



Center for Regional Development

BGSU

RESEARCH MEMORANDUM

FROM: Michael C. Carroll, Ph.D., Director
SUBJECT: Ohio's Arts: A Foundation of Innovation, Creativity and Economic Strength
DATE: February 20, 2009

Research Statement

The purpose of this memorandum is to identify and measure the annual economic impact generated by the "creative industries" in Ohio. The baseline data used in this report is from Federal and State sources such as the Bureau of Labor Statistics, Economic Development Administration, Internal Revenue Service, and the Ohio Department of Development. All of the economic forecasts were based on reported data. No forecasts were begun with an assumed or estimated parameter. The agency information was taken as datum and no attempt was made to verify or audit the financial systems and procedures of the data reporting agencies. Every attempt was made to accurately measure and spatially place the relevant, "real" economic impacts. It should be noted that this memorandum contains only openly reported activities and no attempt was made to estimate "off the books" activity.

A handwritten signature in blue ink, appearing to read "Michael C. Carroll".

Michael C. Carroll, Ph.D.
Director

Ohio's Arts: A Foundation of Innovation, Creativity and Economic Strength

EXECUTIVE SUMMARY

The purpose of this study is to demonstrate the economic impact the “creative industries” has on the State of Ohio.

Results in Brief:

- Creative industries contribute more than \$25 billion to Ohio's economy annually
- Creative industries support 231,200 jobs in Ohio's economy annually
- Creative industries generate \$1.06 billion in state and local tax revenues annually
- Creative industries generate \$1.78 billion in federal tax revenues annually
- Creative industries are spread throughout Ohio and are not only present in urban areas
- Creative industries display the same infrastructure as other knowledge-based industries.

Industries Included:

Much has been written as to which industries should be labeled “Creative.” To simplify the analysis and give the study a sense of continuity, the industries selected are those identified by the *Americans for the Arts*. The industries generally fall into six main classifications:

- Museums and Collections
- Performing Arts
- Visual Arts/Photography
- Film, Radio, and Television

- Design and Publishing
- Schools and Services

Why is this important?

The creative industries are part of what has become known as the knowledge economy. Knowledge industries rely on investments in human capital rather than physical plant and equipment. Creativity and innovation spur economic growth as advances in and access to new technology become more important than low cost production sites. Manufacturing can be outsourced but access to new technology is often place dependent.

Ohio's Arts: A Foundation of Innovation, Creativity and Economic Strength

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 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

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 Economic Analysis 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.

INDUSTRIES SELECTED:

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identified by the Americans for The Arts. The industries generally fall into six main classifications:

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- Performing Arts
- Visual Arts/Photography
- Film, Radio, and Television
- Design and Publishing
- Schools and Services

Given limitations in the available data, Architectural services and retail were not included in this study. There was no appropriate way of separating the subcategories and hence were eliminated from the study.

Table 1
Americans for the Arts
Definition of the *Creative Industries*:
The Standard Industrial Classification (SIC) Codes
of the Nation's Arts-Related Businesses

Museums and Collections

Museums
Zoos and Botanical
Historical Society
Planetarium

Performing Arts

Music Groups
Orchestras
Composing and Arranging
Recording/Playback Equipment
Recorded Music Sales
Studios
Concert Management
Instruments (manufacturing/distribution)
Professional Companies
Amateur Companies
Dance Companies

Opera Companies
Costume/Scenery Rental
Theatrical Productions
Casting and Booking Agents
Ticket Agencies
Performing Arts Centers
Dance Halls and Studios
Theatrical Equipment
Entertainers
Actors

Visual Arts/Photography

Stone, Clay, and Glass
Jewelry
Stained Glass
Textiles
Home Furnishing Crafts
Artist Studios
Art Galleries
Studios
Commercial Photography
Photo Finishing Labs
Photography Equipment
Retail Stores
Services and Supplies

Film, Radio, and Television

Production
Distribution
Services
Equipment
Theaters
Video Tape Rentals
Television Stations
Radio Stations
Producers
Disk Jockeys

Design and Publishing

Architects
Architecture Supplies
Commercial and Industrial
Interior
House
Art Periodicals
Arts Publishing

Books
Book Clubs
Advertising Agencies
Display Products

Schools and Services

Arts Councils
Art Schools
Arts and Crafts Instruction
Dance Schools and Instruction
Music and Drama Schools
Agents and Brokers
Patents and licensing

The estimates were made using the IMPLAN model and the specific IMPLAN industrial classifications are given below.

