

The Impact of The “New” University of Toledo On Ohio’s Economy



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The University of Toledo contracted with the Bowling Green State University Center for Regional Development to conduct this study and prepare this report.

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RESEARCH STATEMENT

The economic impacts contained in this report are based on the audited financial statements of The University of Toledo and the Medical University of Ohio. The financial information is taken as datum and no attempt was made to verify or audit financial systems and procedures. This report does not include the economic value of intangible items such as the value of an undergraduate education or the potential valuation of technology transfers. Every attempt was made to accurately measure and spatially place the relevant, “real” economic impacts.

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EXECUTIVE SUMMARY

Institutions of higher education have a significant role in ensuring Ohio's future economic success. Higher education conducts the core research that becomes the origin of commercial and economic development. Universities provide the classical education that shapes the intellect and character of future economic leaders. Universities also provide the practical education and training necessary to sharpen the skill sets of Ohio's workforce. The economic significance of institutions of higher education will become more important as Ohio transforms itself into the "knowledge-based" system that will define the economy of the 21st century.

Universities have a very tangible and significant impact on Ohio's economy. Beyond the role of contributing to the local, regional and state knowledge base, universities are dependable economic engines that are anchored to their communities. Universities are also large employers and their spending supports a wide variety of local businesses. In addition, universities are critical contributors to their region's social and cultural well being.

The purpose of this study is to identify and measure the economic impact that The "New" University of Toledo has on Ohio's economy. The "New" UT which was formed through the merger of The University of Toledo with the Medical University of Ohio, came into effect on July 1, 2006. This report uses data from the pre-merger institutions to measure their combined impact as The "New" University of Toledo, hereafter referred to as The University of Toledo (UT).

Audited financial statements are the foundation of this report. As a consequence, this study captures all financial activity conducted by The University of Toledo and reported through its audited and compliant systems. This includes university expenditure items, such as purchases of tangible goods and related services, payroll for all staff, capital improvements, physical plant, and inventory purchases. Examples of university revenues include grants and state appropriations, tuition income, private gifts, and sales by university auxiliary enterprises.

This study also includes estimates of the economic impact of UT's student, employee, and visitor spending. No attempt was made to estimate the value of non-tangible expenditure streams.

This study does not attempt to measure the added value of student earning capacity; the economic impact of faculty earnings from private consulting, patent and book royalties; or the economic impact of faculty and staff expertise used by businesses and public sector organizations.

Every attempt was made to precisely identify the true economic impact¹. Once the spending patterns were determined, the data were coupled with an economic Input/Output model to determine the appropriate spending multipliers for State of Ohio.

Highlights

- UT generates more than 1.1 billion dollars annually for the Ohio economy.
- UT economic activity creates 12,761 jobs for Ohioans.
- UT generates \$9.87 in local economic activity for each dollar it receives in state appropriations.
- UT generates more tax revenues (federal, state, local) than it receives in state appropriations. (\$125 million in tax revenues from \$111.7 million in state appropriations.)
- UT capital improvements and operations spending generate 530 million dollars annually for Ohio's economy.
- UT employee spending generates 343 million dollars annually for Ohio's economy.
- UT student spending generates 204 million dollars annually for Ohio's economy.
- UT visitors generate 25 million dollars in economic activity annually. (The majority is retained by Lucas County businesses.) This does not include hospital visitors.
- UT generates \$125.4 million dollars in total tax revenues (federal, state, local; \$55.8 million dollars in state and local tax revenues annually).

¹ Generally CRD plots accounts payable files to determine the geographic distribution of university spending. Unfortunately the appropriate data for this type of analysis was not available. These data are not critical to measuring the overall impact of the institution.

Composition of UT's Economic Impact

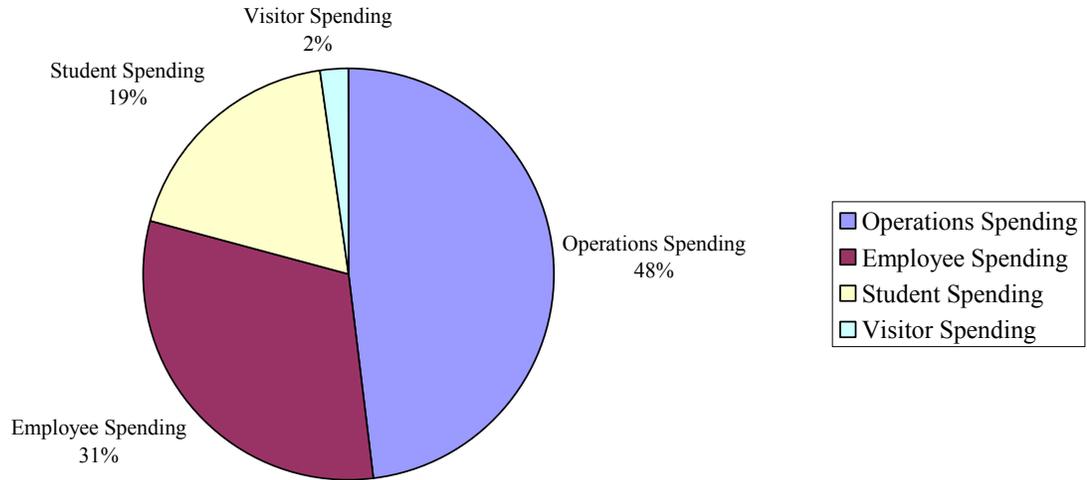


Table 1				
Dollar Value of the Economic Impact of The University of Toledo on Ohio's Economy				
	Direct	Indirect	Induced	Total
University Spending	283,529,008	101,394,733	145,078,034	530,001,775
Employee Spending	243,029,453	47,880,339	52,159,668	343,069,460
Student Spending	138,705,265	31,690,874	34,243,989	204,640,129
Visitor Spending	15,125,208	4,308,507	5,659,889	25,093,605
Total:	\$680,388,934	\$185,274,453	\$237,141,580	\$1,102,804,969

