant period) using information derived from the Texas Econometric Model.
- On average, a sales stimulus attributable to alcoholic beverage sales of about 6.3% was observed. The value is consistent with academic studies, which reveal a gain from greater accessibility of 6.0%-7.4%. Another empirical approach involved classifying each county in Texas according to wet/dry status and taxable retail sales (adjusted for size and economic characteristics). This exercise also revealed an impact of about 6.0%. This process also allowed the calculation of the contribution of varying components of beverage sales as well. In the present instance, a downward adjustment was implemented to account for the various portions of Dallas that already permit more expansive beverage sales.
- Once the direct input values were determined (as described within the report), 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 structure of the City of Dallas/Dallas County 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, healthcare 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 (2009) 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 2007 and \$1 million in 2008, it is appropriate to say that \$2 million was achieved in the 2007-2008 period. If the same area has 100 people working in 2007 and 100 in 2008, 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 Projected Annual Economic Impact of Implementing a Proposed Expansion
of Alcoholic Beverage Sales on Business Activity in the City of Dallas
Detailed Industrial Category**

Category	Total Expenditures (2010 Dollars)	Gross Product (2010 Dollars)	Personal Income (2010 Dollars)	Employment (Permanent Jobs)
Agricultural Products & Services	\$21,014,881	\$5,143,262	\$3,502,847	59
Forestry & Fishery Products	\$236,088	\$261,335	\$96,924	1
Coal Mining	\$3,897,852	\$1,130,819	\$1,191,621	8
Crude Petroleum & Natural Gas	\$29,790,087	\$6,514,318	\$3,004,394	16
Miscellaneous Mining	\$347,058	\$133,180	\$78,286	1
New Construction	\$0	\$0	\$0	0
Maintenance & Repair Construction	\$51,208,688	\$27,155,060	\$22,377,461	331
Food Products & Tobacco	\$116,307,623	\$29,859,348	\$15,253,582	267
Textile Mill Products	\$1,124,696	\$264,375	\$223,683	5
Apparel	\$23,679,312	\$13,114,493	\$6,645,312	190
Paper & Allied Products	\$25,212,593	\$11,141,282	\$5,036,892	80
Printing & Publishing	\$40,468,890	\$20,660,938	\$13,485,860	240
Chemicals & Petroleum Refining	\$37,890,551	\$5,677,267	\$2,665,806	21
Rubber & Leather Products	\$9,078,215	\$3,890,804	\$2,274,547	47
Lumber Products & Furniture	\$5,064,596	\$1,804,351	\$1,286,402	28
Stone, Clay, & Glass Products	\$5,816,060	\$3,330,487	\$1,741,858	30
Primary Metal	\$2,249,211	\$625,773	\$465,796	7
Fabricated Metal Products	\$13,173,951	\$4,565,485	\$2,947,481	53
Machinery, Except Electrical	\$3,709,041	\$1,520,441	\$1,086,208	12
Electric & Electronic Equipment	\$9,985,065	\$5,200,370	\$3,108,962	27
Motor Vehicles & Equipment	\$3,962,856	\$798,071	\$518,478	8
Transp. Equip., Exc. Motor Vehicles	\$3,649,717	\$1,571,297	\$1,026,788	13
Instruments & Related Products	\$2,703,307	\$1,103,538	\$838,787	11
Miscellaneous Manufacturing	\$6,604,072	\$2,658,044	\$1,833,284	30
Transportation	\$85,207,296	\$58,573,459	\$38,738,394	561
Communication	\$83,619,965	\$51,349,130	\$21,922,594	203
Electric, Gas, Water, Sanitary Services	\$113,274,129	\$26,045,832	\$11,365,707	50
Wholesale Trade	\$125,934,737	\$85,223,512	\$49,140,636	575
Retail Trade	\$1,053,393,680	\$872,898,034	\$521,965,115	14,332
Finance	\$52,554,318	\$27,410,893	\$15,961,443	149
Insurance	\$66,377,887	\$39,720,159	\$23,746,278	299
Real Estate	\$403,134,662	\$72,411,941	\$11,667,134	109
Hotels, Lodging Places, Amusements	\$117,588,510	\$63,055,564	\$41,366,631	1,056
Personal Services	\$61,899,442	\$38,098,013	\$29,640,869	523
Business Services	\$138,299,934	\$87,306,182	\$71,219,475	908
Eating & Drinking Places	\$470,222,391	\$275,408,768	\$146,532,165	6,939
Health Services	\$89,007,041	\$62,429,147	\$52,784,424	913
Miscellaneous Services	\$78,547,159	\$32,347,871	\$28,042,909	702
Households	\$3,541,003	\$3,541,003	\$3,466,076	251
Total	\$3,359,776,564	\$1,943,943,846	\$1,158,251,109	29,054

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