IMPLAN Sectors

- Radio and television broadcasting
- Advertising and related services
- Specialized design services
- Ornamental and architectural metal work manufacturing
- Motion picture and video industries
- Museums
- Photographic services
- Video tape and disc rental
- Sign manufacturing
- Promoters of performing arts
- Independent artists- writers- and performers
- Performing arts companies
- Sound recording industries
- Book publishers and newspapers
- Custom architectural woodwork and millwork
- Musical instrument manufacturing
- Cable networks and program distribution
- Audio and video media reproduction

RESULTS

Selected highlights:

- Creative industries contribute more than \$25 billion to Ohio's economy annually
- Creative industries support 231,200 jobs in Ohio's economy annually

- Creative industries generate \$1.06 billion in state and local tax revenues annually
- Creative industries generate \$1.78 billion in federal tax revenues annually
- Creative industries are spread throughout Ohio and are not only present in urban areas
- Creative industries display the same infrastructure as other knowledge-based industries.

The economic impact of the creative industries in Ohio is quite significant. Generating more than \$25 billion dollars in economic activity and supporting 231,199 jobs annually. Further, the fiscal impacts are also significant. The creative industries generate nearly \$1.06 million dollars for state and local government and in excess of \$1.78 billion annually for the Federal government. Detailed impacts are included in the table that follows show the total impact on all the industries in Ohio. These may be the result of direct art related spending, or they may result from supply chain purchases or employee spending.

Economic Impact by Industry

ID#	Industry	Employment	Dollars
1	Oilseed farming	4.4	272,327
2	Grain farming	17.7	700,767
3	Vegetable and melon farming	25.8	2,704,243
4	Tree nut farming	0	285
5	Fruit farming	5.9	340,163
6	Greenhouse and nursery production	72.8	5,169,090
7	Tobacco farming	0	566
8	Cotton farming	0	0
9	Sugarcane and sugar beet farming	0.2	3,677
10	All other crop farming	15.1	1,799,443
11	Cattle ranching and farming	123.3	10,029,091
12	Poultry and egg production	13.5	4,271,527
13	Animal production- except cattle and poultry	196	5,538,462
14	Logging	15.1	3,631,581
15	Forest nurseries- forest products- and timber	0	5,253
16	Fishing	5.9	150,227
17	Hunting and trapping	3.4	418,344
18	Agriculture and forestry support activities	22	515,331
19	Oil and gas extraction	101.9	36,291,436
20	Coal mining	5	1,584,048
21	Iron ore mining	0	0
22	Copper- nickel- lead- and zinc mining	0	0
23	Gold- silver- and other metal ore mining	0	0
24	Stone mining and quarrying	0.3	57,335
25	Sand- gravel- clay- and refractory mining	0.2	35,092
26	Other nonmetallic mineral mining	0.7	153,670
27	Drilling oil and gas wells	0	19,048
28	Support activities for oil and gas operations	1.7	286,930
29	Support activities for other mining	0	3,609
30	Power generation and supply	291.4	143,247,008
31	Natural gas distribution	46.3	31,397,158
32	Water- sewage and other systems	22.6	3,085,965
33	New residential 1-unit structures- all	0	0
34	New multifamily housing structures- all	0	0
35	New residential additions and alterations- all	0	0
36	New farm housing units	0	0
37	Manufacturing and industrial buildings	0	0
38	Commercial and institutional buildings	0	0
39	Highway- street- bridge- and tunnel construction	0	0
40	Water- sewer- and pipeline construction	0	0