Table 2				
Ohio Employment Generated From the Economic Impact of The University of Toledo				
	Direct	Indirect	Induced	Total
University Spending	5,207	945	1,578	7,730
Employee Spending	1,755	423	568	2,745
Student Spending	1,176	299	401	1,876
Visitor Spending	311	37	62	410
Total:	\$8,449	\$1,704	\$2,609	\$12,761

Notes:

- **Direct** impact measures the actual expenditure conducted by each constitute group. Direct university spending includes capital spending, operation expenses. The amount of direct university spending is taken from the audited financial statements.
- **Indirect** impact measures the volume of industry-to-industry purchases that result from UT activity.
- **Induced** impact reflects the change in household spending that result from direct and indirect activity.
- **Total** impact is the summation of direct, indirect, and induced.

INTRODUCTION

The purpose of this study is to identify and measure the economic impact that The “New” University of Toledo has on Ohio’s economy. The “New” UT which was formed through the merger of The University of Toledo with the Medical University of Ohio, came into effect on July 1, 2006. This report uses data from the pre-merger institutions to measure their combined impact as The “New” University of Toledo, hereafter referred to as The University of Toledo (UT).

The expenditures of UT affect the economy in three ways. The direct impact includes the purchases of resources (labor, goods, and services) that occur from normal university operations. Such purchases would include local utilities, supplies, and general salary and service expenses. The indirect impact measures the volume of industry-to-industry purchases. For example, if UT purchases goods or services from other Ohio firms, the value of these items is included. Finally, the induced impact reflects the change in household demand as employees of UT and its suppliers earn dollars for consumer spending. This analysis disaggregates the ultimate economic impact into these three categories in order to investigate the process by which dollars and jobs are generated. The direct impacts are obtained from University financial records, whereas the indirect and induced impacts are estimated with an input-output model.

This study’s goal is to measure the direct, indirect and induced economic impacts as accurately as possible. All the revenue and expenditure transactions were reconciled and any non-cash (e.g. depreciation, accruals, etc.) transactions were eliminated. Therefore, any “real” financial activity conducted by the University and reported through its GAAP audited system was captured. This includes expenditure items such as purchases of tangible goods and related services, payroll for all staff, and purchases for physical plant and inventory. The revenue amounts include interest income, grants and appropriations, private gifts, and sales of auxiliary goods. Further, this study includes estimates of employee, student, and visitor spending.

It should be made clear that this report is purely an economic impact study. Its sole purpose is to determine the impact of the “new” UT on Ohio’s economy. Although this study depends on

financial records, it is in no way intended to represent any audit of financial procedures.

METHODOLOGY

This section outlines the general methodology used to calculate the economic impact. A brief discussion of the models employed is followed by a description of the pertinent data used in the economic calculations. The primary data are directly from The University of Toledo and The Medical University of Ohio's 2005 audited financial statements and represents the most accurate data available. The secondary data, which includes industry employment levels and local demographic characteristics, are taken from state and national data sources.

General Economic Forecasting Model Specification

This study employed an Input\Output model to make the primary economic forecasts. Input\Output methodology allows the examination of forward and backward linkages that are present in any regional economy. The model measures the total annual economic activity that results from inter- and intra-industry transactions. The model breaks the economy into approximately 500 separate sectors with each sector representing an individual industry. It then uses a sectoring scheme developed by the IMPLAN Group and is closely related to the Bureau of Economic Analysis (BEA) REIS model. The model is a approximate 500X500 (row x column) matrix that shows all the economic activity between the individual sectors. The entries in the matrix are based on the dollar amount that each industry sells to (and purchases from) other industries in the Ohio economy. It measures the amount of final consumption by the residents of the region as well as how much each industry exports from the area. The model uses data collected at the county level, which are obtained from the IMPLAN Group and the BEA. County data are in turn aggregated or "rolled-up" to form service areas such as local areas, states or larger geographic regions such as the Midwest.

Input\Output models estimate economic impacts by taking advantage of the relatively stable patterns in the flow of goods and services within the economy. Predictions can be made of an

industry's total economic impact by examining the purchasing patterns of the individual sectors. The BEA collects extensive data on these regional trade flows and reports their findings annually.

Spatial patterns are then defined through a Geographical Information System (GIS) interface. This GIS interface affords the ability to spatially locate and describe the economic phenomena under consideration. It further allows the forecasting model to accurately describe (+-30 ft from a centroid location) the physical location of any economic activity reported. Economic activity, once accurately defined, can be tracked through to its ultimate destination. Any degradation of the economic impact is assumed to be a function of distance decay or information/transportation infrastructure inadequacies.

Primary Data

All the primary data come directly from audited financial statements and provide a solid foundation for the analysis. These data include all accounts payable transactions, salaries and fringe benefits, number of employees, construction and capital improvements spending, and state appropriations.

Secondary Data Specifications

Once the primary (direct) impact is identified, it is necessary to estimate the ultimate impact on the economy. This study's forecasting model utilizes variables from a variety of national data sets. To reduce potential confusion, a specific definition of the major variables may be of use.

Industry Output

Industry output represents the value of the industry's total production. Industry output can be thought of as the value of industry sales plus or minus inventory changes. It should be emphasized that industry output is not a measure of an industry's income and, therefore, cannot be directly compared to the Gross State Product (GSP) numbers reported by the BEA. The value of industry output is typically higher than GSP. It is a more comprehensive measure and, therefore, is a better measure of true economic impacts. The IMPLAN model estimates the

industry output data, which are derived from the Bureau of Census Economic Census, the Annual Survey of Manufacturers, and the Bureau of Labor Statistics growth model.