Economic Impact by Industry

ID#	Industry	Employment	Dollars
41	Other new construction	0	0
42	Maintenance and repair of farm and nonfarm residen	46.8	6,436,203
43	Maintenance and repair of nonresidential buildings	777.3	92,995,232
44	Maintenance and repair of highways- streets- bridges	0	0
45	Other maintenance and repair construction	137.2	8,973,650
46	Dog and cat food manufacturing	0.9	1,025,869
47	Other animal food manufacturing	0.5	365,452
48	Flour milling	0.8	620,454
49	Rice milling	0	22,642
50	Malt manufacturing	0	0
51	Wet corn milling	0.1	132,080
52	Soybean processing	0.2	699,895
53	Other oilseed processing	0	0
54	Fats and oils refining and blending	0.2	332,755
55	Breakfast cereal manufacturing	1.5	1,344,368
56	Sugar manufacturing	0.9	500,140
57	Confectionery manufacturing from cacao beans	0.4	260,644
58	Confectionery manufacturing from purchased chocolate	5.2	1,646,752
59	Nonchocolate confectionery manufacturing	5.1	1,603,695
60	Frozen food manufacturing	4.7	1,455,539
61	Fruit and vegetable canning and drying	4	1,969,228
62	Fluid milk manufacturing	22.4	13,312,615
63	Creamery butter manufacturing	0	2,302
64	Cheese manufacturing	11.7	8,818,425
65	Dry- condensed- and evaporated dairy products	13.5	12,561,240
66	Ice cream and frozen dessert manufacturing	12.4	6,009,626
67	Animal- except poultry- slaughtering	20.1	8,161,159
68	Meat processed from carcasses	71.5	32,431,376
69	Rendering and meat byproduct processing	7.2	3,703,857
70	Poultry processing	31.7	7,238,569
71	Seafood product preparation and packaging	0.1	16,880
72	Frozen cakes and other pastries manufacturing	4.3	790,213
73	Bread and bakery product- except frozen- mfg	113.6	17,112,716
74	Cookie and cracker manufacturing	23.9	9,167,170
75	Mixes and dough made from purchased flour	9.4	3,733,211
76	Dry pasta manufacturing	1.3	455,661
77	Tortilla manufacturing	1.1	156,788
78	Roasted nuts and peanut butter manufacturing	1.3	629,679
79	Other snack food manufacturing	18.6	10,556,799
80	Coffee and tea manufacturing	1.8	964,172

Economic Impact by Industry

ID#	Industry	Employment	Dollars
81	Flavoring syrup and concentrate manufacturing	2.3	1,654,625
82	Mayonnaise- dressing- and sauce manufacturing	8	3,122,347
83	Spice and extract manufacturing	8.7	4,405,674
84	All other food manufacturing	15.9	4,214,934
85	Soft drink and ice manufacturing	12.3	7,761,386
86	Breweries	2.9	2,675,266
87	Wineries	1.1	342,051
88	Distilleries	0.5	354,236
89	Tobacco stemming and redrying	0	0
90	Cigarette manufacturing	0	0
91	Other tobacco product manufacturing	0	0
92	Fiber- yarn- and thread mills	0	7,301
93	Broadwoven fabric mills	0.3	61,197
94	Narrow fabric mills and schiffli embroidery	0.2	26,898
95	Nonwoven fabric mills	0.5	165,540
96	Knit fabric mills	0	0
97	Textile and fabric finishing mills	2.1	581,723
98	Fabric coating mills	0.5	176,085
99	Carpet and rug mills	0	3,068
100	Curtain and linen mills	27.6	5,739,186
101	Textile bag and canvas mills	1.3	179,968
102	Tire cord and tire fabric mills	0	112
103	Other miscellaneous textile product mills	1.3	183,786
104	Sheer hosiery mills	0.2	39,753
105	Other hosiery and sock mills	0	0
106	Other apparel knitting mills	0	0
107	Cut and sew apparel manufacturing	55.3	7,426,545
108	Accessories and other apparel manufacturing	3.1	407,474
109	Leather and hide tanning and finishing	0	5,285
110	Footwear manufacturing	2.5	417,589
111	Other leather product manufacturing	8.4	1,110,756
112	Sawmills	30.6	7,485,068
113	Wood preservation	0.9	245,150
114	Reconstituted wood product manufacturing	2.9	1,119,057
115	Veneer and plywood manufacturing	24.4	4,312,726
116	Engineered wood member and truss manufacturing	16.1	2,712,277
117	Wood windows and door manufacturing	26.1	4,723,748
118	Cut stock- resawing lumber- and planing	9.8	1,337,423
119	Other millwork- including flooring	21.2	3,445,985
120	Wood container and pallet manufacturing	19.7	2,221,942