Employment

Employment is the total number of full-time wage and salary employees, plus the number of self-employed workers within a particular industry. Part-time workers' hours are aggregated into full-time equivalents (2,080 hours), and reported with the full-time workers. In our process, each year's activity is computed separately so that the employment effects are computed each year.

No single source of employment data is adequate for accurately estimating employment impacts. Due to nondisclosure rules, the employment figure reported by government agencies often underestimates true employment in a given county. In accordance with U.S. Code Title 13, Section 9, no datum is published that would disclose the operations of an individual employer or put an individual employer at an unfair disadvantage. In this study, as we narrow our focus to the county level, the number of firms representing an industry inevitably decreases. It is not uncommon for a single business establishment to be the sole operator in that industry in a particular county. If this is the case, the employment numbers are not disclosed and the employment in that region is understated. Fortunately, it is possible to reconstruct a region's employment by combining data from a variety of sources. Non-disclosure rules require that the individual reporting agency not reveal confidential information. However, other government agencies may report the missing data in another form. For example, the U.S. Department of Labor collects labor data as part of the Unemployment Insurance ES-202 program. These data are for "covered employees" of the Unemployment Insurance Program. Workers not "covered," such as self-employed workers, would not be included in the data. However, "not covered" workers would be included in the employment figures captured by the Department of Census County Business Patterns. By carefully combining the employment figures reported in the ES-202 data set, the County Business Patterns, the REIS data and the Internal Revenue Service Quarterly Payroll File (FICA), a fairly comprehensive employment figure can be reconstructed. The raw data are then "sectored" into the appropriate SICs and, in turn, combined into the necessary industry vectors and IMPLAN matrices.

Employee Compensation

Employee compensation includes all salaries and wages paid to the industry's employees. The figure includes the proprietors' income of self-employed persons in the industry. The figures reported are gross amounts and taken from the IMPLAN data set.

Consumption

Employee consumption measures consumption spending of employees directly employed by the relevant industry (in this case, The "New" University of Toledo). Employee spending is estimated using the BEA Benchmark I/O Study and the BLS Consumer Expenditure Survey. This provides estimates of employee spending based on regional preferences and household income levels. In this case, it measures the typical "basket" of goods purchased by an Ohio family.

Understanding Multipliers

UT operations impact the economy in three ways. The direct impact includes the purchases of resources (labor, goods, and services) as the University completes its academic mission. The indirect impact occurs through industry-to-industry purchases the university makes with its local suppliers. Finally, the induced impact reflects the change in household demand as employees of UT suppliers spend their income. Therefore, the total impact to the economy is the summation of the direct, indirect and induced components. The indirect and the induced portions are commonly known as the multiplier. It shows how the initial (direct) expenditures get multiplied through the economy. Calculating the multipliers based on the supplier relationships and employee consumptions patterns are much more accurate than simple multiplier tables.

FINDINGS

This section provides the major findings of the economic analysis of The University of Toledo's impact on Ohio's economy. It shows the dollar and employment impacts for construction, operations, employee spending, student spending, and visitor spending components. It also includes a section on the fiscal impacts of the University.

Capital Improvements and Operating Expenditures

Capital improvements and operation spending was calculated using the 2005 audited financial statements and other data provided by The University. To avoid double counting, payroll amounts were deleted and will be the source of employee spending described later in this report. Non-cash transactions such as accruals, and depreciation were eliminated, as they have no tangible impact. After making the necessary adjustments, UT spent \$283,529,008 (direct) on capital improvements and operations in 2005. This initial spending in turn generated an additional \$101,394,733 (indirect) through The University's purchase of labor and raw materials from local sources. An additional \$145,078,034 (induced) of economic activity was created as the employees of the construction firms and local suppliers spent the wages earned as a result of University contracts. The total economic impact is the summation of the direct, indirect and induced effects. In this case, for 2005, UT's total impact from operations and capital improvements was \$530,001,775.

The University created 7,730 full-time jobs as a result of their operations and capital improvement activities. Of the 7,730 jobs created, 5,207 were the result of direct construction and University operations, 945 resulted from business-to-business (indirect) activities, and 1,578 resulted from employee spending (induced) activity of the construction and supplier industries.

Employee Spending Impact

To determine possible employee spending, it is first necessary to subtract the amount of taxes and other deductions from gross pay. Following the Bureau of Labor Statistics (BLS) guidelines for our region, it was assumed that on average, 85% of the gross pay was available for consumption. Therefore, it was assumed that the portion of University salaries available for

consumption was \$243,029,453. This was then allocated into spending categories (food, housing, healthcare, etc.) based on the BLS Consumer Expenditure Survey. This survey estimates the typical household spending patterns for our region for middle-income (35K-50K) consumers. It was assumed that the bulk of the employee consumption spending (food, clothing, and transportation) was completed within the Ohio economy. This is consistent with Bureau of Labor Statistics research on local consumption spending.

The direct spending of \$243,029,453 generated an additional indirect impact of \$47,880,339 and an induced impact of \$52,159,668. The total economic impact of employee spending on Ohio's economy was \$343,069,460. This economic impact supports 2,745 jobs in Ohio's economy.

Student Spending Impact

Student spending was estimated for three distinct categories. Undergraduate students who reside in on-campus facilities were the first group. This category has the lowest economic impact as the bulk of their spending occurs on campus from University-run facilities. (This spending is captured in the university operations section of this report.) The second category of student spending is undergraduate students residing in off-campus housing. This impact is significantly higher as the living expenses are often conducted with local rental agencies and businesses. The last category of student spending is graduate student spending. Spending from graduate students tends to be higher than undergraduate spending. This is traditionally due to higher stipends for graduate students and from additional family income of a locally employed spouse.