Economic Impact by Industry

ID#	Industry	Employment	Dollars
121	Manufactured home- mobile home- manufacturing	0	0
122	Prefabricated wood building manufacturing	0.2	23,884
123	Miscellaneous wood product manufacturing	6.9	963,635
124	Pulp mills	0	7,525
125	Paper and paperboard mills	0.3	153,289
126	Paperboard container manufacturing	1.9	576,189
127	Flexible packaging foil manufacturing	0.6	218,305
128	Surface-coated paperboard manufacturing	2.4	724,259
129	Coated and laminated paper and packaging materials	41.3	15,936,371
130	Coated and uncoated paper bag manufacturing	0.4	102,778
131	Die-cut paper office supplies manufacturing	0.2	52,016
132	Envelope manufacturing	0	8,290
133	Stationery and related product manufacturing	0.1	25,818
134	Sanitary paper product manufacturing	0.1	75,123
135	All other converted paper product manufacturing	0.5	144,428
136	Manifold business forms printing	9.8	2,604,445
137	Books printing	302.8	82,782,128
138	Blankbook and looseleaf binder manufacturing	6.5	1,368,873
139	Commercial printing	679.8	54,389,668
140	Tradebinding and related work	99.3	8,177,538
141	Prepress services	45.9	6,991,032
142	Petroleum refineries	14	120,705,456
143	Asphalt paving mixture and block manufacturing	2.6	1,639,768
144	Asphalt shingle and coating materials manufacturing	8.1	5,676,724
145	Petroleum lubricating oil and grease manufacturing	4.6	4,526,416
146	All other petroleum and coal products manufacturing	0.3	267,125
147	Petrochemical manufacturing	2.5	19,765,146
148	Industrial gas manufacturing	4.8	4,131,109
149	Synthetic dye and pigment manufacturing	7.9	4,701,023
150	Other basic inorganic chemical manufacturing	10.1	5,202,444
151	Other basic organic chemical manufacturing	8.4	9,730,237
152	Plastics material and resin manufacturing	1.5	2,060,591
153	Synthetic rubber manufacturing	0.4	299,900
154	Cellulosic organic fiber manufacturing	0	374
155	Noncellulosic organic fiber manufacturing	0	3,472
156	Nitrogenous fertilizer manufacturing	1.9	2,703,772
157	Phosphatic fertilizer manufacturing	0	5,677
158	Fertilizer- mixing only- manufacturing	0.8	393,791
159	Pesticide and other agricultural chemical mfg	0.2	266,404
160	Pharmaceutical and medicine manufacturing	58	48,560,424

Economic Impact by Industry

ID#	Industry	Employment	Dollars
161	Paint and coating manufacturing	0.8	491,013
162	Adhesive manufacturing	8.4	4,325,955
163	Soap and other detergent manufacturing	19.2	18,697,454
164	Polish and other sanitation good manufacturing	24.2	22,681,536
165	Surface active agent manufacturing	0.6	640,935
166	Toilet preparation manufacturing	25.4	17,867,086
167	Printing ink manufacturing	63.8	31,663,498
168	Explosives manufacturing	0.7	150,210
169	Custom compounding of purchased resins	14.8	6,693,594
170	Photographic film and chemical manufacturing	24.3	10,444,956
171	Other miscellaneous chemical product manufacturing	17.1	8,388,497
172	Plastics packaging materials- film and sheet	57.4	20,143,908
173	Plastics pipe- fittings- and profile shapes	42.3	15,158,797
174	Laminated plastics plate- sheet- and shapes	26.2	6,231,366
175	Plastics bottle manufacturing	11.8	3,802,897
176	Resilient floor covering manufacturing	2.7	906,563
177	Plastics plumbing fixtures and all other plastics	257.4	51,320,560
178	Foam product manufacturing	42	11,148,806
179	Tire manufacturing	0	3,328
180	Rubber and plastics hose and belting manufacturing	1.2	275,540
181	Other rubber product manufacturing	3.4	741,820
182	Vitreous china plumbing fixture manufacturing	0.6	117,694
183	Vitreous china and earthenware articles mfg	5.9	428,609
184	Porcelain electrical supply manufacturing	0.2	25,550
185	Brick and structural clay tile manufacturing	0	6,613
186	Ceramic wall and floor tile manufacturing	4.9	892,284
187	Nonclay refractory manufacturing	0	4,560
188	Clay refractory and other structural clay products	0	1,864
189	Glass container manufacturing	1.8	590,121
190	Glass and glass products- except glass containers	43.5	10,876,455
191	Cement manufacturing	0	738
192	Ready-mix concrete manufacturing	0.1	13,639
193	Concrete block and brick manufacturing	0	3,418
194	Concrete pipe manufacturing	0	349
195	Other concrete product manufacturing	0.2	27,750
196	Lime manufacturing	0	2,792
197	Gypsum product manufacturing	0	4,928
198	Abrasive product manufacturing	0.4	90,858
199	Cut stone and stone product manufacturing	3.6	399,597
200	Ground or treated minerals and earths mfg	0	407

Economic Impact by Industry

ID#	Industry	Employment	Dollars
201	Mineral wool manufacturing	0.8	371,557
202	Miscellaneous nonmetallic mineral products	0.3	86,726
203	Iron and steel mills	6.7	5,895,519
204	Ferrous alloy and related product manufacturing	0.4	275,690
205	Iron- steel pipe and tube from purchased steel	2.3	1,099,526
206	Rolled steel shape manufacturing	3	1,652,091
207	Steel wire drawing	0.2	89,530
208	Alumina refining	0	0
209	Primary aluminum production	0	10,567
210	Secondary smelting and alloying of aluminum	0	11,105
211	Aluminum sheet- plate- and foil manufacturing	0.1	128,790
212	Aluminum extruded product manufacturing	0.9	289,856
213	Other aluminum rolling and drawing	0	22,396
214	Primary smelting and refining of copper	0	0
215	Primary nonferrous metal- except copper and alm	0.4	235,546
216	Copper rolling- drawing- and extruding	0.1	57,728
217	Copper wire- except mechanical- drawing	0.7	732,215
218	Secondary processing of copper	0	9,960
219	Nonferrous metal- except copper and aluminum	6.1	2,918,277
220	Secondary processing of other nonferrous	0.3	151,409
221	Ferrous metal foundries	0	2,149
222	Aluminum foundries	0.2	34,810
223	Nonferrous foundries- except aluminum	0.1	23,379
224	Iron and steel forging	0.4	91,009
225	Nonferrous forging	0	10,418
226	Custom roll forming	0.1	56,072
227	All other forging and stamping	2	412,167
228	Cutlery and flatware- except precious- mfg	0.8	231,756
229	Hand and edge tool manufacturing	4.2	905,704
230	Saw blade and handsaw manufacturing	4.2	771,804
231	Kitchen utensil- pot- and pan manufacturing	5.8	1,099,216
232	Prefabricated metal buildings and components	0	12,371
233	Fabricated structural metal manufacturing	2.9	756,056
234	Plate work manufacturing	0.8	224,735
235	Metal window and door manufacturing	2.5	455,403
236	Sheet metal work manufacturing	1.7	341,764
237	Ornamental and architectural metal work mfg	1,800.30	346,256,480
238	Power boiler and heat exchanger manufacturing	0.2	47,958
239	Metal tank- heavy gauge- manufacturing	0.2	35,870
240	Metal can- box- and other container manufacturing	2.7	1,359,293

Economic Impact by Industry

ID#	Industry	Employment	Dollars
241	Hardware manufacturing	0.5	118,863
242	Spring and wire product manufacturing	2.7	561,433
243	Machine shops	93.9	12,487,608
244	Turned product and screw- nut- and bolt mfg	13.6	2,553,543
245	Metal heat treating	6.2	1,316,148
246	Metal coating and nonprecious engraving	23	4,076,012
247	Electroplating- anodizing- and coloring metal	18.5	3,257,848
248	Metal valve manufacturing	2	569,624
249	Ball and roller bearing manufacturing	2.2	791,934
250	Small arms manufacturing	0.6	83,286
251	Other ordnance and accessories manufacturing	0	0
252	Fabricated pipe and pipe fitting manufacturing	2.2	463,959
253	Industrial pattern manufacturing	0.1	17,306
254	Enameled iron and metal sanitary ware mfg	0.1	22,436
255	Miscellaneous fabricated metal product mfg	0.2	40,791
256	Ammunition manufacturing	0.1	18,029
257	Farm machinery and equipment manufacturing	1.3	562,943
258	Lawn and garden equipment manufacturing	2.7	1,205,994
259	Construction machinery manufacturing	0.1	91,124
260	Mining machinery and equipment manufacturing	0.1	24,562
261	Oil and gas field machinery and equipment	0	6,705
262	Sawmill and woodworking machinery	1.6	278,201
263	Plastics and rubber industry machinery	1	236,272
264	Paper industry machinery manufacturing	0.6	131,725
265	Textile machinery manufacturing	0	6,229
266	Printing machinery and equipment manufacturing	31.3	7,322,307
267	Food product machinery manufacturing	0.4	88,255
268	Semiconductor machinery manufacturing	0	19,068
269	All other industrial machinery manufacturing	1.4	318,786
270	Office machinery manufacturing	0.1	32,489
271	Optical instrument and lens manufacturing	5.5	1,169,468
272	Photographic and photocopying equipment mfg	0.1	51,032
273	Other commercial and service industry machinery	1.5	380,616
274	Automatic vending- commercial laundry and dryclean	1.7	410,971
275	Air purification equipment manufacturing	0	2,816
276	Industrial and commercial fan and blower mfg	0	1,742
277	Heating equipment- except warm air furnaces	0	1
278	AC- refrigeration- and forced air heating	0	3
279	Industrial mold manufacturing	0.9	110,701
280	Metal cutting machine tool manufacturing	0.2	54,314