Table 3 shows the number of students per category and the annual budget amounts for each group. UT has few graduate students in on-campus facilities so all graduate students were considered to be off-campus.

Table 3		
Student Spending	Students	Annual Spending Budget
On-campus (undergraduate)	7,400	\$2,550
Off-campus undergraduate	9,817	\$8,050
Off campus graduate	3,614	\$11,300
Total:	20,831	

Similar to employee spending, the direct amount was then allocated into spending categories based on the BLS Consumer Expenditure Survey. This survey estimates the typical household spending patterns for our region for low income (<15K) consumers. It was assumed that the bulk of the student consumption spending (food, clothing, etc.) was completed within the Ohio economy. The budget amounts were derived from averages of several other economic impact studies (see Carroll 2004, Carroll et al. 2004, Carroll 1997, Notre Dame 2002, Appleseed 2003). It was determined that UT student-spending patterns were consistent with the other regions and no additional surveys were necessary.

The direct spending amount of \$138,705,265 generated \$31,690,874 in indirect activity and \$34,243,989 in induced. This equals \$204,640,129 economic impact on Ohio's economy from UT students. This spending generated 1,876 Ohio jobs.

Visitor Spending Impact

Estimating visitor spending in economic impact studies is always a difficult task. One common method is to use estimated percentages of the university impact. This method is not always accurate and certainly does not capture any unique student or university activities. Another method is to estimate the number of visitors that attend each of the university events. To accurately complete these tasks extensive surveys would need to be conducted at each of the university's events. This is prohibitively expensive and is outside the scope of this project. Furthermore, given the regional nature of UT and the fact that the state of Ohio is the service

area for this study the number of out-of-state visitors for each event is relatively small even if accurately surveyed.

The best method for estimating visitor spending for a regional university is to base it on the number of visitors per student and faculty member (Appleseed 2003, Notre Dame 2002, Carroll 2004, Carroll et al. 2004). The number of students and faculty provides a good foundation and measuring personal visits from out of town friends and family is a good proxy for all visitor categories. The faculty number includes professional visitors who UT sponsored events (e.g. meetings, conferences, symposia, cultural programs, etc.).

Table 4		
Type of Expenditure	Expenditure Per Visitor	Percent
Transportation	\$10.00	8%
Lodging	\$35.00	28%
Entertainment	\$21.25	17%
Food/Beverage	\$30.00	24%
Shopping	\$28.75	23%
Total	\$125.00	100%

Using an average derived from the Boston (Appleseed 2003) and Notre Dame (Notre Dame 2002) studies, it is estimated that undergraduate students have 5.95 overnight visitors annually; graduate students have 3.12, and faculty have 4.32. Graduate student and faculty numbers are lower than the undergraduates as these groups often stay as guests in faculty and graduate student residences. Based on 2005 student enrollments and the numbers shown above, it is estimated that the direct visitor spending is \$15,125,208 (Table 5.)

Table 5	
Category	Spending
Undergraduate Students	\$ 12,806,941
Graduate Students	\$1,409,460
Faculty	\$908,807
Total	\$15,125,208

The \$15,125,208 of direct spending by visitors generated an additional \$4,308,507 in indirect impacts, \$5,659,889 in induced impacts for a total of \$25,093,605 in economic activity. This economic activity supports 410 Ohio jobs with the bulk of these in Lucas County.

Fiscal Impact

In 2005, UT and MUO received \$111.7 million in state appropriations. During that time period, UT/MUO economic activity generated \$125,467,550 in tax revenues. The total economic impact on Ohio's economy was \$1.1 billion. Therefore, every dollar received in state support generates more than \$9 in economic activity. This is not to say that UT has a multiplier of 9. This means that UT takes the state appropriation, couples it with tuition and grant revenues, and produces a \$1.1 billion impact. The actual multiplier generated from this study is a very conservative 1.62.

Table 6: Fiscal Impact		
Federal Government		
	Corporate Profits Tax	\$5,915,333
	Indirect Bus Tax: Custom Duty	795,482
	Indirect Bus Tax: Excise Taxes	2,694,246
	Indirect Bus Tax: Fed NonTaxes	843,453
	Personal Tax: Estate and Gift Tax	0
	Personal Tax: Income Tax	992,308
	Personal Tax: NonTaxes (Fines-Fees)	0
	Social Ins Tax- Employee Contribution	29,755,875
	Social Ins Tax- Employer Contribution	28,656,239
	Total	\$69,652,936
State/Local Government		
	Corporate Profits Tax	677,703
	Dividends	5,837,181
	Indirect Bus Tax: Motor Vehicle License	323,880
	Indirect Bus Tax: Other Taxes	1,669,116
	Indirect Bus Tax: Property Tax	13,744,481
	Indirect Bus Tax: S/L NonTaxes	980,457
	Indirect Bus Tax: Sales Tax	13,180,684
	Indirect Bus Tax: Severance Tax	6,635
	Personal Tax: Estate and Gift Tax	0
	Personal Tax: Income Tax	13,931,405
	Personal Tax: Motor Vehicle License	740,196
	Personal Tax: NonTaxes (Fines-Fees)	1,462,895
	Personal Tax: Other Tax (Fish/Hunt)	129,443
	Personal Tax: Property Taxes	318,222
	Social Ins Tax- Employee Contribution	756,416
	Social Ins Tax- Employer Contribution	2,055,900
	Total	55,814,614
Total Fiscal Impact		
		\$125,467,550

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APPENDIX: Ohio Industries Most Impacted by UT