Economic Impact by Industry

ID#	Industry	Employment	Dollars
281	Metal forming machine tool manufacturing	0.1	13,295
282	Special tool- die- jig- and fixture manufacturing	3.3	441,253
283	Cutting tool and machine tool accessory mfg	8.1	1,263,444
284	Rolling mill and other metalworking machinery	0.3	60,786
285	Turbine and turbine generator set units mfg	0.1	56,589
286	Other engine equipment manufacturing	2.8	2,011,555
287	Speed changers and mechanical power transmission	1.3	266,476
288	Pump and pumping equipment manufacturing	0.1	22,117
289	Air and gas compressor manufacturing	0	17,070
290	Measuring and dispensing pump manufacturing	0	3,351
291	Elevator and moving stairway manufacturing	0.1	23,776
292	Conveyor and conveying equipment manufacturing	0.4	119,982
293	Overhead cranes- hoists- and monorail systems	0.1	23,276
294	Industrial truck- trailer- and stacker manufacturi	2.9	807,684
295	Power-driven handtool manufacturing	1.5	597,072
296	Welding and soldering equipment manufacturing	2.4	718,986
297	Packaging machinery manufacturing	0.3	53,199
298	Industrial process furnace and oven manufacturing	0.1	29,751
299	Fluid power cylinder and actuator manufacturing	0.1	11,647
300	Fluid power pump and motor manufacturing	0	6,247
301	Scales- balances- and miscellaneous general purpose	2.9	792,628
302	Electronic computer manufacturing	3.1	7,540,913
303	Computer storage device manufacturing	2.5	1,875,780
304	Computer terminal manufacturing	2.3	777,281
305	Other computer peripheral equipment manufacturing	2.8	1,196,219
306	Telephone apparatus manufacturing	1.7	1,418,753
307	Broadcast and wireless communications equipment	1.8	974,868
308	Other communications equipment manufacturing	4.3	1,388,043
309	Audio and video equipment manufacturing	1.3	944,575
310	Electron tube manufacturing	4.2	1,457,697
311	Semiconductors and related device manufacturing	12.6	9,865,585
312	All other electronic component manufacturing	29.5	6,011,090
313	Electromedical apparatus manufacturing	4.1	1,589,489
314	Search- detection- and navigation instruments	0.1	35,371
315	Automatic environmental control manufacturing	6	1,191,607
316	Industrial process variable instruments	5.6	1,319,193
317	Totalizing fluid meters and counting devices	1	369,159
318	Electricity and signal testing instruments	1.2	299,315
319	Analytical laboratory instrument manufacturing	0.3	115,858
320	Irradiation apparatus manufacturing	0.4	183,594

Economic Impact by Industry

ID#	Industry	Employment	Dollars
321	Watch- clock- and other measuring and controlling	1.4	362,084
322	Software reproducing	7.2	3,114,158
323	Audio and video media reproduction	70.2	16,916,624
324	Magnetic and optical recording media manufacturing	0.2	104,300
325	Electric lamp bulb and part manufacturing	0	452
326	Lighting fixture manufacturing	0	2,246
327	Electric housewares and household fan manufacturing	20.3	6,531,843
328	Household vacuum cleaner manufacturing	5.3	1,915,798
329	Household cooking appliance manufacturing	0.1	27,355
330	Household refrigerator and home freezer manufacturing	0.3	88,912
331	Household laundry equipment manufacturing	2.3	1,392,736
332	Other major household appliance manufacturing	0.3	100,229
333	Electric power and specialty transformer mfg	7.4	2,165,210
334	Motor and generator manufacturing	1	313,155
335	Switchgear and switchboard apparatus manufacturing	3.1	798,478
336	Relay and industrial control manufacturing	1.8	516,740
337	Storage battery manufacturing	1.9	513,968
338	Primary battery manufacturing	0	2,519
339	Fiber optic cable manufacturing	0.2	95,214
340	Other communication and energy wire manufacturing	1.4	571,170
341	Wiring device manufacturing	0.6	158,229
342	Carbon and graphite product manufacturing	0.3	96,430
343	Miscellaneous electrical equipment manufacturing	1.6	362,441
344	Automobile and light truck manufacturing	28	40,796,748
345	Heavy duty truck manufacturing	1.2	1,167,135
346	Motor vehicle body manufacturing	1.4	376,017
347	Truck trailer manufacturing	0	8,894
348	Motor home manufacturing	0.5	187,201
349	Travel trailer and camper manufacturing	5.4	1,147,745
350	Motor vehicle parts manufacturing	36	13,431,088
351	Aircraft manufacturing	0.1	33,404
352	Aircraft engine and engine parts manufacturing	0.6	286,192
353	Other aircraft parts and equipment	0.2	57,085
354	Guided missile and space vehicle manufacturing	0	0
355	Propulsion units and parts for space vehicles	0	0
356	Railroad rolling stock manufacturing	0	15,636
357	Ship building and repairing	0	767
358	Boat building	0.3	67,301
359	Motorcycle- bicycle- and parts manufacturing	3.4	1,578,020
360	Military armored vehicles and tank parts mfg	0.1	48,233