Industry	Economic Impact (Dollars)	Employment
Colleges- universities- and junior colleges	229,062,758	5,124
Commercial and institutional buildings	53,952,193	668
Real estate	51,230,296	437
Hospitals	41,928,527	397
Owner-occupied dwellings mortgages	38,492,167	0
Food services and drinking places	34,283,430	950
Offices of physicians- dentists- and other health	31,863,535	352
Monetary authorities and depository credit intermediaries	19,456,392	92
Other educational services	17,104,307	385
Automotive repair and maintenance- except car wash	16,245,735	120
General merchandise stores	15,236,559	401
Motor vehicle and parts dealers	14,664,641	194
Telecommunications	13,291,554	64
Insurance carriers	11,773,486	69
Food and beverage stores	11,726,032	249
Other ambulatory health care services	11,192,781	80
Power generation and supply	10,101,072	31
Truck transportation	9,021,269	75
Other State and local government enterprises	8,973,632	61
Nursing and residential care facilities	8,829,076	221
Hotels and motels- including casino hotels	8,544,041	153
Legal services	8,271,160	99
Securities- commodity contracts- investments	7,037,021	100
Architectural and engineering services	6,651,041	81
Gasoline stations	6,267,143	122
Building material and garden supply stores	6,262,185	105
Miscellaneous store retailers	6,070,106	128
Non-store retailers	5,831,494	183
Management of companies and enterprises	5,649,956	50
Clothing and clothing accessories stores	5,573,749	120
Motor vehicle parts manufacturing	5,366,361	22
Nondepository credit intermediation and related activities	5,333,954	47
Spectator sports	5,157,497	114
Other amusement- gambling- and recreation industries	5,115,931	83
Automobile and light truck manufacturing	5,028,968	6
Petroleum refineries	4,726,179	2
Employment services	4,432,500	211
Wholesale trade	4,075,170	31
Health and personal care stores	4,031,764	88
Home health care services	3,795,178	92

Industry	Economic Impact (Dollars)	Employment
Maintenance and repair of nonresidential buildings	3,716,461	44
Pharmaceutical and medicine manufacturing	3,711,195	9
Plastics plumbing fixtures and all other plastics	3,641,475	20
Furniture and home furnishings stores	3,442,654	55
Natural gas distribution	3,395,597	6
Automotive equipment rental and leasing	3,352,142	25
Civic- social- professional and similar organization	3,314,593	125
Business support services	3,176,565	55
Meat processed from carcasses	3,167,081	13
Accounting and bookkeeping services	3,120,801	49
Management consulting services	3,102,096	38
Bread and bakery product- except frozen- manufacturing	3,091,015	25
Sporting goods- hobby- book and music stores	3,068,815	74
Oil and gas extraction	3,067,637	13
Funds- trusts- and other financial vehicles	2,993,398	13
Postal service	2,985,423	39
Commercial printing	2,920,758	25
Religious organizations	2,915,440	23
Services to buildings and dwellings	2,846,856	94
Electronics and appliance stores	2,735,018	45
Personal care services	2,682,645	70
Lessors of nonfinancial intangible assets	2,660,668	0
Social assistance- except child day care services	2,465,259	100
Other personal services	2,458,350	27
Insurance agencies- brokerages- and related	2,405,010	27
Office administrative services	2,373,707	16
Child day care services	2,345,015	69
Advertising and related services	2,290,801	30
Radio and television broadcasting	2,080,984	14
Couriers and messengers	2,080,413	28
Newspaper publishers	2,052,192	20
Waste management and remediation services	1,969,040	16
Toilet preparation manufacturing	1,922,470	5
Dry-cleaning and laundry services	1,898,969	42
Machinery and equipment rental and leasing	1,865,024	6
Other support services	1,834,269	14
Motion picture and video industries	1,784,601	20
Death care services	1,739,522	27
Fluid milk manufacturing	1,635,014	3
Air transportation	1,633,174	9
Computer systems design services	1,466,591	14
General and consumer goods rental except video tap	1,427,566	28
Animal- except poultry- slaughtering	1,426,081	3

Industry	Economic Impact (Dollars)	Employment
Rail transportation	1,403,361	6
Dry- condensed- and evaporated dairy products	1,396,222	2
Scenic and sightseeing transportation and support	1,384,150	16
Household goods repair and maintenance	1,341,049	11
Cattle ranching and farming	1,340,614	23
Elementary and secondary schools	1,330,867	44
Warehousing and storage	1,318,632	23
Commercial machinery repair and maintenance	1,282,424	14
Electronic equipment repair and maintenance	1,253,555	11
Water transportation	1,185,812	2
Soap and other detergent manufacturing	1,185,731	3
Investigation and security services	1,171,145	42
Glass and glass products- except glass containers	1,139,085	6
All other miscellaneous professional and technical	1,110,840	9
Other basic organic chemical manufacturing	1,086,052	2
Database- directory- and other publishers	1,057,194	5
Cheese manufacturing	1,045,945	2
Veterinary services	1,016,748	20
Cookie and cracker manufacturing	999,824	5
Specialized design services	994,117	9
Plastics packaging materials- film and sheet	940,662	3
Grant making and giving and social advocacy organization	934,837	34
Periodical publishers	932,747	6
Other snack food manufacturing	926,008	3
Surgical appliance and supplies manufacturing	872,265	5
Transit and ground passenger transportation	858,583	34
Other computer related services	839,056	11
Other maintenance and repair construction	816,441	11
Non-upholstered wood household furniture manufacture	799,059	8
Private households	779,748	106
Cable networks and program distribution	776,171	2
Maintenance and repair of farm and non-farm residents	752,579	6
Promoters of performing arts and sports and agents	752,008	20
Travel arrangement and reservation services	751,711	11
State and local government electric utilities	745,393	2
Fitness and recreational sports centers	735,143	38
Machine shops	724,982	6
Other accommodations	719,703	5
All other food manufacturing	698,295	3
Car washes	688,846	19
Environmental and other technical consulting services	682,239	6
Poultry processing	675,957	5
Foam product manufacturing	659,623	3

Industry	Economic Impact (Dollars)	Employment
Video tape and disc rental	649,073	19
Scientific research and development services	647,124	11
Poultry and egg production	631,040	3
Cut and sew apparel manufacturing	611,697	5
Performing arts companies	605,916	38
State and local government passenger transit	599,927	14
Other Federal Government enterprises	583,368	6
Wood windows and door manufacturing	548,013	3
Animal production- except cattle and poultry and eggs	544,055	11
Pipeline transportation	543,251	2
Mayonnaise- dressing- and sauce manufacturing	539,851	2
Soft drink and ice manufacturing	521,838	2
Ice cream and frozen dessert manufacturing	506,967	2
Greenhouse and nursery production	497,080	6
Photographic services	485,945	8
Paperboard container manufacturing	480,322	3
Book publishers	477,386	2
Vegetable and melon farming	458,445	5
Telephone apparatus manufacturing	458,318	2
Data processing services	453,052	5
Information services	453,028	3
Other miscellaneous chemical product manufacturing	445,382	2
Museums- historical sites- zoos- and parks	422,965	6
Plastics pipe- fittings- and profile shapes	412,070	3
Polish and other sanitation good manufacturing	407,003	2
Spice and extract manufacturing	405,010	2
Support activities for oil and gas operations	392,160	2
Wood kitchen cabinet and countertop manufacturing	375,085	5
Mixes and dough made from purchased flour	371,169	2
Custom computer programming services	366,900	6
Plastics bottle manufacturing	355,877	2
Petroleum lubricating oil and grease manufacturing	351,940	2
Asphalt shingle and coating materials manufacturing	349,756	2
Software publishers	346,240	2
Other millwork- including flooring	332,353	5
Independent artists- writers- and performers	330,895	5
Surgical and medical instrument manufacturing	322,085	2
All other crop farming	315,626	6
Mattress manufacturing	308,982	2
Other basic inorganic chemical manufacturing	300,542	0
Water- sewage and other systems	290,902	3
All other electronic component manufacturing	285,886	2
Sign manufacturing	275,176	3

Industry	Economic Impact (Dollars)	Employment
Sawmills	273,812	2
Breakfast cereal manufacturing	265,797	0
Adhesive manufacturing	262,688	2
Frozen cakes and other pastries manufacturing	253,562	2
Fruit and vegetable canning and drying	245,956	2
Veneer and plywood manufacturing	236,885	2
Breweries	235,366	0
Flavoring syrup and concentrate manufacturing	234,156	0
Upholstered household furniture manufacturing	231,863	3
Turned product and screw- nut- and bolt manufacturing	231,702	2
Dental laboratories	222,372	3
Frozen food manufacturing	213,141	2
Electro-medical apparatus manufacturing	211,849	2
Coated and laminated paper and packaging materials	211,041	2
Broadcast and wireless communications equipment	209,921	0
Engineered wood member and truss manufacturing	208,486	2
Sheet metal work manufacturing	204,932	2
Metal valve manufacturing	202,069	2
Manifold business forms printing	200,889	2
Coal mining	195,654	0
Sound recording industries	187,548	2
Custom compounding of purchased resins	186,941	0
Iron and steel mills	182,580	0
Metal household furniture manufacturing	171,095	2
Asphalt paving mixture and block manufacturing	169,050	0
Automatic environmental control manufacturing	162,887	2
Watch- clock- and other measuring and controlling	159,470	2
Petrochemical manufacturing	157,267	0
Elevator and moving stairway manufacturing	154,504	0
Storage battery manufacturing	154,122	2
Miscellaneous wood product manufacturing	153,845	2
Showcases- partitions- shelving- and lockers	151,736	2
Glass container manufacturing	151,564	0
Audio and video media reproduction	148,160	2
Other communication and energy wire manufacturing	143,832	0
Industrial gas manufacturing	142,725	2
Grain farming	138,555	3
Wood container and pallet manufacturing	134,396	2
Other commercial and service industry machinery ma	129,894	0
Spring and wire product manufacturing	128,110	2
Facilities support services	127,850	2
Hand and edge tool manufacturing	124,735	2
Heavy duty truck manufacturing	123,457	0

Industry	Economic Impact (Dollars)	Employment
Photographic film and chemical manufacturing	120,167	0
Logging	119,428	2
Cut stock- re-sawing lumber- and planing	118,633	0
Confectionery manufacturing from purchased chocolate	116,962	2
Lawn and garden equipment manufacturing	114,062	0
Non-chocolate confectionery manufacturing	113,140	0
Ophthalmic goods manufacturing	112,553	2
Printing ink manufacturing	111,992	0
Roasted nuts and peanut butter manufacturing	110,519	0
Other engine equipment manufacturing	103,136	0
Metal can- box- and other container manufacturing	102,581	0
Power-driven hand tool manufacturing	102,413	0
Plastics material and resin manufacturing	98,435	0
Coffee and tea manufacturing	97,753	0
Hardware manufacturing	96,742	0
Cutting tool and machine tool accessory manufacturing	92,723	0
Accessories and other apparel manufacturing	92,518	0
Synthetic dye and pigment manufacturing	91,471	0
Travel trailer and camper manufacturing	91,253	0
Motor vehicle body manufacturing	91,172	0
Other communications equipment manufacturing	90,083	0
Bowling centers	87,672	3
Other computer peripheral equipment manufacturing	86,711	0
Other leather product manufacturing	86,258	2
Electronic computer manufacturing	84,789	0
Fabricated structural metal manufacturing	84,067	0
Dog and cat food manufacturing	83,452	0
Resilient floor covering manufacturing	81,390	0
Ready-mix concrete manufacturing	81,343	0
Household laundry equipment manufacturing	80,280	0
Miscellaneous electrical equipment manufacturing	79,356	0
Footwear manufacturing	78,718	0
Wood preservation	74,647	0
Metal coating and non- precious engraving	73,151	0
Metal window and door manufacturing	73,007	0
Steel wire drawing	72,898	0
All other industrial machinery manufacturing	72,890	0
Agriculture and forestry support activities	71,682	3
Electroplating- anodizing- and coloring metal	71,332	2
Laminated plastics plate- sheet- and shapes	70,653	2
Books printing	68,730	0
Dental equipment and supplies manufacturing	68,514	0
Surface active agent manufacturing	65,943	0