Economic Impact by Industry

ID#	Industry	Employment	Dollars
361	All other transportation equipment manufacturing	0.1	74,666
362	Wood kitchen cabinet and countertop manufacturing	50.9	6,964,133
363	Upholstered household furniture manufacturing	14.8	1,946,405
364	Nonupholstered wood household furniture mfg	60.3	8,702,249
365	Metal household furniture manufacturing	0.6	103,486
366	Institutional furniture manufacturing	1.9	283,024
367	Other household and institutional furniture	14.3	2,736,329
368	Wood office furniture manufacturing	0.2	43,494
369	Custom architectural woodwork and millwork	1,078.00	133,219,648
370	Office furniture- except wood- manufacturing	0.1	12,868
371	Showcases- partitions- shelving- and lockers	2.8	465,603
372	Mattress manufacturing	9	2,576,301
373	Blind and shade manufacturing	2.3	324,671
374	Laboratory apparatus and furniture manufacturing	1	223,629
375	Surgical and medical instrument manufacturing	12.8	3,264,588
376	Surgical appliance and supplies manufacturing	30.2	7,323,068
377	Dental equipment and supplies manufacturing	5.1	1,113,217
378	Ophthalmic goods manufacturing	16.1	2,505,271
379	Dental laboratories	27.3	2,359,977
380	Jewelry and silverware manufacturing	2.6	627,408
381	Sporting and athletic goods manufacturing	0.5	101,535
382	Doll- toy- and game manufacturing	17.3	4,838,182
383	Office supplies- except paper- manufacturing	3	584,898
384	Sign manufacturing	4,979.70	578,358,720
385	Gasket- packing- and sealing device manufacturing	1.6	253,797
386	Musical instrument manufacturing	714.7	83,719,224
387	Broom- brush- and mop manufacturing	1.6	329,591
388	Burial casket manufacturing	0.1	19,020
389	Buttons- pins- and all other miscellaneous mfg	2.6	395,862
390	Wholesale trade	334.4	55,460,444
391	Air transportation	75.9	17,650,484
392	Rail transportation	83.8	21,697,672
393	Water transportation	15.3	7,560,771
394	Truck transportation	1,185.30	153,358,864
395	Transit and ground passenger transportation	123.6	5,134,378
396	Pipeline transportation	9.8	6,168,535
397	Scenic and sightseeing transportation and support	228.8	22,058,980
398	Postal service	1,045.10	73,670,672
399	Couriers and messengers	585.6	43,945,304
400	Warehousing and storage	466.7	33,217,016

Economic Impact by Industry

ID#	Industry	Employment	Dollars
401	Motor vehicle and parts dealers	1,446.50	136,028,944
402	Furniture and home furnishings stores	385.4	32,910,854
403	Electronics and appliance stores	348.9	19,508,440
404	Building material and garden supply stores	919.4	75,619,776
405	Food and beverage stores	1,988.70	103,771,872
406	Health and personal care stores	735.9	48,316,432
407	Gasoline stations	618	45,426,184
408	Clothing and clothing accessories stores	956.8	66,643,696
409	Sporting goods- hobby- book and music stores	535.5	22,607,444
410	General merchandise stores	1,973.10	102,526,112
411	Miscellaneous store retailers	971.4	33,219,792
412	Nonstore retailers	1,148.40	76,244,688
413	Newspaper publishers	19,087.30	2,182,758,400
414	Periodical publishers	147.5	32,765,272
415	Book publishers	3,806.60	1,118,964,608
416	Database- directory- and other publishers	151.4	45,631,704
417	Software publishers	15.6	4,829,998
418	Motion picture and video industries	11,790.60	1,677,778,304
419	Sound recording industries	401.9	110,794,664
420	Radio and television broadcasting	11,261.90	2,022,296,576
421	Cable networks and program distribution	607.2	513,961,024
422	Telecommunications	914.7	308,171,840
423	Information services	258.6	77,845,736
424	Data processing services	89.1	15,289,736
425	Nondepository credit intermediation and related	964.4	138,024,192
426	Securities- commodity contracts- investments	962.7	121,077,104
427	Insurance carriers	680.1	169,995,088
428	Insurance agencies- brokerages- and related	305.8	37,447,504
429	Funds- trusts- and other financial vehicles	113	30,123,976
430	Monetary authorities and depository credit	997.5	235,967,840
431	Real estate	5,463.60	714,082,304
432	Automotive equipment rental and leasing	205	36,028,232
433	Video tape and disc rental	6,260.40	300,581,856
434	Machinery and equipment rental and leasing	110.4	33,976,464
435	General and consumer goods rental except video tape	203.4	11,962,672
436	Lessors of nonfinancial intangible assets	33.8	79,770,352
437	Legal services	1,512.50	170,283,504
438	Accounting and bookkeeping services	1,422.60	139,035,200
439	Architectural and engineering services	711	82,943,296
440	Specialized design services	10,554.70	1,506,472,960