Industry	Economic Impact (Dollars)	Employment
Motor and generator manufacturing	64,557	0
Relay and industrial control manufacturing	64,540	0
Fruit farming	61,178	2
Other rubber product manufacturing	60,646	0
Flour milling	57,875	0
Irradiation apparatus manufacturing	54,480	0
Primary battery manufacturing	53,510	0
Electron tube manufacturing	48,240	0
Distilleries	47,463	0
Audio and video equipment manufacturing	47,201	0
Welding and soldering equipment manufacturing	46,848	0
Analytical laboratory instrument manufacturing	46,491	0
Flexible packaging foil manufacturing	45,735	0
Sugar manufacturing	45,272	0
Industrial process variable instruments	45,178	0
Other animal food manufacturing	44,850	0
Switchgear and switchboard apparatus manufacturing	44,135	0
Totalizing fluid meters and counting devices	43,786	0
Fabricated pipe and pipe fitting manufacturing	43,215	0
Paint and coating manufacturing	41,248	0
Aircraft engine and engine parts manufacturing	40,518	0
Metal heat treating	40,130	0
Computer storage device manufacturing	39,436	0
Special tool- die- jig- and fixture manufacturing	38,739	0
Speed changers and mechanical power transmission equip	37,967	0
Software reproducing	36,805	0
Packaging machinery manufacturing	36,586	0
Ball and roller bearing manufacturing	35,769	0
Curtain and linen mills	33,712	0
Household vacuum cleaner manufacturing	33,449	0
Fats and oils refining and blending	33,424	0
Plastics and rubber industry machinery	31,478	0
Wineries	31,373	0
Prepress services	31,346	0
Reconstituted wood product manufacturing	31,118	0
Blind and shade manufacturing	31,000	0
Iron- steel pipe and tube from purchased steel	30,265	0
Fertilizer- mixing only- manufacturing	29,027	0
Photographic and photocopying equipment manufacturing	27,040	0
Nitrogenous fertilizer manufacturing	26,314	0
Paper and paperboard mills	26,074	0
Industrial truck- trailer- and stacker manufacturing	25,592	0
Buttons- pins- and all other miscellaneous manufacturing	25,498	0

Industry	Economic Impact (Dollars)	Employment
All other forging and stamping	25,376	0
Broom- brush- and mop manufacturing	25,193	0
Rolled steel shape manufacturing	24,908	0
Oilseed farming	24,883	2
Farm machinery and equipment manufacturing	24,703	0
Semiconductors and related device manufacturing	23,414	0
Non-woven fabric mills	23,310	0
Ornamental and architectural metal work manufactures	22,899	0
Magnetic and optical recording media manufacturing	22,506	0
Other aircraft parts and equipment	21,832	0
Mineral wool manufacturing	20,870	0
Printing machinery and equipment manufacturing	20,070	0
Other concrete product manufacturing	19,984	0
Aircraft manufacturing	19,468	0
Aluminum foundries	18,223	0
Blankbook and loose-leaf binder manufacturing	18,201	0
Other miscellaneous textile product mills	17,733	0
Rendering and meat byproduct processing	17,631	0
Hunting and trapping	16,911	0
Conveyor and conveying equipment manufacturing	16,606	0
Wet corn milling	16,506	0
Confectionery manufacturing from cacao beans	16,453	0
Textile and fabric finishing mills	16,342	0
Optical instrument and lens manufacturing	16,314	0
Nonferrous metal- except copper and aluminum- shaping	16,142	0
Dry pasta manufacturing	15,707	0
Boat building	15,272	0
Carbon and graphite product manufacturing	15,120	0
Jewelry and silverware manufacturing	14,388	0
Cutlery and flatware- except precious- manufacturing	14,203	0
Synthetic rubber manufacturing	14,184	0
Fabric coating mills	14,086	0
Electric power and specialty transformer manufacturing	13,959	0
Other nonmetallic mineral mining	13,920	0
Sawmill and woodworking machinery	13,787	0
Abrasive product manufacturing	12,941	0
Kitchen utensil- pot- and pan manufacturing	12,704	0
Electricity and signal testing instruments	12,673	0
Motor home manufacturing	12,629	0
Soybean processing	12,338	0
Household refrigerator and home freezer manufacturing	11,985	0
Construction machinery manufacturing	11,450	0
Nonferrous foundries- except aluminum	11,348	0