Economic Impact by Industry

ID#	Industry	Employment	Dollars
441	Custom computer programming services	157.1	13,934,851
442	Computer systems design services	814.8	67,523,992
443	Other computer related services	220	39,288,484
444	Management consulting services	1,252.50	166,121,088
445	Environmental and other technical consulting	100.3	15,767,754
446	Scientific research and development services	280.4	35,395,684
447	Advertising and related services	25,301.40	3,038,458,624
448	Photographic services	6,702.60	495,486,336
449	Veterinary services	268.6	18,331,060
450	All other miscellaneous professional and technical	480.6	228,655,168
451	Management of companies and enterprises	953.4	198,980,960
452	Office administrative services	659.2	112,113,144
453	Facilities support services	59.4	3,512,839
454	Employment services	6,017.20	149,885,808
455	Business support services	847.3	56,747,248
456	Travel arrangement and reservation services	98.4	11,284,213
457	Investigation and security services	835.6	29,762,704
458	Services to buildings and dwellings	1,872.60	95,331,232
459	Other support services	218.3	27,897,622
460	Waste management and remediation services	125.9	21,263,794
461	Elementary and secondary schools	617.2	21,493,436
462	Colleges- universities- and junior colleges	814.2	49,595,808
463	Other educational services	704.3	36,607,280
464	Home health care services	725.8	33,691,628
465	Offices of physicians- dentists- and other health	2,685.70	295,403,488
466	Other ambulatory health care services	598.8	78,268,096
467	Hospitals	2,639.70	285,307,200
468	Nursing and residential care facilities	1,688.70	79,286,576
469	Child day care services	826.1	30,027,718
470	Social assistance- except child day care services	1,438.10	47,380,952
471	Performing arts companies	11,877.80	271,687,424
472	Spectator sports	4,364.60	279,231,456
473	Independent artists- writers- and performers	3,954.20	220,695,616
474	Promoters of performing arts and sports and agents	19,916.90	813,241,600
475	Museums- historical sites- zoos- and parks	5,780.60	381,678,592
476	Fitness and recreational sports centers	458.5	14,300,955
477	Bowling centers	55.4	2,581,724
478	Other amusement- gambling- and recreation	626.9	37,308,732
479	Hotels and motels- including casino hotels	1,009.90	65,585,356
480	Other accommodations	33.4	3,097,060

Economic Impact by Industry

ID#	Industry	Employment	Dollars
481	Food services and drinking places	7,027.80	323,944,256
482	Car washes	226.7	9,771,182
483	Automotive repair and maintenance- except car wash	675.6	55,111,580
484	Electronic equipment repair and maintenance	42.7	5,992,751
485	Commercial machinery repair and maintenance	203.9	26,045,912
486	Household goods repair and maintenance	79.2	13,807,688
487	Personal care services	575.5	28,671,572
488	Death care services	111.4	7,194,551
489	Drycleaning and laundry services	295	14,488,044
490	Other personal services	419.3	67,015,760
491	Religious organizations	245.4	27,654,164
492	Grantmaking and giving and social advocacy org	341.7	16,365,384
493	Civic- social- professional and similar organizati	1,620.80	55,286,160
494	Private households	1,141.70	9,794,660
495	Federal electric utilities	0	0
496	Other Federal Government enterprises	84.1	1,630,197
497	State and local government passenger transit	135.6	9,396,478
498	State and local government electric utilities	55.5	19,439,584
499	Other State and local government enterprises	505.1	110,925,656
500	Noncomparable imports	0	0
501	Scrap	0	0
502	Used and secondhand goods	0	0
503	State & Local Education	0	0
504	State & Local Non-Education	0	0
505	Federal Military	0	0
506	Federal Non-Military	0	0
507	Rest of the world adjustment to final uses	0	0
508	Inventory valuation adjustment	0	0
509	Owner-occupied dwellings	0	670,628,352
25,001	Foreign Trade	0	0
28,001	Domestic Trade	0	0
	Totals	231,199.70	\$25,085,571,119.00