Industry	Economic Impact (Dollars)	Employment
Food product machinery manufacturing	11,310	0
Automatic vending- commercial laundry and dry-cleaning	10,980	0
Tortilla manufacturing	10,971	0
Office machinery manufacturing	10,805	0
Surface-coated paperboard manufacturing	10,764	0
Vitreous china plumbing fixture manufacturing	10,209	0
Textile bag and canvas mills	9,824	0
Rubber and plastics hose and belting manufacturing	9,730	0
Custom architectural woodwork and millwork	9,677	0
Trade-binding and related work	9,545	0
Laboratory apparatus and furniture manufacturing	9,437	0
Other major household appliance manufacturing	9,279	0
Stone mining and quarrying	9,109	0
Other apparel knitting mills	8,809	0
Rolling mill and other metalworking machinery	8,588	0
Aluminum sheet- plate- and foil manufacturing	8,557	0
Metal forming machine tool manufacturing	7,973	0
Metal cutting machine tool manufacturing	7,879	0
Motorcycle- bicycle- and parts manufacturing	7,735	0
Iron and steel forging	7,713	0
Prefabricated metal buildings and components	7,441	0
Industrial mold manufacturing	7,285	0
Miscellaneous fabricated metal product manufacturing	7,225	0
Pesticide and other agricultural chemical manufacturing	7,186	0
Household cooking appliance manufacturing	7,122	0
Institutional furniture manufacturing	6,959	0
Sand- gravel- clay- and refractory mining	6,870	0
Vitreous china and earthenware articles manufacturing	6,790	0
Turbine and turbine generator set units manufacturing	6,518	0
Wiring device manufacturing	6,398	0
Scales- balances- and miscellaneous general purpose	6,061	0
Electric house wares and household fan manufacturing	5,994	0
Saw blade and handsaw manufacturing	5,945	0
Prefabricated wood building manufacturing	5,800	0
Broad-woven fabric mills	5,171	0
Aluminum extruded product manufacturing	5,116	0
Metal tank- heavy gauge- manufacturing	5,024	0
Computer terminal manufacturing	4,963	0
Coated and uncoated paper bag manufacturing	4,856	0
Drilling oil and gas wells	4,742	0
Sanitary paper product manufacturing	4,615	0
All other petroleum and coal products manufacturing	4,551	0
Fluid power cylinder and actuator manufacturing	4,420	0

Industry	Economic Impact (Dollars)	Employment
Lighting fixture manufacturing	4,412	0
Copper rolling- drawing- and extruding	4,379	0
Air and gas compressor manufacturing	4,304	0
Plate work manufacturing	4,284	0
Office supplies- except paper- manufacturing	4,146	0
Fiber optic cable manufacturing	4,126	0
Leather and hide tanning and finishing	3,933	0
Custom roll forming	3,872	0
Overhead cranes- hoists- and monorail systems	3,771	0
Power boiler and heat exchanger manufacturing	3,506	0
Porcelain electrical supply manufacturing	3,503	0
Narrow fabric mills and embroidery	3,411	0
Explosives manufacturing	3,403	0
Envelope manufacturing	3,231	0
Semiconductor machinery manufacturing	3,217	0
Railroad rolling stock manufacturing	3,175	0
Truck trailer manufacturing	3,070	0
Other household and institutional furniture	2,913	0
Carpet and rug mills	2,830	0
Miscellaneous nonmetallic mineral products	2,822	0
Brick and structural clay tile manufacturing	2,818	0
Wood office furniture manufacturing	2,794	0
Creamery butter manufacturing	2,564	0
Gasket- packing- and sealing device manufacturing	2,547	0
Pump and pumping equipment manufacturing	2,449	0
Ferrous metal foundries	2,364	0
Ceramic wall and floor tile manufacturing	2,283	0
Die-cut paper office supplies manufacturing	2,215	0
Military armored vehicles and tank parts manufacturing	2,115	0
Doll- toy- and game manufacturing	2,010	0
Search- detection- and navigation instruments	1,965	0
Paper industry machinery manufacturing	1,898	0
Cut stone and stone product manufacturing	1,762	0
Fishing	1,716	0
Primary aluminum production	1,716	0
All other transportation equipment manufacturing	1,716	0
Office furniture- except wood- manufacturing	1,688	0
All other converted paper product manufacturing	1,685	0
Industrial process furnace and oven manufacturing	1,612	0
Fluid power pump and motor manufacturing	1,411	0
AC- refrigeration- and forced air heating	1,386	0
Sporting and athletic goods manufacturing	1,281	0
Nonferrous forging	1,264	0

Industry	Economic Impact (Dollars)	Employment
Seafood product preparation and packaging	1,261	0
Secondary processing of other nonferrous	1,180	0
Tire manufacturing	1,112	0
Mining machinery and equipment manufacturing	887	0
Primary nonferrous metal- except copper and aluminum	837	0
Enameled iron and metal sanitary ware manufacturing	815	0
Oil and gas field machinery and equipment	771	0
Ferroalloy and related product manufacturing	751	0
Concrete block and brick manufacturing	713	0
Industrial pattern manufacturing	706	0
Non-cellulosic organic fiber manufacturing	681	0
Industrial and commercial fan and blower manufacturing	657	0
Concrete pipe manufacturing	634	0
Secondary smelting and alloying of aluminum	623	0
Measuring and dispensing pump manufacturing	602	0
Gypsum product manufacturing	526	0
Pulp mills	516	0
Textile machinery manufacturing	433	0
Copper wire- except mechanical- drawing	390	0
Ship building and repairing	314	0
Fiber- yarn- and thread mills	313	0
Air purification equipment manufacturing	310	0
Other hosiery and sock mills	300	0
Secondary processing of copper	271	0
Tobacco farming	264	0
Cement manufacturing	246	0
Phosphates fertilizer manufacturing	203	0
Lime manufacturing	191	0
Non-clay refractory manufacturing	188	0
Gold- silver- and other metal ore mining	160	0
Sheer hosiery mills	152	0
Stationery and related product manufacturing	150	0
Support activities for other mining	149	0
Tree nut farming	147	0
Forest nurseries- forest products- and timber tracts	139	0
Electric lamp bulb and part manufacturing	138	0
Musical instrument manufacturing	122	0
Heating equipment- except warm air furnaces	94	0
Burial casket manufacturing	83	0
Sugarcane and sugar beet farming	58	0
Ground or treated minerals and earths manufacturing	30	0
Other aluminum rolling and drawing	25	0
Ammunition manufacturing	16	0